DIGITAL CAMERA

SAMSUNG ST200/ST200F

SERVICE Manual

DIGITAL CAMERA

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1. Repair information

1-1 Customer satisfaction statement

We hold ourselves to the highest standards of customer satisfaction and service.

- Combining perfect technical solutions with a customer-oriented approach is our top priority.
- We treat our customers we serve with kindness, loyalty, respect and dignity.
- We are committed to earn customers' trust continuously through excellence in repair solutions.
- We keep our promises and commitments to our customers.
- Committed to quick and easy resolution of all support issues, we deliver industry-leading response times.

[Guide]

We listen carefully to our customers' requirements and always find an optimum solution for their needs.
We are committed to your satisfaction and have procedures in place to provide you with a fair, timely and effective means to resolve problems. It combines industry leading preventive assistance with responsive support that helps us address problems quickly and effectively.
We will continuously maintain and improve our services to satisfy the needs of our customers.

1-2 Warranty and repair service information

(1) General terms and conditions

It is guaranteed to be free of charge from defects in material and workmanship under normal use for a period of one year from date of purchase.
Digital Camera and lens come with a one year limited warranty from the date of purchase.

*** The duration of the warranty depends on the laws in the country in which it was purchased.**

The following information will be required to process warranty requests:

a. We imply warranties to one year from the original date of purchase. In the event that the purchaser is unable to provide a warranty card or proof of purchase, the warranty period will be determined by the date of manufacture. The warranty period shall be decreased to three months from the original product manufactured date.

b. The coverage under this warranty begins on the date of your purchase of the product. In the event that a warranty card or proof of purchase is not available, a purchase receipt, preferably the purchase invoice, to confirm the date of purchase is required for warranty service.

c. In the event that a valid date of purchase is not available, the warranty period will be determined by the date of manufacture. The warranty period shall be decreased to three months from the original product manufactured date.

(2) Limited Warranty

It reserves the right to retain any parts or components replaced at its discretion in the event of a defect noticed in the product. The period with respect to retaining components may vary respectively depending on its components. We are not liable to repair or replace its faulty product after the Warranty Period has expired.

*** We warrant its retaining camera and lenses for five years and three years for the accessories.**

a. If a warranty claim is filed after the product has been discontinued, we reserves the right to honor the components warranty. Warranty period may vary depending on the type of components.

b. In the event that no identical warranty information is available for service repair, company has the right to provide warranty. The warranty does not affect the consumers' rights against the company related to its information.

For the length of the period indicated on the chart below, it starts with the date of original purchase.

(3) Warranty Period for components

Our liability under this warranty shall be limited to the following:

a. In the event of a same malfunction problem within two months after repair service by Samsung authorized technician, we will repair or replace free of charge the component of the product which is found to be defective.

b. In the event of the component that you have paid the replacement cost is returned under normal use within one year at our premises, such components will be replaced free of charge component of the product which is found to be defective.

<Table. 1-1 Warranty Periods for Parts>

Part Name	Warranty Period
Battery Charger	Six months
AC Adaptor	
Battery	
Remote Control	
CD Software	Three months
Earphone	
Pouch for camera	Not applicable
Cable	

(4) Repair Claims

1) Repair free of charge

Essentially, the following causes of damage are covered:

a. Failing to function properly under normal use during the limited warranty period.

b. Repair Services free of charge is granted for the performance of a specific contract.

2) Repair charges

This warranty does not cover damage caused by:

a. Defect occurring after the expiration of the Warranty Period.

b. Damage due to negligence, immersion in water, impact, loss and tampering.

c. Repair or alteration performed by any party other than Samsung authorized technicians.

d. Misuse or other improper use of the power button.

e. Exhausted parts such as batteries, lamps and filters, etc.

f. Defect that occurs due to sand, dirt liquid, etc. entering the inside of the product casing.

g. Consumable parts which have ceased working through normal use such as as earphone, battery discharger and various accessories.

h. Products purchased second hand or any damage that occurs due to a second hand or repair performed by anyone other than Samsung or a Samsung authorized service station.

i. Fire, earthquake, flood or other natural disasters.

The warranty cover period for components is listed below as per table 1-2.

<Table. 1-2 Warranty Period for components>

<table>
<tr><th colspan="3">Types of consumer damages</th><th colspan="2">Compensation</th></tr>
<tr><td rowspan="6">Failing to perform or failing to function properly under normal use</td><td colspan="2">Required for essential repair within 10 days after the purchase</td><td>Replace the product or refund</td><td>-</td></tr>
<tr><td colspan="2">Required for essential repair within one month after the purchase</td><td>Replace the product or repair at free of charge</td><td>Repair charges</td></tr>
<tr><td rowspan="3">Applicable to repair</td><td>Problem occurred twice due to same malfunction</td><td colspan="2">Free of charge</td></tr>
<tr><td>Problem occurred three times due to same malfunction</td><td rowspan="3">Replace the product or refund</td><td rowspan="2">Repair charges</td></tr>
<tr><td>Problem occurred four times due to some other malfunction</td></tr>
<tr><td>Not applicable to repair</td><td>Within the period with respect to retaining components</td><td>Replace the product at the cost of the depreciated value or refund its price added 10% of depreciation</td></tr>
<tr><td rowspan="2">Failing to perform or failing to function properly as a result of willful intent and negligence of customer</td><td colspan="2">Applicable repair</td><td colspan="2">Repair charges</td></tr>
<tr><td colspan="2">Not applicable to repair
(Except for defects or malfunction as a result of fire or flood or other natural disasters</td><td>Replacement charge</td><td>Repair charge and replace the product at the cost of the depreciated value</td></tr>
</table>

1-3 Precaution for disassembly and reassembly

CAUTION

1. Use the anti-static handing procedures included with the anti-static mat to ensure that there is no electrostatic discharge and component damage.
2. Static electricity is the biggest danger to the PCB parts you are about to disassemble or assemble. It's important to use your anti-static wrist strap to prevent damage to these components.
3. Dismantling a discrete electronic component such as main capacitor is dangerous.
   The capacitor contains high voltage, which can cause a severe electric shock if you touch it. This holds a charge even when the unit is not plugged in and is capable of delivering a fatal shock.
4. Using excessive force during disassembly and assembly can damage locking parts. Use care when handling "Locking parts" to avoid damage to FPCB or wire. Apply pressure only at the points designated in the maintenance instructions.
5. Due to increasing environmental concerns, a number of restrictions have been placed on the material content of electronic components and electronic assemblies. It requires utilizing Lead-Free (Pb-free) Soldering.
6. The following precautions must be observed when handling such components below.

<Table. 1-3 Precaution for disassembly and reassembly>

Component	Precautions
FPCB	FPCB is brittle material. It can be easily damaged thus it should be handled with care. It is recommended to use wooden or plastic tweezers for manual placement.
CCD (CMOS) IR CUT Filter LCD, LENS	Be careful not to stained your finger. It is recommended to use wooden or plastic tweezers for manual placement. Stain is often caused by the Alcohol used in these components. Find a clean, well-ventilated place to do your work.
PCB	Use an anti-static mat as well as an anti-static wrist strap to avoid ESD damage to PCB.
CONNECTOR	The use wooden or plastic tweezers is recommended for manual placement. Metal tip tweezer might make marks or damage.
BARREL	Always follow proper direction while assembling the components of the barrel.

2. Product specifications

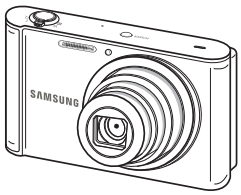
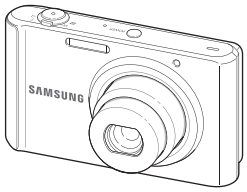
2-1 Specifications

<Table. 2-1 Specifications>

Image Sensor	1/2.3" (Approx. 7.76 mm) CCD
Effective pixels	Approx. 16.1 mega-pixels
Total pixels	Approx. 16.4 mega-pixels
Wight	5.07oz (without battery and memory card)
Dimensions	3.92 X 2.30 X 0.74in (without protrusions)
LCD	TFT LCD, 3.0" (7.62 cm) 460K
Zoom	Still image mode: 1.0–5.0X (Optical zoom X Digital zoom: 50.0X, Optical zoom X Intelli zoom: 20.0X)
Shutter Speeds	• Smart Auto: 1/8-1/2,000 sec. • Program: 1-1/2,000 sec. • Night Shot: 8-1/2,000 sec.
Flash Range	• Wide: 0.3 m-3.6 m (ISO Auto) • Tele: 0.5 m-2.0 m (ISO Auto)
ISO Range	Auto, ISO 80, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600, ISO 3200
Focal Length	Samsung 10X Zoom Lens f= 4.85~48.5mm (35mm film equivalent : 27~270 mm)
Storage	• Internal memory: Approx. 16 MB • External memory (Optional): -- microSD card (up to 2 GB guaranteed) -- microSDHC card (up to 32 GB guaranteed) -- microSDXC card (up to 64 GB guaranteed)
Image Stabilization	Optical Image Stabilization (OIS)
Wireless network (ST200F only)	Social Sharing, Email, MobileLink, Remote Viewfinder, Cloud, Auto Backup, TV Link, Authentication Browser, Wi-Fi Direct
Battery Source	Lithium-ion battery (BP85A, 850 mAh)
Connector type	Micro USB (7 Pin)

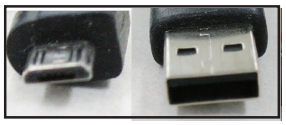
2-2 Product comparison

<Table. 2-2 Product comparison>

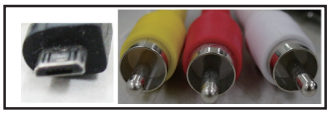
Model / Specs	ST200/ST200F	ST76/ST77	
Product image			
Image Sensor	1/2.3" (Approx. 7.76 mm) CCD	1/2.3" (Approx. 7.76 mm) CCD	
Effective pixels	Approx. 16.1 mega-pixels	Approx. 16.1 mega-pixels	
Total pixels	Approx. 16.4 mega-pixels	Approx. 16.4 mega-pixels	
Wight	5.07oz (without battery and memory card)	3.53oz (without battery and memory card)	
Dimensions	3.92 X 2.30 X 0.74in (without protrusions)	3.57 X 2.11 X 0.67in (without protrusions)	
LCD	TFT LCD, 3.0" (7.62 cm) 460K	TFT LCD, 2.7" (6.9 cm) QVGA (230K)	
Zoom	Still image mode: 1.0–5.0X (Optical zoom X Digital zoom: 50.0X, Optical zoom X Intelli zoom: 20.0X)	Still image mode: 1.0–5.0X (Optical zoom X Digital zoom: 25.0X, Optical zoom X Intelli zoom: 10.0X)	
Shutter Speeds	• Smart Auto: 8–1/2,000 sec. • Program: 1–1/2,000 sec. • Night: 8–1/2,000 sec.	• Smart Auto: 8–1/2,000 sec. • Program: 1–1/2,000 sec. • Night: 8–1/2,000 sec.	
ISO Range	Auto, ISO 80, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600, ISO 3200	Auto, ISO 80, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600, ISO 3200	
Focal Length	Samsung 10X Zoom Lens f= 4.85~48.5mm (35mm film equivalent : 27~270 mm)	Samsung Lens f = 4.5–22.5 mm (35 mm film equivalent: 25–125 mm)	
Storage	• Internal memory: Approx. 16 MB • External memory (Optional): -- microSD card (up to 2 GB guaranteed) -- microSDHC card (up to 32 GB guaranteed) -- microSDXC card (up to 64 GB guaranteed)	• Internal memory: Approx. 70 MB • External memory (Optional): -- microSD card (up to 2 GB guaranteed) -- microSDHC card (up to 8 GB guaranteed)	
Wireless network (ST200F only)	Social Sharing, Email, MobileLink, Remote Viewfinder, Cloud, Auto Backup, TV Link, Authentication Browser, Wi-Fi Direct	-	
Image Stabilization	Optical Image Stabilization (OIS)	ST76	Digital Image Stabilization(DIS)
		ST77	Optical Image Stabilization(OIS)
Battery Source	Lithium-ion battery (BP85A, 850 mAh)	Lithium-ion battery (BP70A, 740 mAh: Min. 700 mAh)	
Connector type	Micro USB (7 Pin)	Micro USB (5 Pin)	

2-3 Accessories information

<Table. 2-3 Packing items information>

	image	Description		Parts No.
Packing items		Camera		ST200/ST200F
		AC adapter	AD5055_EXP	AD44-00183A
			AD5055_USA	AD44-00179A
			AD5055_UK	AD44-00182A
			AD5055_AUS	AD44-00185A
			AD5055_ARG	AD44-00181A
			AD5055_BRA	AD44-00180A
			AD5055_CHI	AD44-00184A
		USB cable 	CHI	AD39-00190A
			EXP	AD39-00191A
		Battery		AD43-00199A
		Strap	BLACK	AD63-02604A
			SILVER	AD63-02596A
		User Manual CD-ROM		AD46-00433A
		Quick Start Guide	ST200F_EUR1	AD68-06850A
			ST200F_EUR2	AD68-06851A
			ST200F_EUR3	AD68-06852A
			ST200F_ASIA	AD68-06853A
			ST200F_S.CHI	AD68-06849A
			ST200F_CANADA	AD68-06854A
			ST200F_ENG_TUR	AD68-06856A
			ST200F_SEA	AD68-06855A

<Table. 2-4 Optional items information>

	image	Description		Parts No.
Optional items		Camera case	CC9S70B	AD69-03284A
			CC9S71N	AD69-03285A
			CC9S30B	AD69-03283A
			CC9U21B/P	AD69-02964A
				AD69-03010A
			CC9U11B	AD69-02397B
		A/V cable 		AD39-00191A
		Battery charger		AD44-00176A
		Memory card	2G	1109-001446
			4G	1109-001420
			8G	1109-001418

2-4 About the memory card

Memory card capacity The memory capacity may differ depending on shooting scenes or shooting conditions. These capacities are based on a 1 GB microSD card:

<Table. 2-5 Memory card capacity>

Size			Super Fine	Fine	Normal
Photos	16M	4608 X 3456	105	206	303
	14M	4608 X 3072	117	230	337
	12M	4608 X 2592	140	275	406
	10M	3648 X 2736	166	323	469
	5M	2592 X 1944	319	607	858
	3M	1984 X 1488	522	954	1,336
	2M	1920 X 1080	742	1,336	1,878
	1M	1024 X 768	1,582	2,505	3,006

Size			30 FPS	15 FPS
*Videos	HD	1280 X 720	Approx. 14’ 55”	Approx. 28’ 54”
	VGA	640 X 480	Approx. 34’ 55”	Approx. 65’ 40”
	QVGA	320 X 240	Approx. 134’ 34”	Approx. 231’ 14”
	240 WEB	For Sharing (ST200F only)	Approx. 134’ 34”	Approx. 231’ 14”

* The figures above are measured without using the zoom function. Available recording time may vary if you use the zoom. Several videos were recorded in succession to determine the total recording time.

2-5 About the battery

<Table. 2-6 Battery specifications>

Specification	Description
Model	BP85A
Type	Lithium-ion battery
Cell capacity	850 mAh
Voltage	3.7 V
Charging time ***(When the camera is switched off)**	Approximately 180 min

* Charging the battery by connecting it to a computer may take longer.

<Table. 2-7 Battery life>

Average shooting time/ Number of photos		Test conditions (when the battery is fully charged)
Photos	Approx. 120 min/ Approx. 240 photos	The battery life was measured under the following conditions: in Program mode, in darkness, 16M resolution, Fine quality, OIS on. 1. Set the flash option to **Fill in**, take a single shot, and zoom in or out. 2. Set the flash option to **Off** , take a single shot, and zoom in or out. 3. Perform steps 1 and 2, waiting 30 seconds between each step. Repeat the process for 5 minutes, and then turn off the camera for 1 minute. 4. Repeat steps 1 to 3.
Videos	Approx. 90 min	Record videos at HD resolution and 30 FPS.

- The figures above are measured by Samsung's standards. Your results may differ, depending on your actual usage.
- Several videos were recorded in succession to determine the total recording time.
- When using network functions, the battery will be depleted more quickly.

3. Disassembly and reassembly

3-1 Screw parts list

<Table. 3-1 Screw Information>

PAGE NO.	TYPE	CODE	QTY
3-2	SCREW (M1.4 L3.5 MACHINE)	6001-002640	2
	SCREW (M1.4 L4.5 TAPPING)	6003-001717	1
3-4	SCREW (M1.4 L4.5 TAPPING)	6003-001717	4
	SCREW (M1.4 L3.5 TAPPING)	6003-001630	1
3-6	SCREW (M1.4 L4.5 TAPPING)	6003-001717	1
3-10	SCREW (143025)	6003001633	3
3-11	SCREW (143525)	6003-001630	6
3-27	SCREW (143525)	6003-001630	4
3-28	SCREW (143525)	6003-001630	2
3-29	SCREW (143025)	6003-001633	3

3-2 Disassembly of main unit

1. Disassembly of BACK COVER ASSY.

(a) Remove the one SCREW on the bottom side.

Fig. 3-1

(b) Remove the one SCREW on the left side.

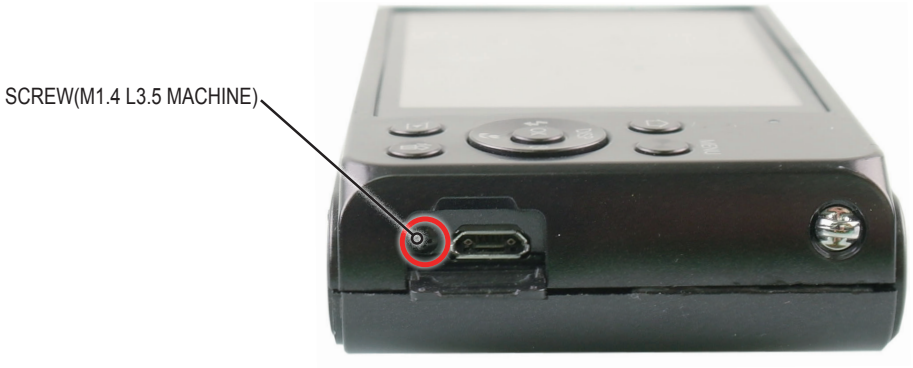


Fig. 3-2

(c) Remove the DECO FRONT GRIP and then remove the one SCREW on the right side.

Fig. 3-3

(d) Run a safe open pry tool around the join of LOCKING PART to release the BACK COVER as illustrated in image.
Slightly wiggle the LOCKING PART to widen the gap. You'll have to apply a little force to remove it.

Fig 3-4

(e) Remove the BACK COVER ASSY.

Fig 3-5

2. Disassembly of KEY PCB ASSY.

(a) Remove the CONNECTOR as indicated " Fig. A" below and then reomve the KEY PCB ASSY.

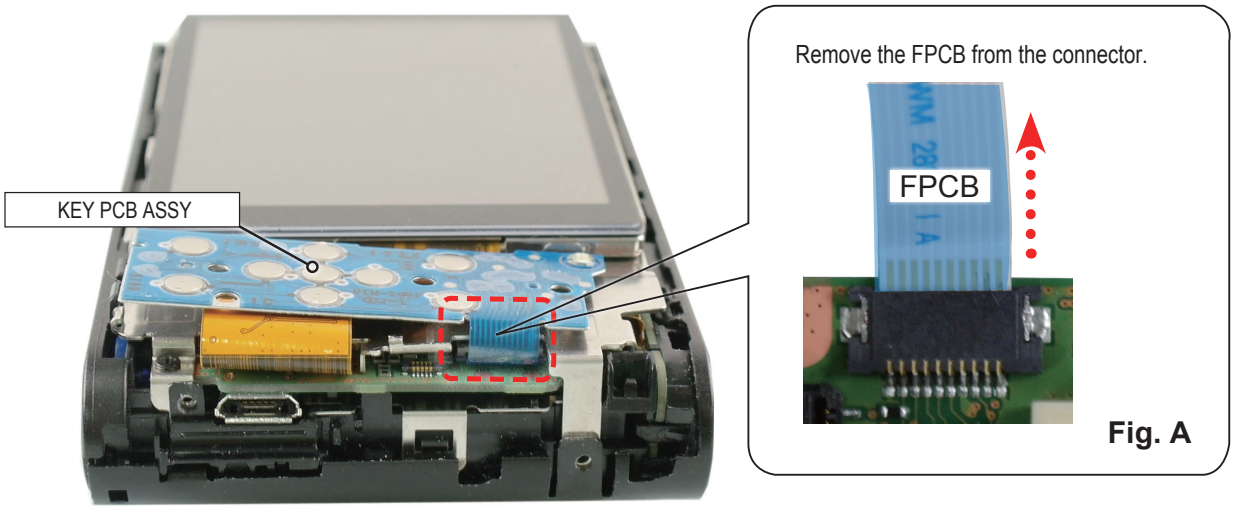


Fig 3-6

3. Disassembly of MAIN FRAME.

(a) Remove the six SCREWs.

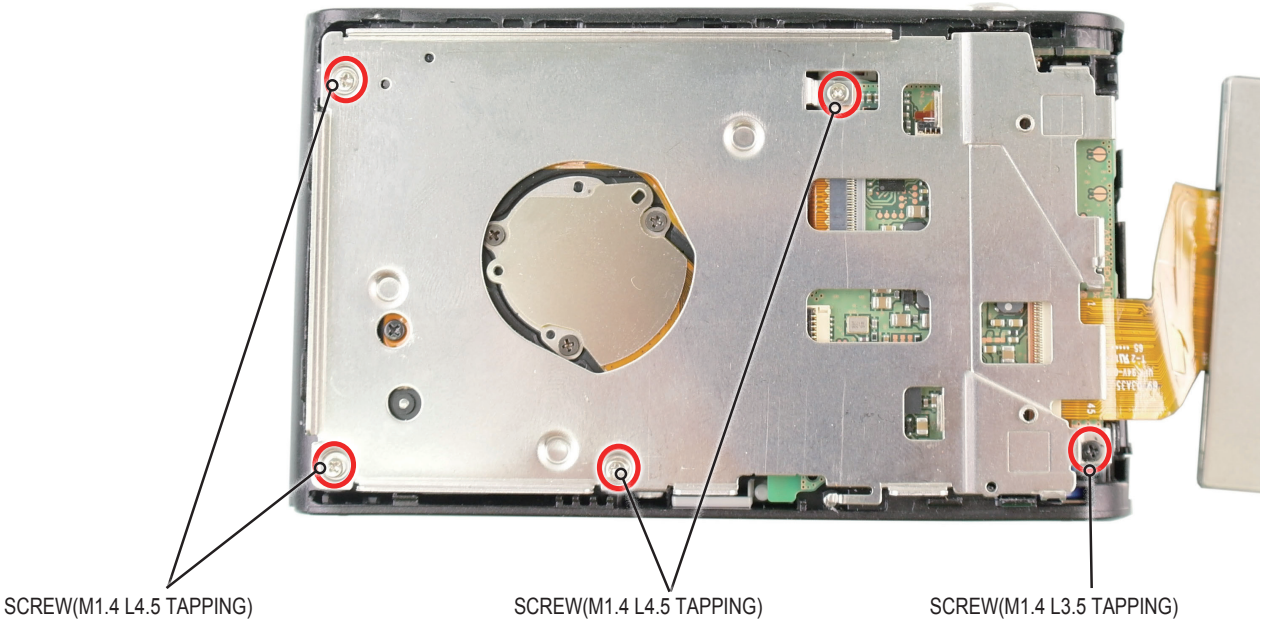


Fig 3-7

(b) Remove the MAIN FRAME.

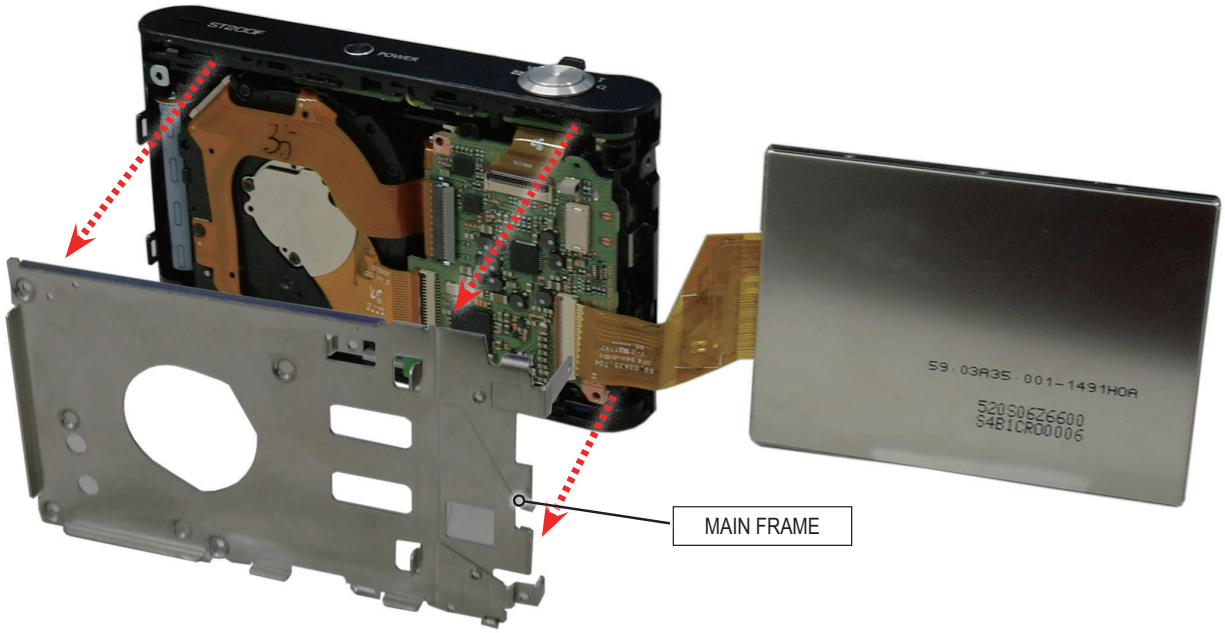


Fig 3-8

4. Disassembly of LCD ASSY.

(a) Remove the CONNECTOR as indicated " Fig. A" below and then remove the LCD ASSY.

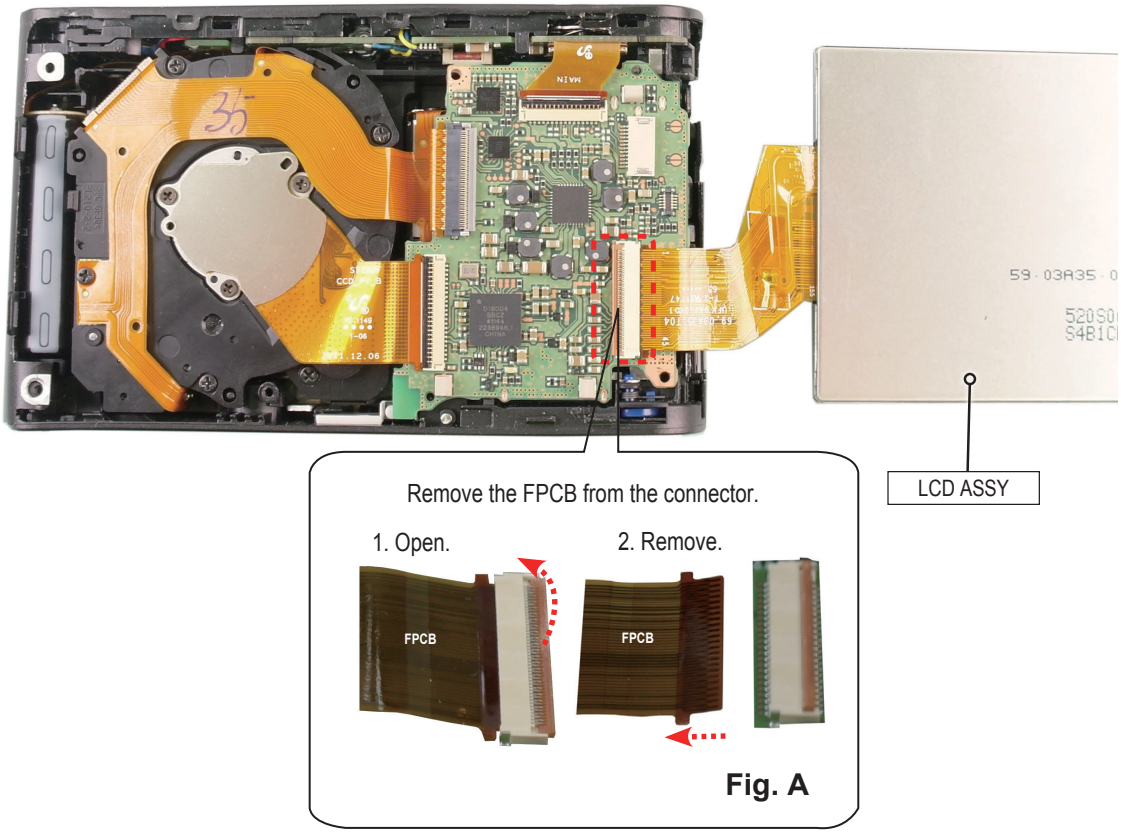


Fig 3-9

5. Disassembly of BARREL ASSY and MAIN PCB ASSY.

(a) Remove the CONNECTOR as indicated " Fig. A" below.

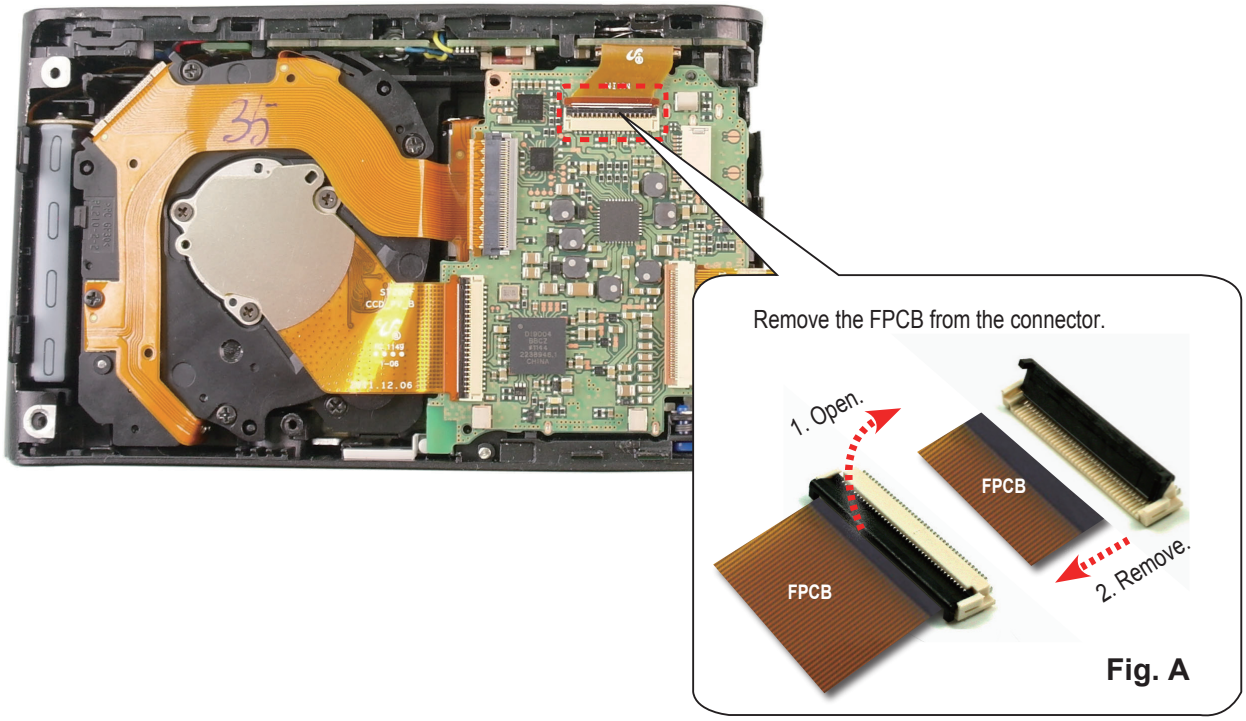


Fig 3-10

(b) Remove the BARREL-MAIN PCB ASSY.

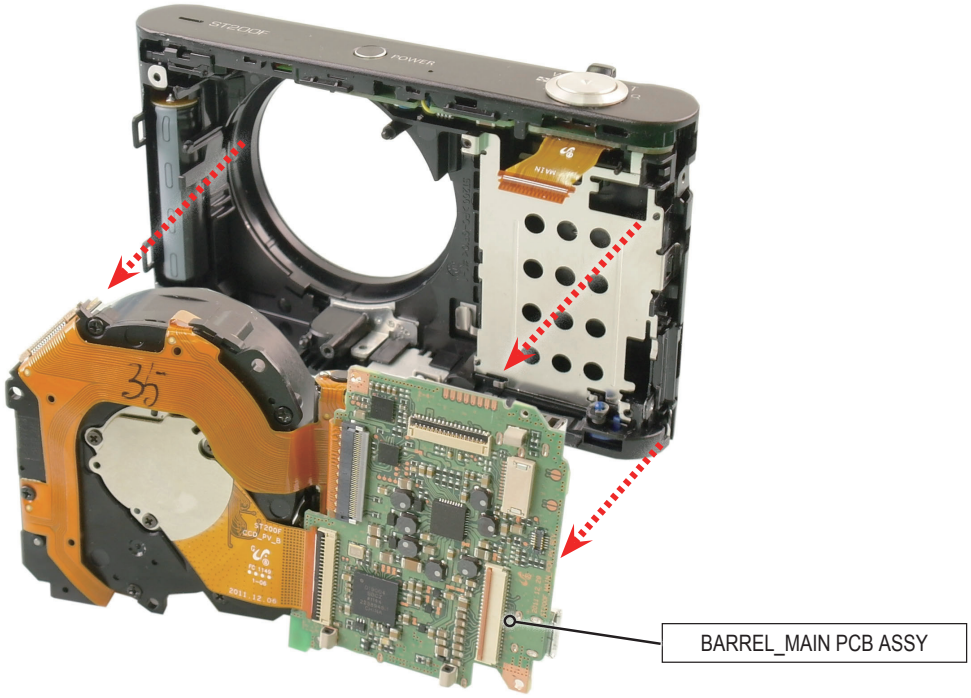


Fig 3-11

(c) Remove the two CONNECTORs as indicated " Fig. A" and " Fig. B" below.

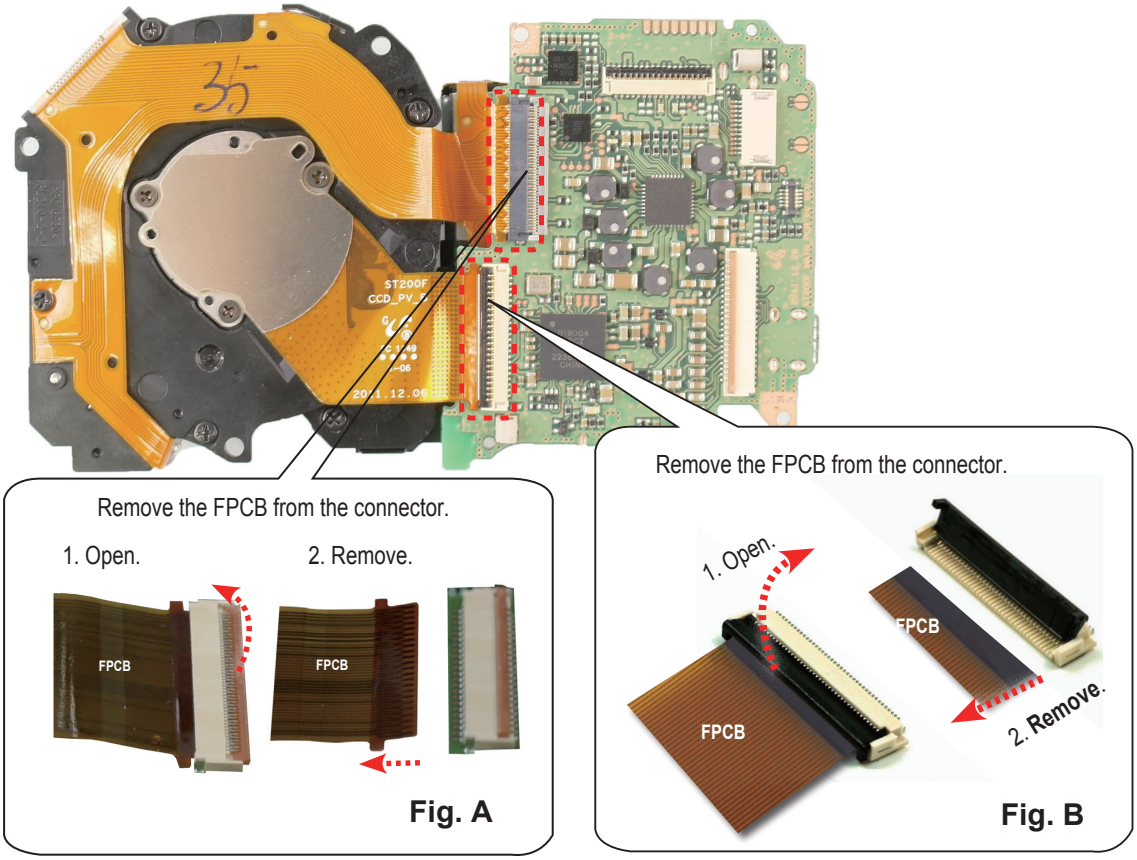


Fig 3-12

(d) Remove the BARREL ASSY with MAIN PCB ASSY.

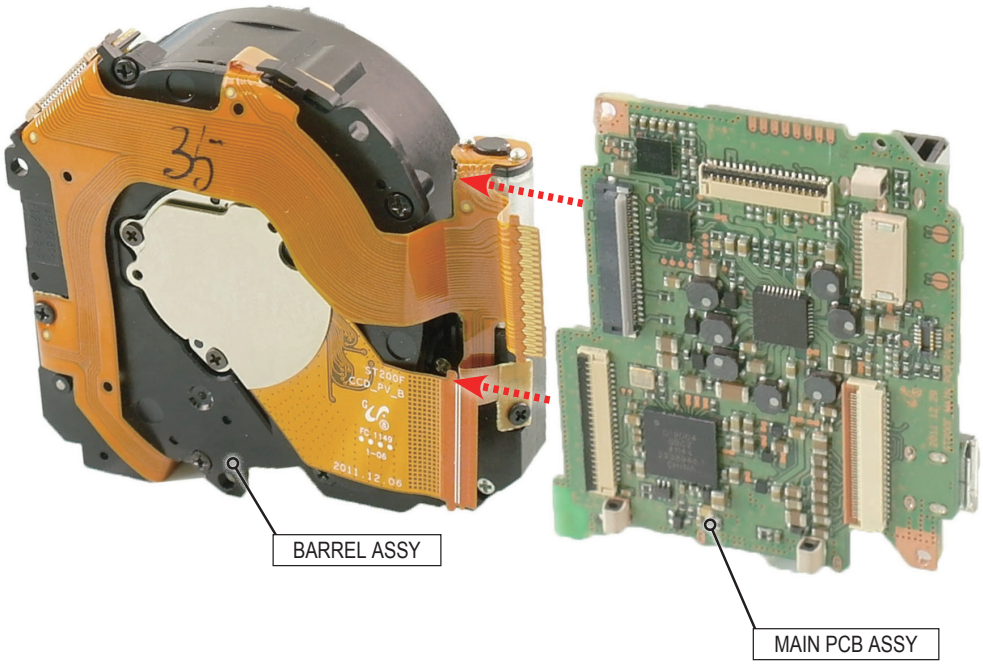


Fig 3-13

6. Disassembly of CHAMBER ASSY.

(a) Remove the one SCREW.

SCREW(M1.4 L4.5 TAPPING)

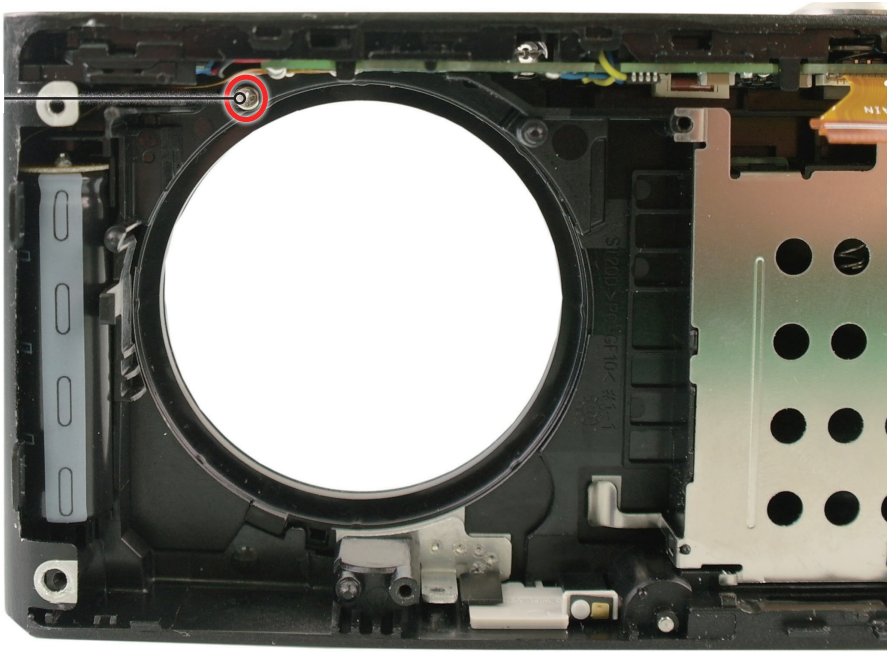


Fig 3-14

(b) Remove the CHAMBER ASSY.

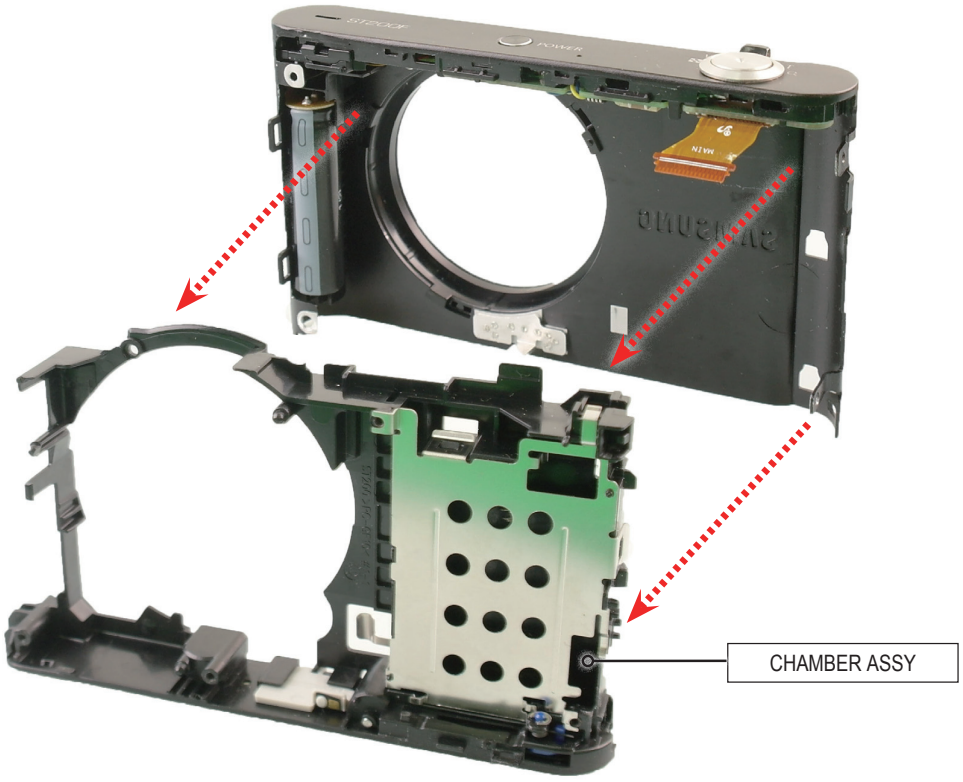


Fig 3-15

7. Disassembly of TOP PCB ASSY.

(a) Discharge.

CAUTION

It must be processed for discharge to the main condenser as shown in the below picture.

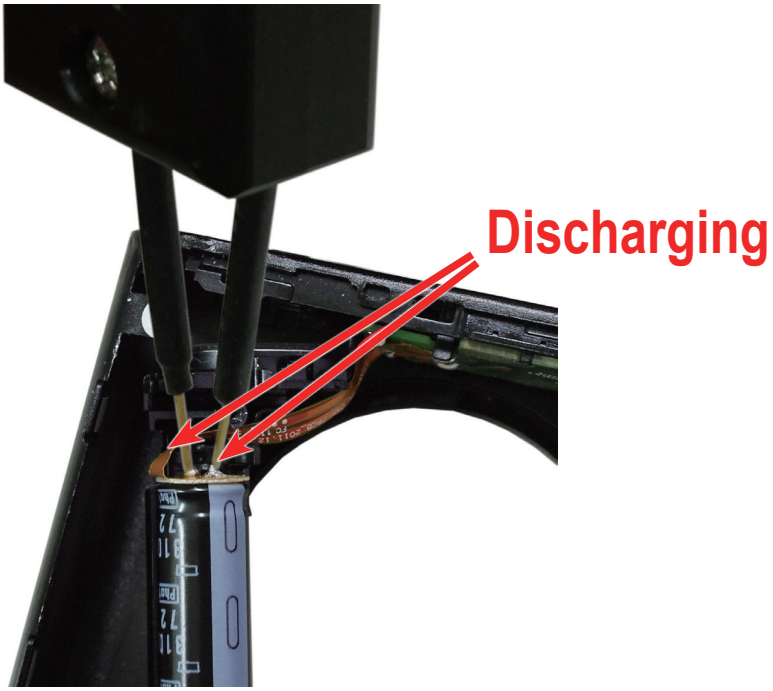


Fig 3-16

(b) Remove the two LOCKs.

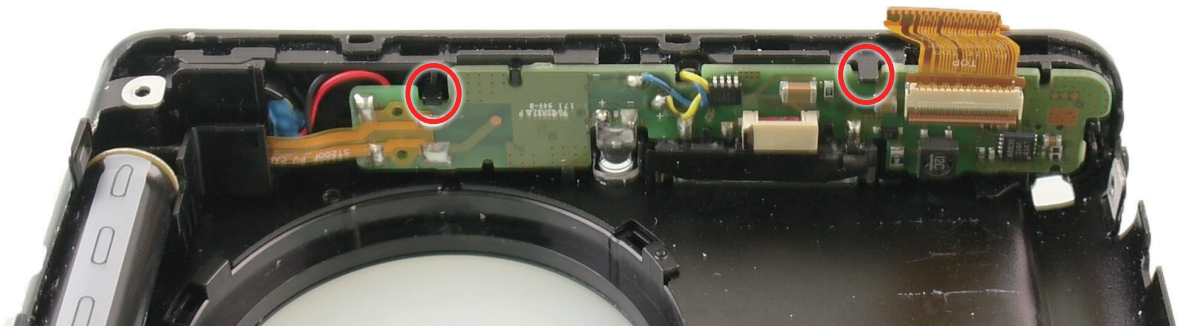


Fig 3-17

(c) Remove the TOP PCB ASSY.

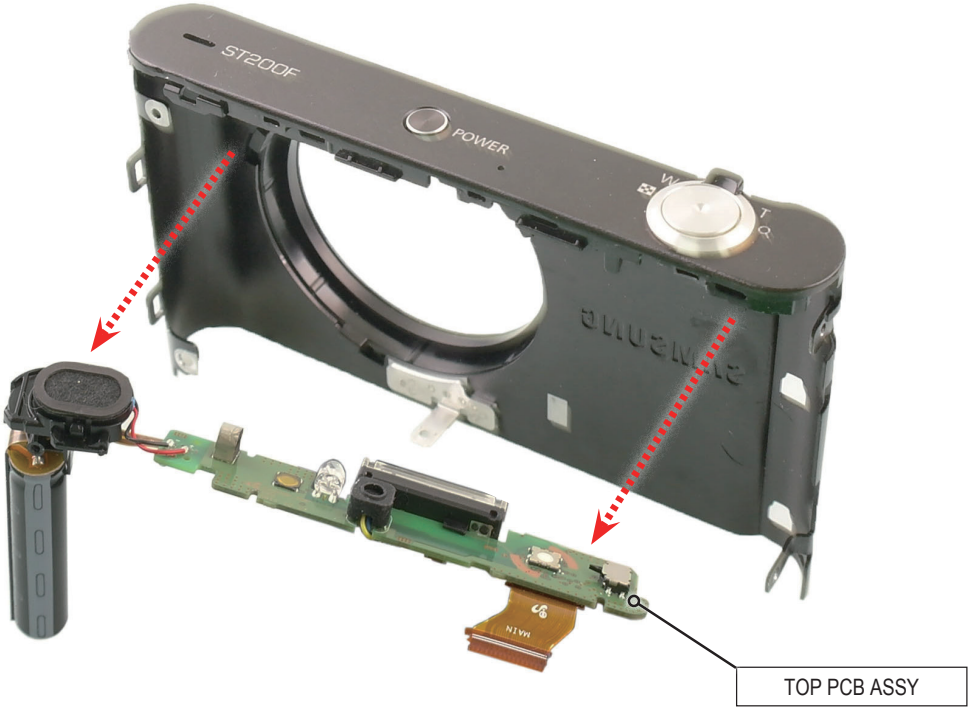


Fig 3-18

3-3 Disassembly of barrel

1. Disassembly of PCB FPC-CCD ASSY.

(a) Remove the three SCREWs and then remove the PCB FPC-CCD ASSY and CUSHION-IR and CUSHION-IR FILTER as order in shown below.

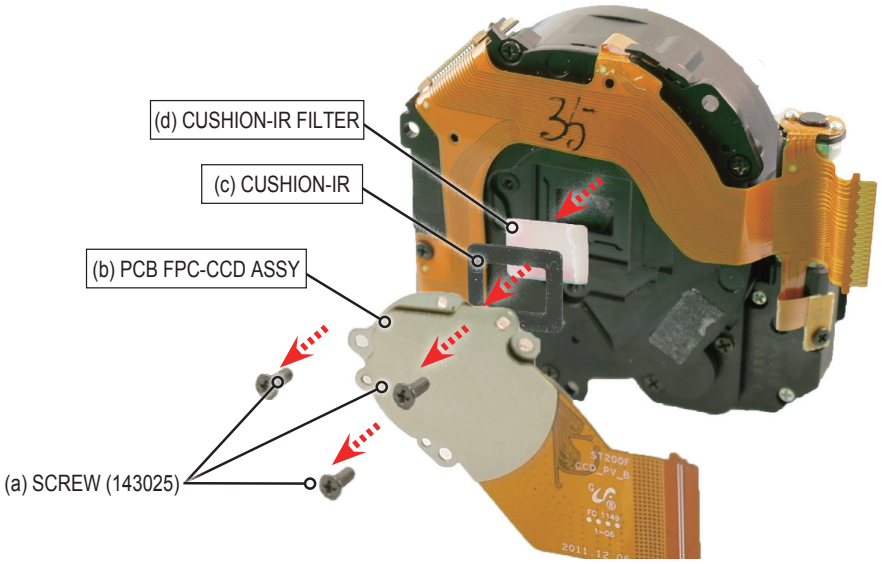


Fig 3-19

2. Disassembly of BARREL FPCB.

(a) Remove the six SCREWs.

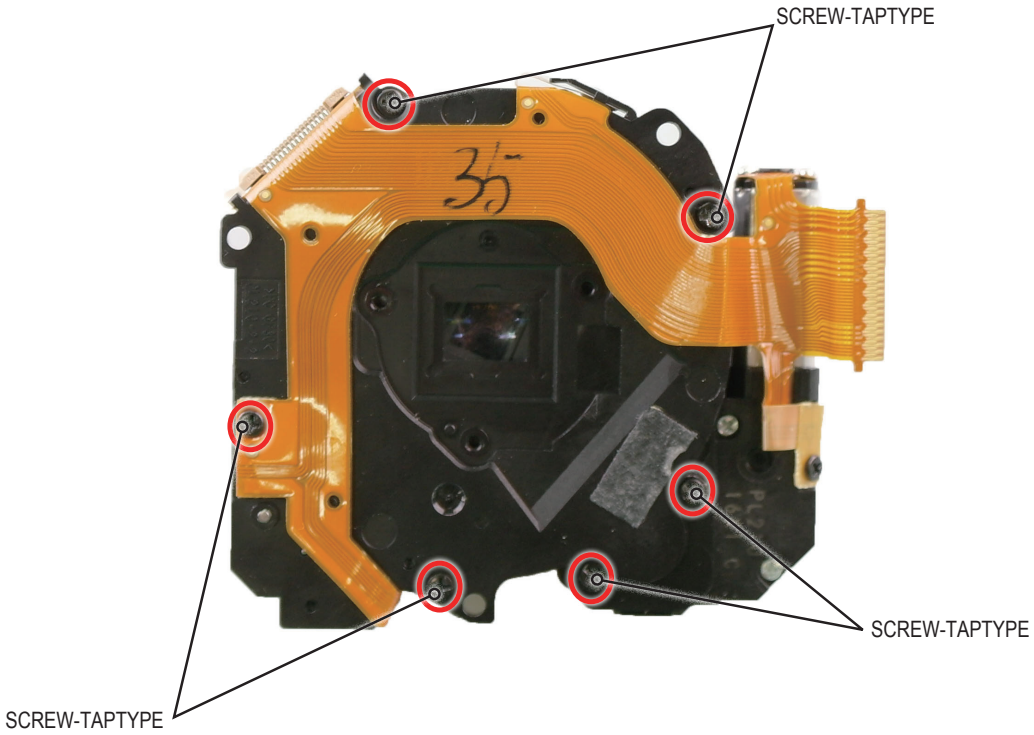


Fig 3-20

(b) Remove the CONNECTOR as indicated " Fig. A" below.

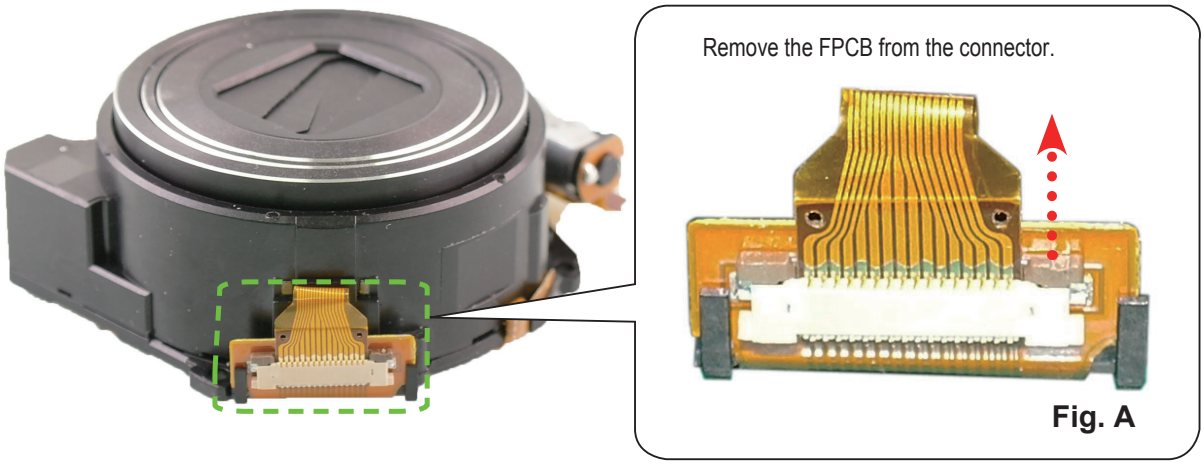


Fig 3-21

3. Disassembly of BARREL.

(a) Remove the ASSY SUB BARREL-LENS BASE and GEAR-IDLE.

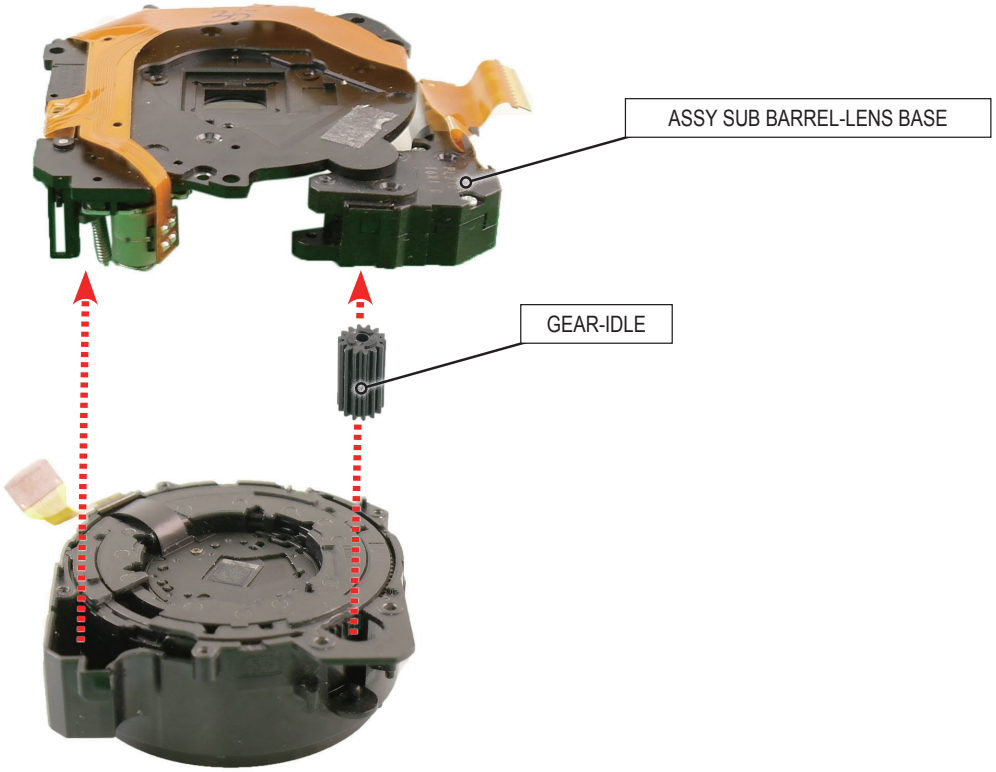


Fig 3-22

(b) Press the displayed portion "a" by using the tools and remove the SHUTTER FPCB GUIDE and then remove the FPCB from the SHUTTER FPCB GUIDE.

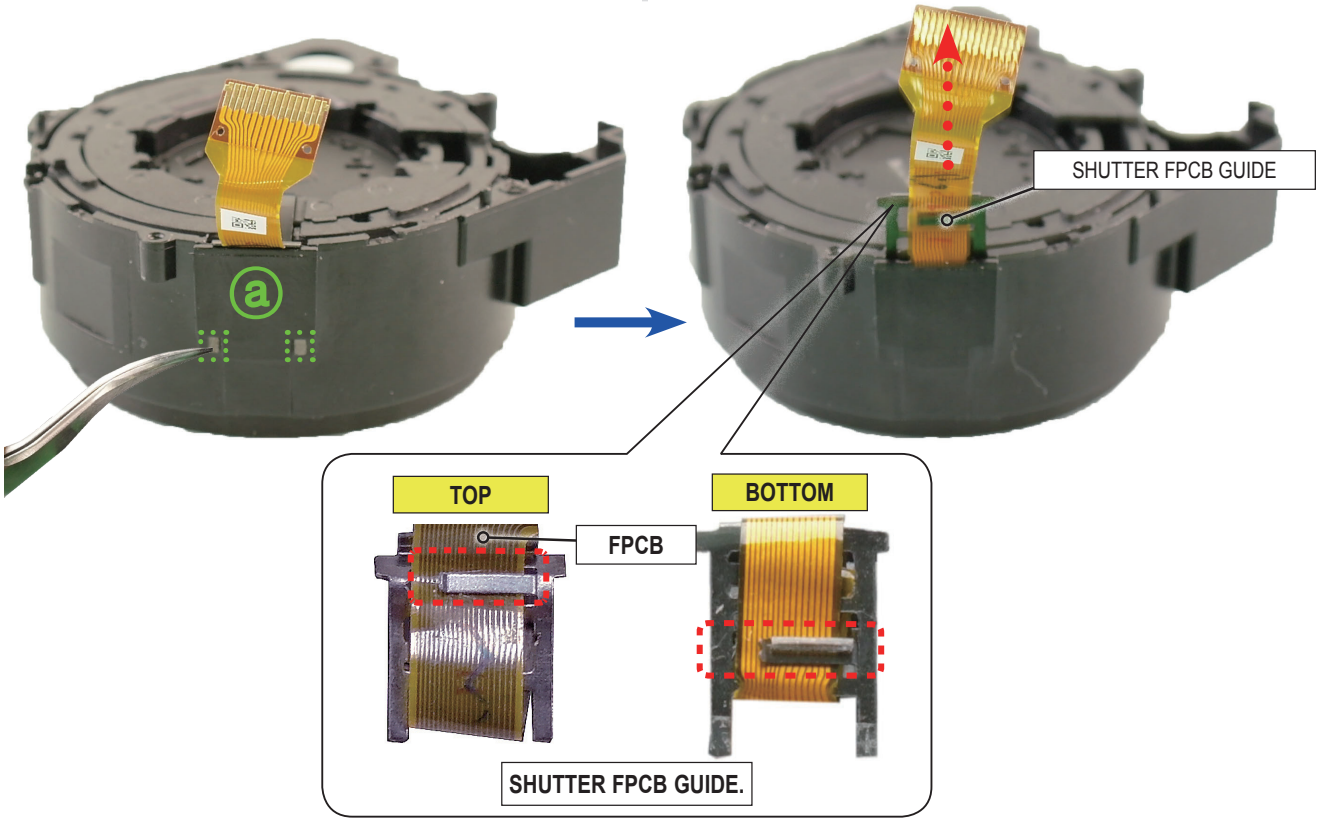


Fig 3-23

(c) Turn the triangle indication of BARREL OUTER CAM by counterclockwise direction as arrow of "Fig. A" and then remove the BARREL BASE.

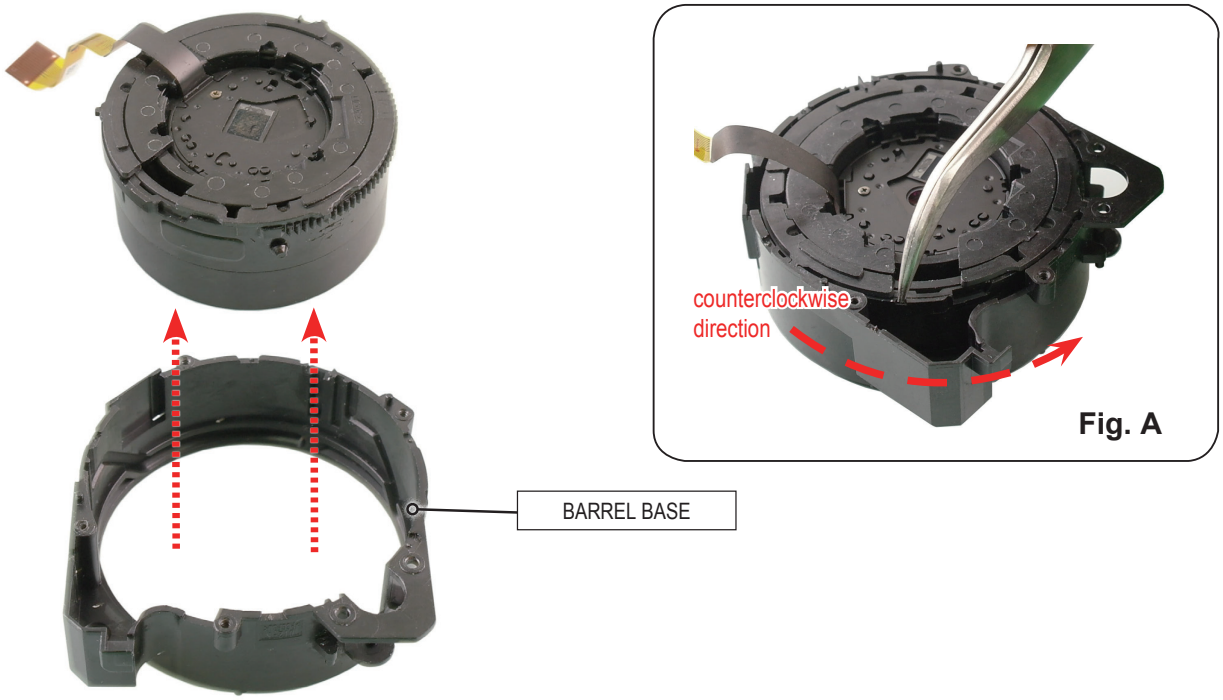


Fig 3-24

(d) Turn the ASSY BARREL-OUTER GUIDE by Clockwise direction as arrow of "Fig. A" and then be especially careful not to damage the part "a" in "Fig. A" when removing the BARREL-OUTER CAM.

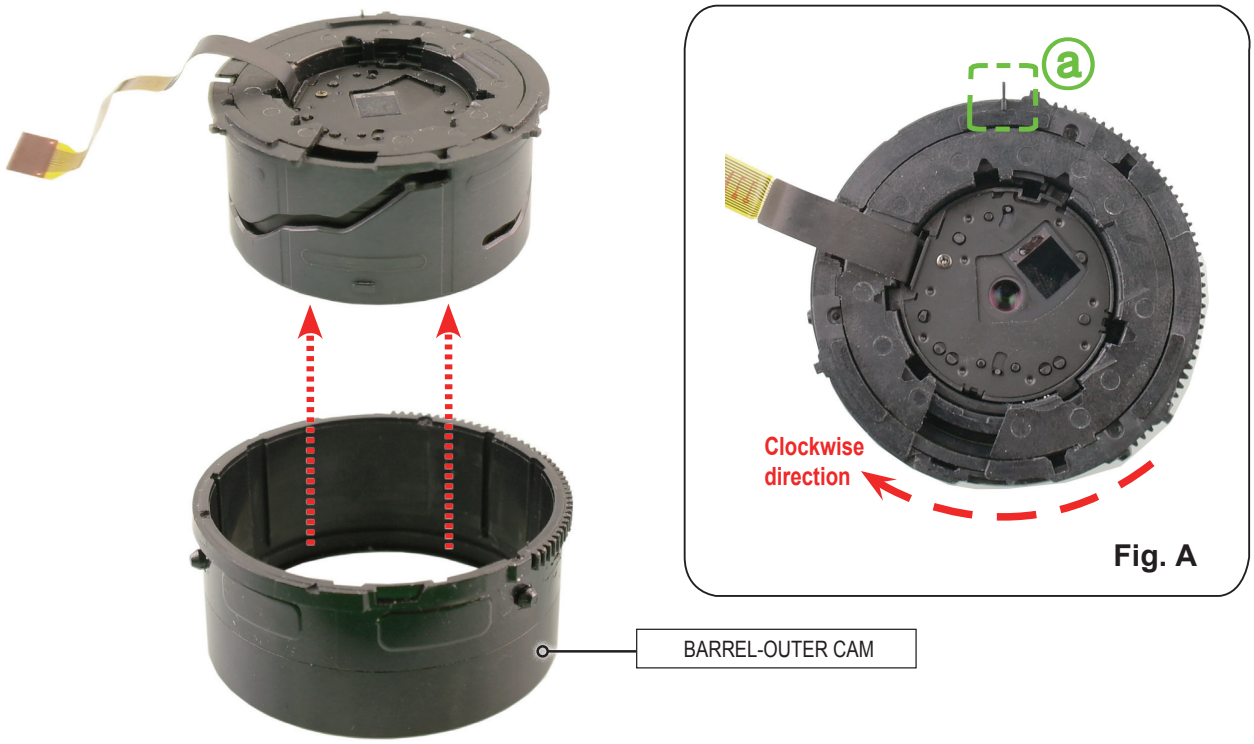


Fig 3-25

(e) Moving the pin by as arrow direction of "Fig. A" and then remove the BARREL-OUTER GUIDE. Be especially careful not to damage the pin when remove it.

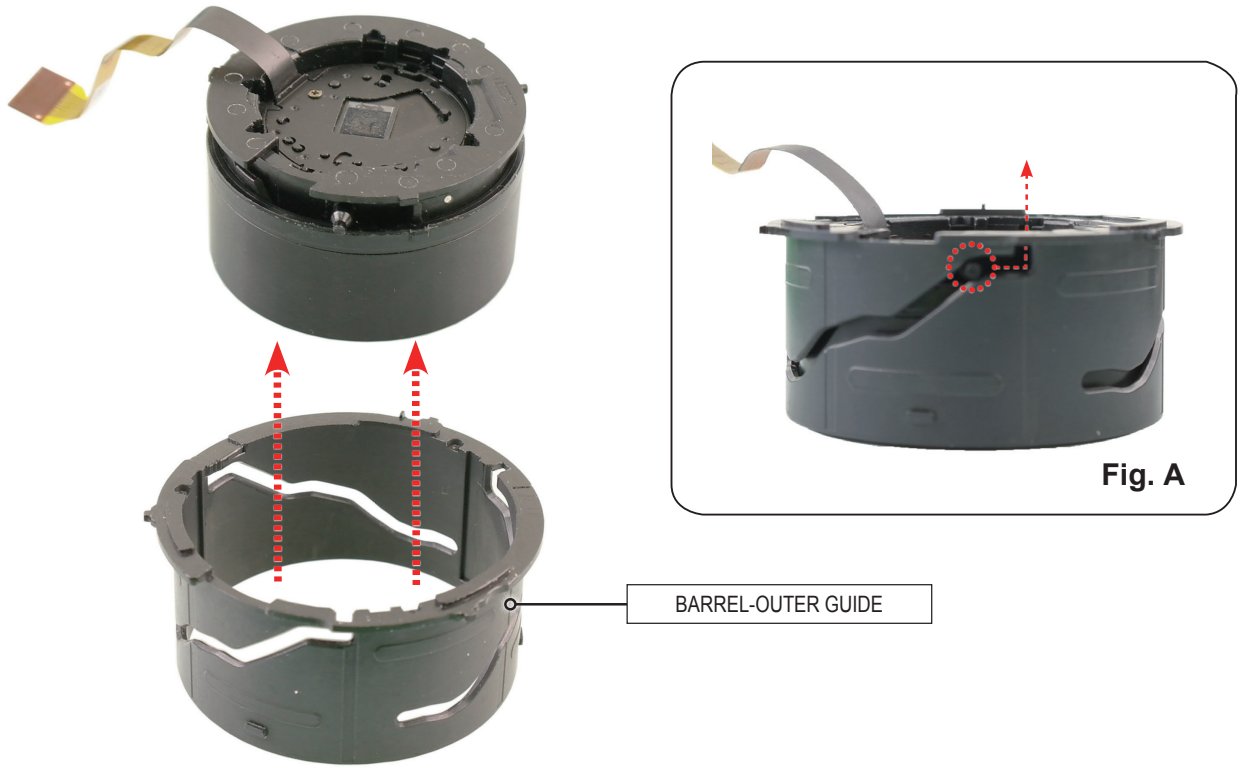


Fig 3-26

(f) Turn the DECORING CAM by clockwise direction as "Fig. A" and then turn the BARREL-INNER GUIDE by counterclockwise direction as "Fig. B".

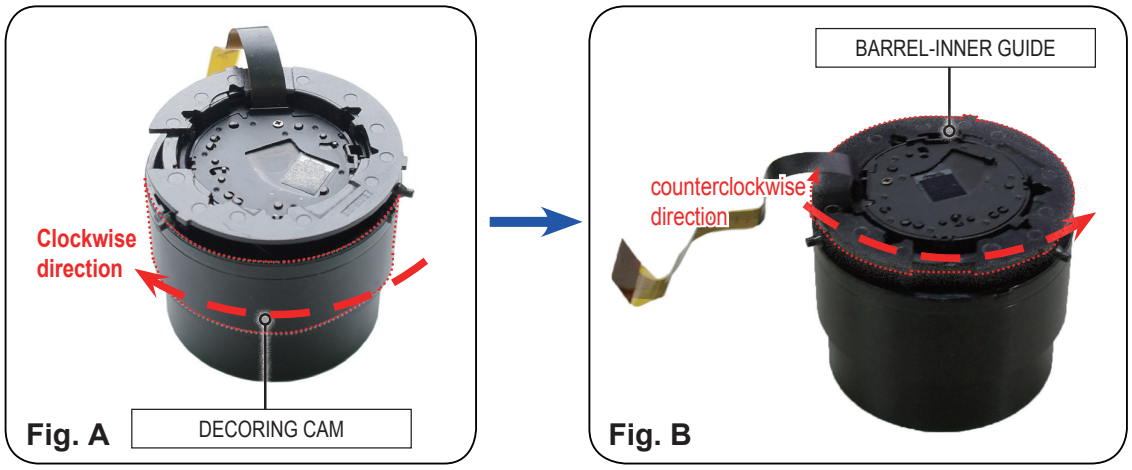


Fig 3-27

(g) Remove the ASSY SUB BARREL CAM.

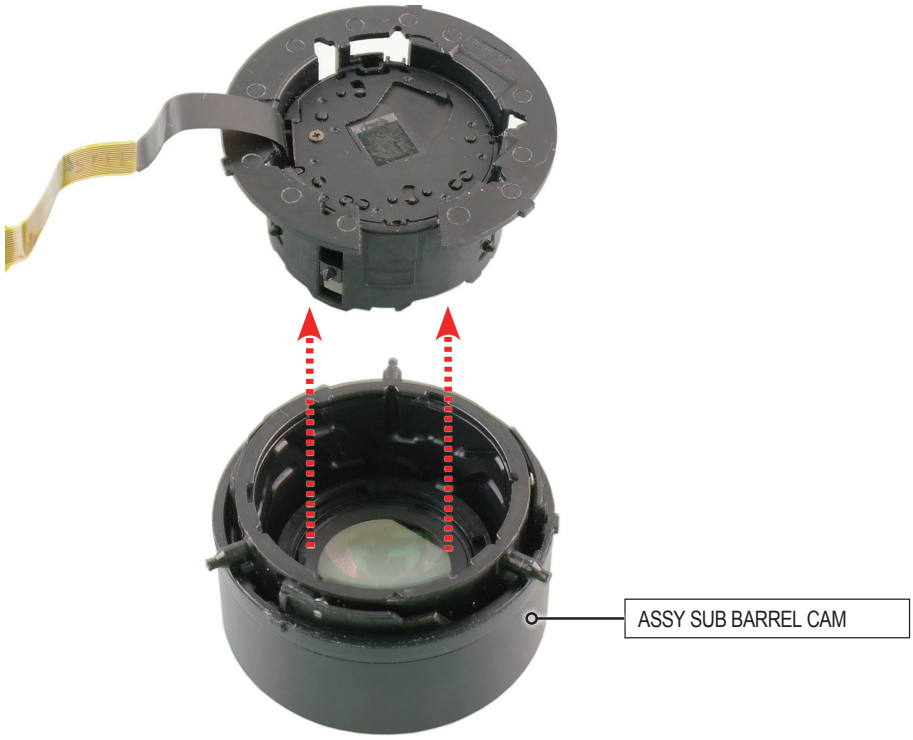


Fig 3-28

(h) Remove the ASSY SUB BARREL-3RD and then remove the ASSY SUB BARREL-2ND LENS.

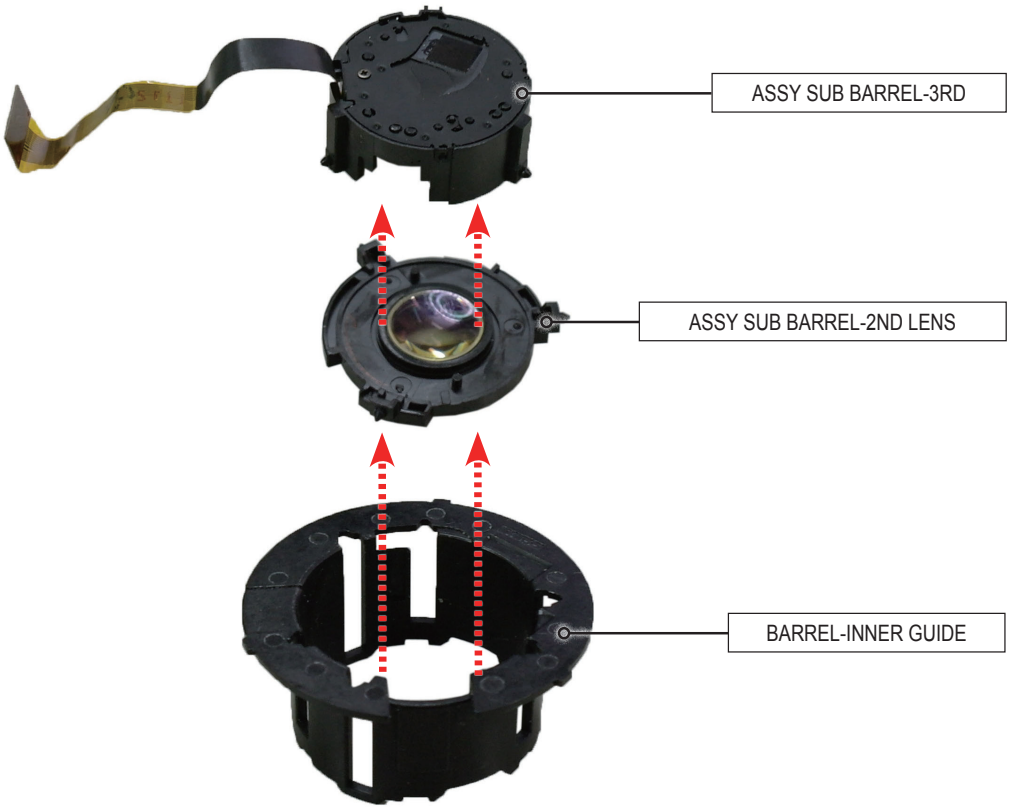


Fig. 3-29

(i) Turn the DECORING-CAM by counterclockwise direction as arrow and remove it.

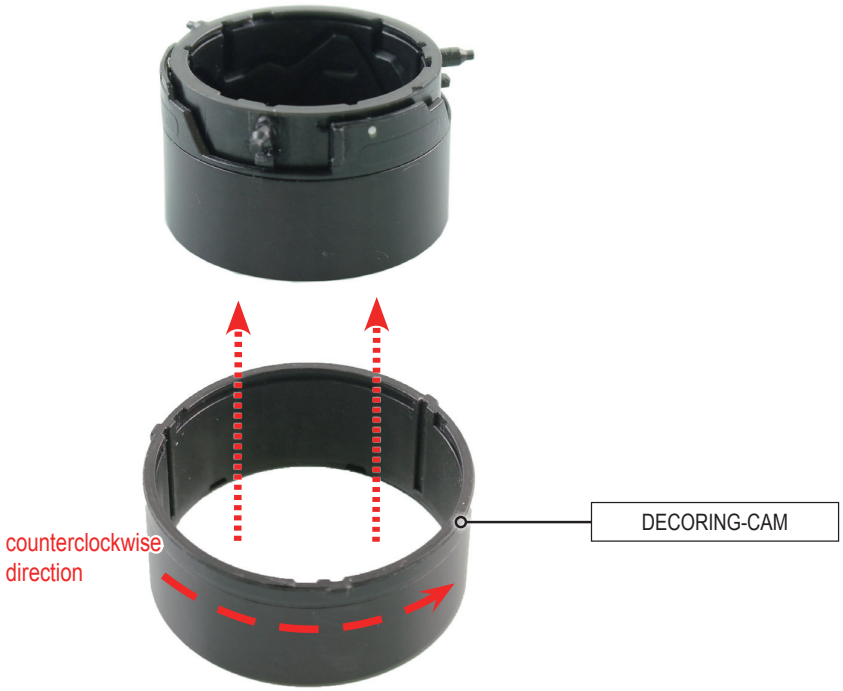


Fig. 3-30

(j) Turn the ASSY SUB BARREL-ZOOMRING by counterclockwise direction as arrow and remove it.

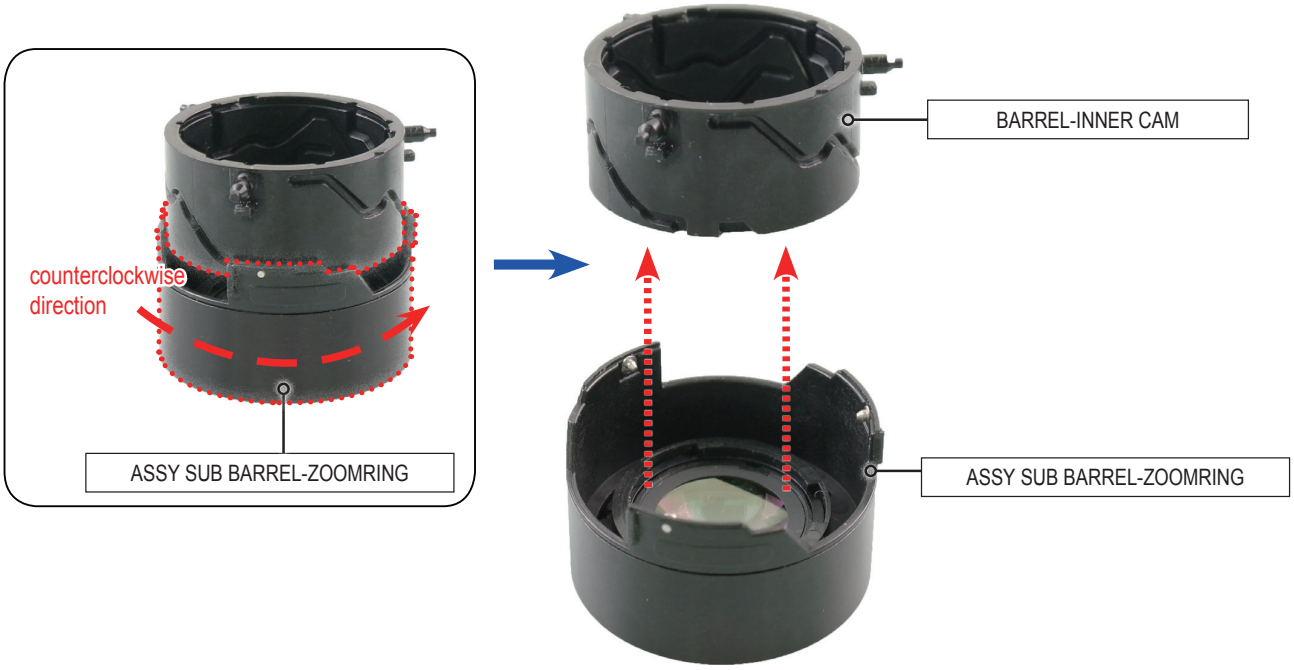


Fig. 3-31

3-4 Reassembly of barrel

3-4-1 How to use the lubricant for anti-friction to the ASSY BARREL assembly.

■ Anti-friction lubricant serves to prevent from the possibility of defective parts.
■ Replacement parts are required to apply the lubricant before installing the ASSY BARREL.

CAUTION

- **HANARL is volatile product. Keep its container tightly covered.**
- **Make sure to shake the HANARL well first before you use it because it has a lot of particles in the bottom. (Otherwise it becomes ineffective.)**
- **Shake the HANARL until there are no lumps at all and apply it with brush.**

1. Type of lubricant

<Table. 3-2 lubricant Information>

Component Name	Where to apply	Name of lubricant
Lens Base	Sliding contact surfaces of AF Lens.	NFH-743C
Barrier assy Related Parts	Friction part and the pins	
AF motor Related Parts	Clip part and lead screw	
Others components	Inside and outside friction surface	

※ Please refer the dealer on lubricant a noted below.

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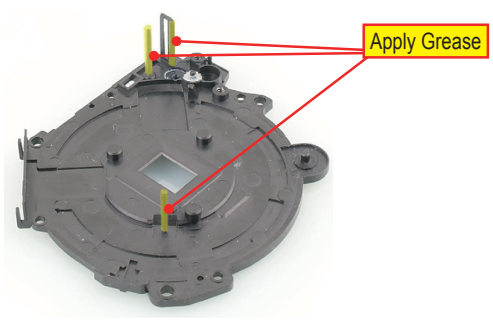
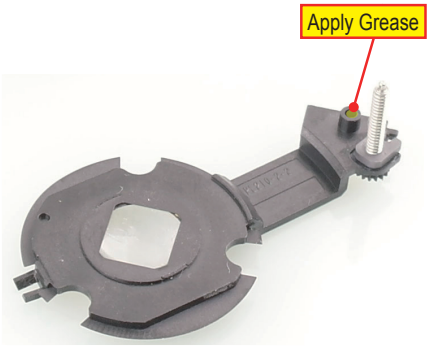
E-MAIL : jykim@kiscokorea.co.kr

2. Instructions

<Table. 3-3 Lubricating with Grease: Lens Base>

The pins that work AF Lens
1) Apply the Grease KG-513 on the pins and Guide of AF Lens. 2) Do not get any Grease on the AF lens. 3) Apply a light coating of the Grease KG-513 and make sure not to get any on the AF lens and other components.
 

3. Lubricating with HANARL: Others components

Apply the HANARL to the Inside and outside friction surface of the components such as ZOOMRING, CAM BARREL, GUIDE PLATE as illustrated in image below.

CAUTION

- Make sure to shake the HANARL well first before you use it until there are no lumps.
- Apply the HANARL with a clean and good-quality brush, making sure the surface is clean.
- HANARL is volatile product. Keep its container tightly covered.

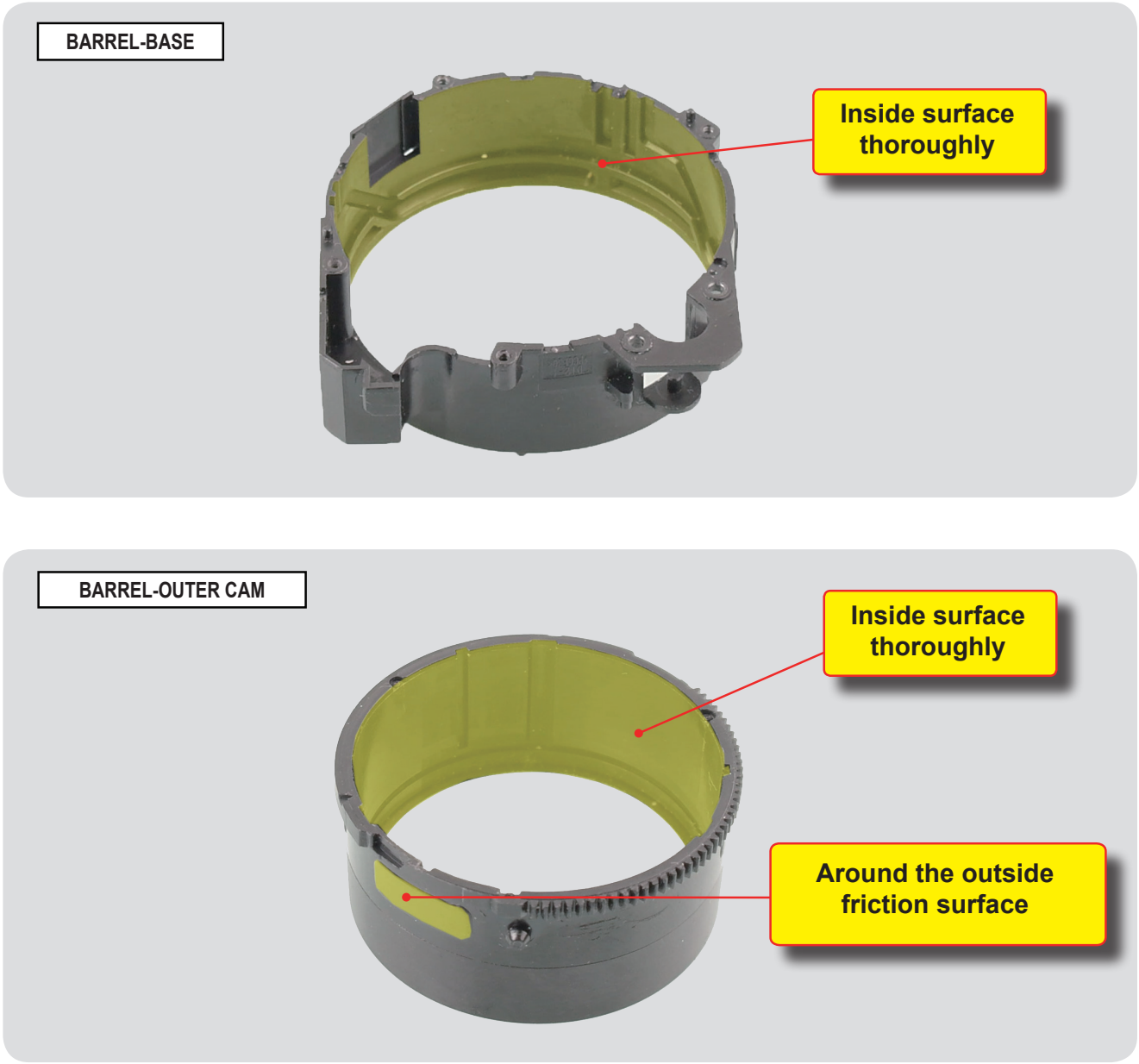
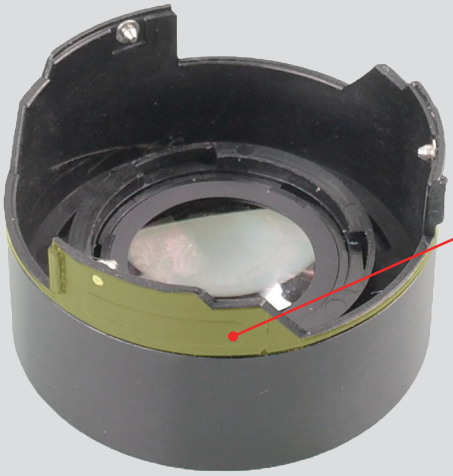
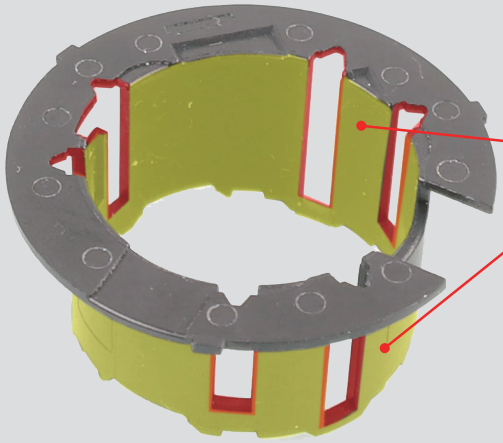


Fig. 3-32

ASSY SUB BARREL-ZOOMRING



BARREL-INNER GUIDE



DECORING-CAM

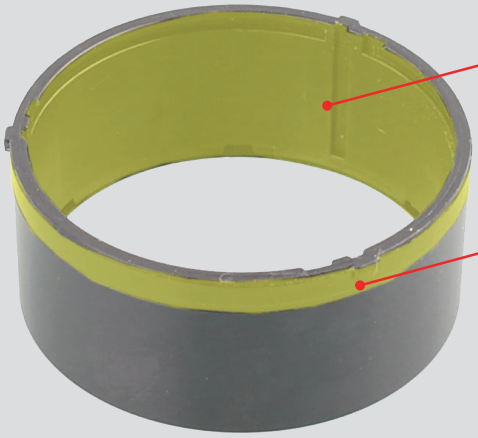


Fig. 3-33

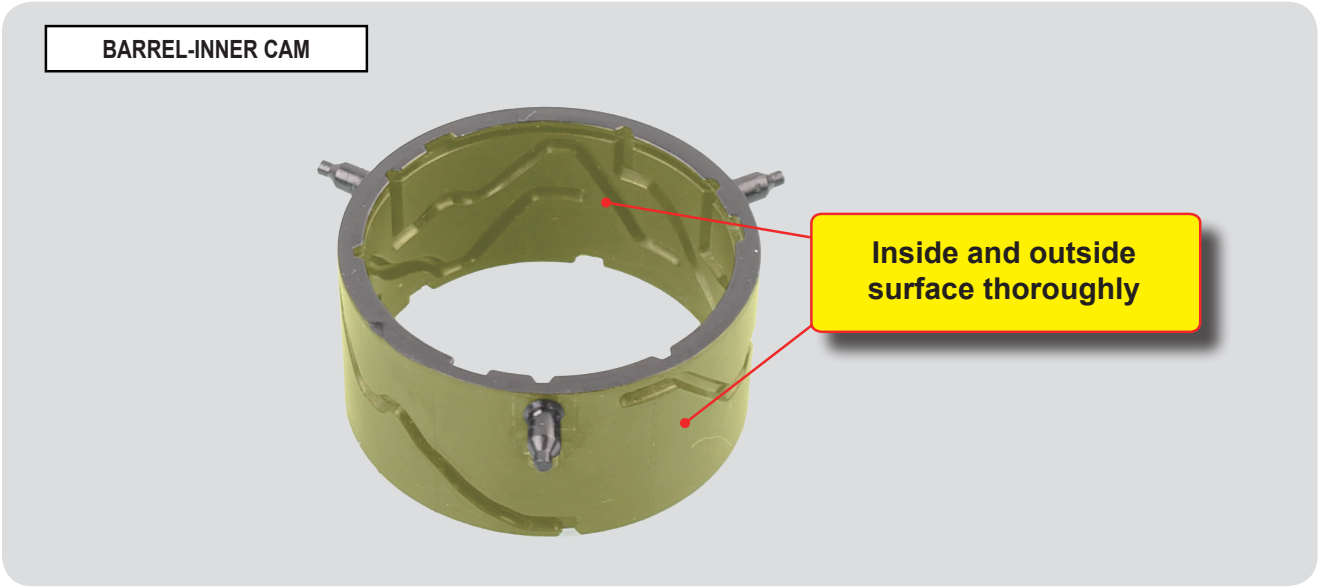


Fig. 3-34

3-4-2 Reassembly of BARREL ASSY.

1. Reassembly of BARREL.

(a) Assemble the BARREL-INNER GUIDE and ASSY SUB BARREL-2ND LENS by aligning the part “a with b" as illustrated.

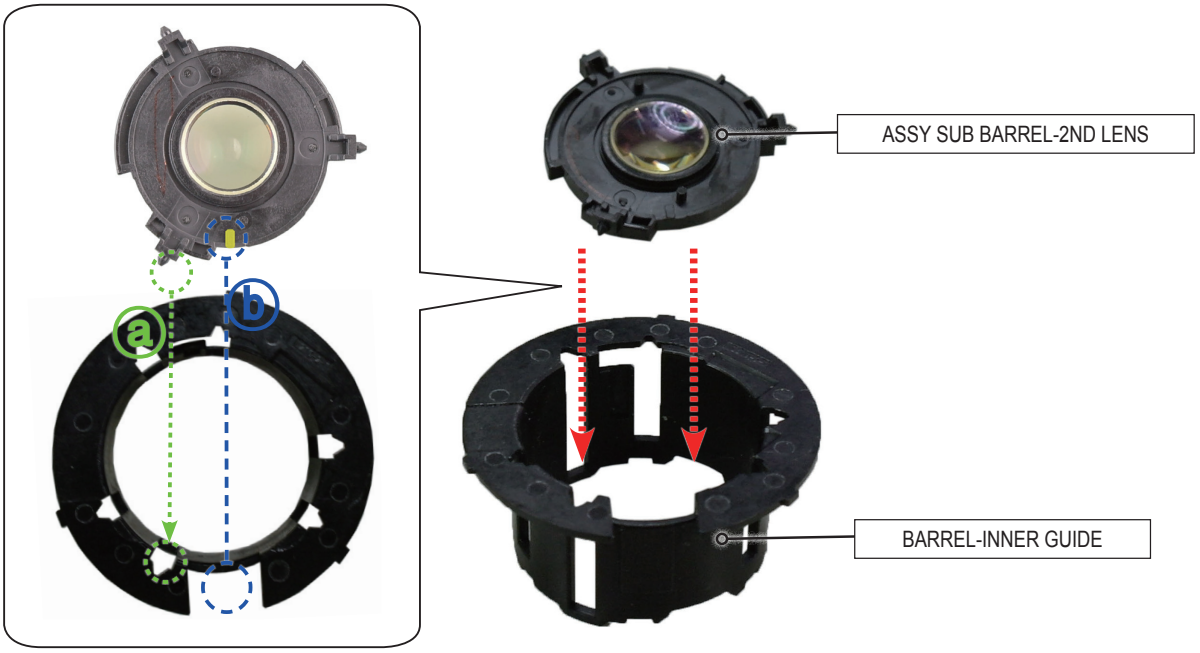


Fig 3-35

(b) Assemble the ASSY SUB BARREL-3RD and BARREL-INNER GUIDE by aligning the part “a with b” as illustrated.

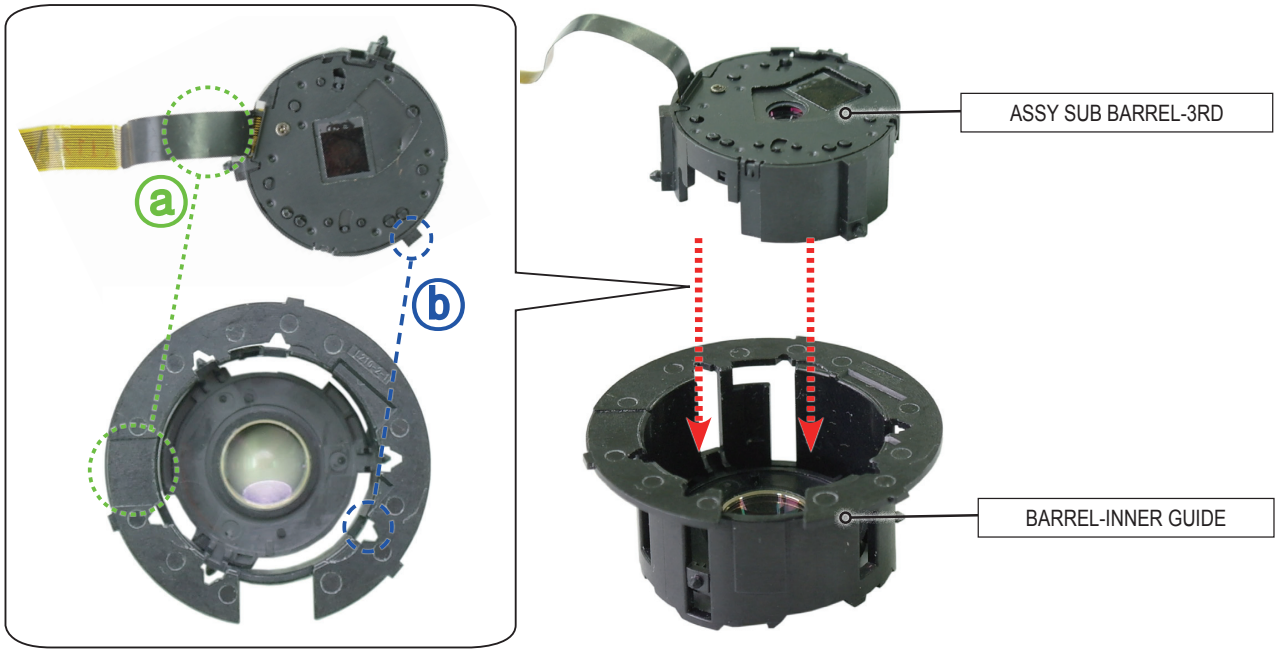


Fig 3-36

(c) Assemble the BARREL-INNER CAM by aligning the part “a with b” as illustrated and then turn the Clockwise direction as arrow and assemble it.

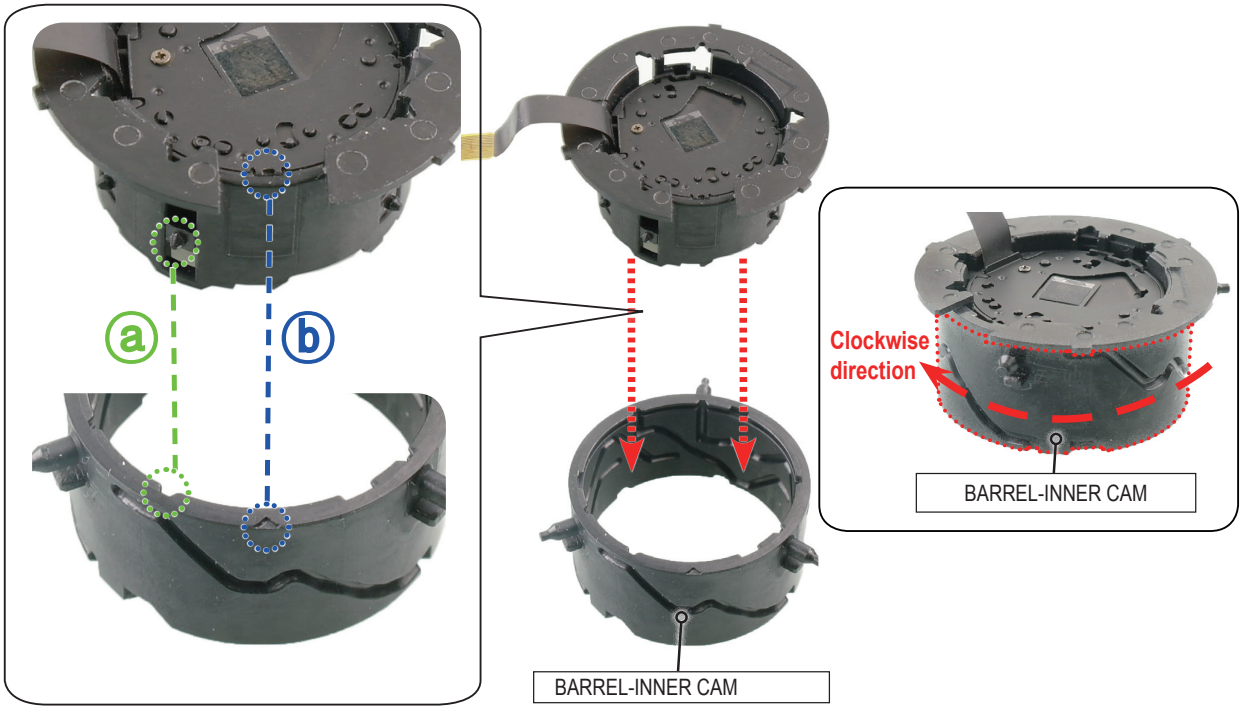


Fig 3-37

(d) Assemble the BARREL-INNER CAM and ASSY SUB BARREL-ZOOMRING by aligning “a”, "b" and then turn the BARREL-INNER CAM by counterclockwise direction as arrow and assemble it.

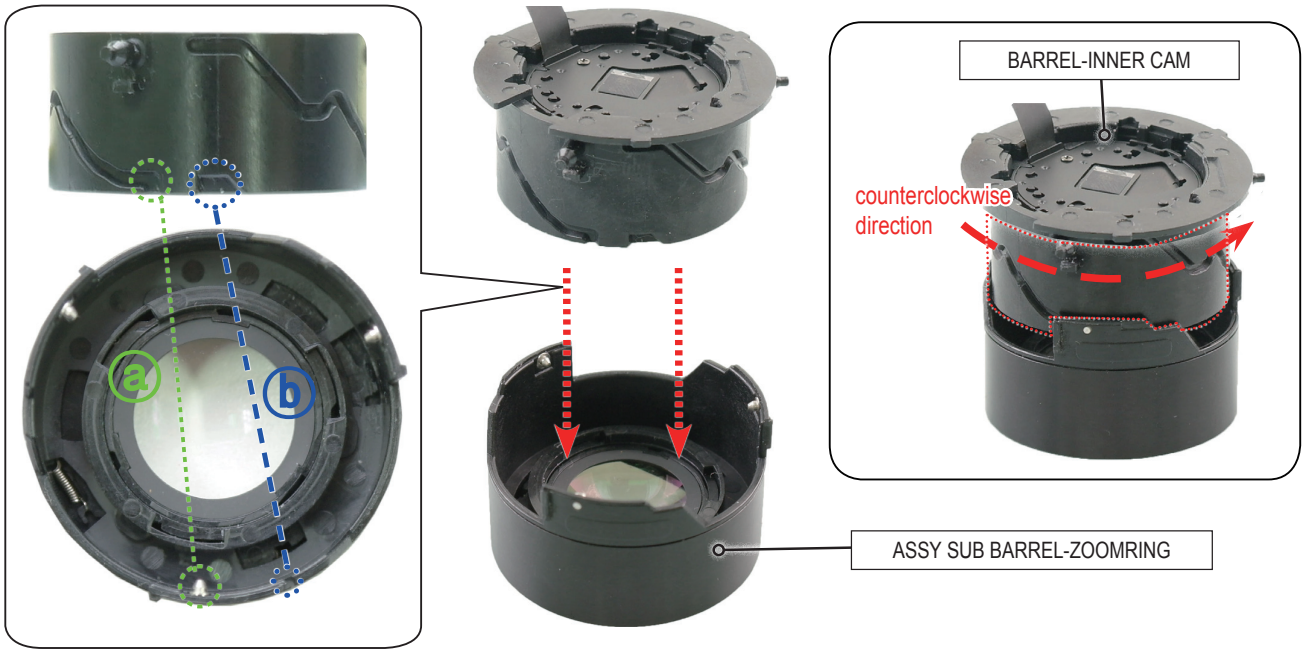


Fig 3-38

(e) Converge the protrusion by middle direction as "a" of "Fig.A" and then assemble the DECORING-CAM by aligning the part “b”, "c" as illustrated.

Fig 3-39

(f) Assemble the BARREL-OUTER GUIDE by aligning the part “a", "b”, "c" as illustrated.

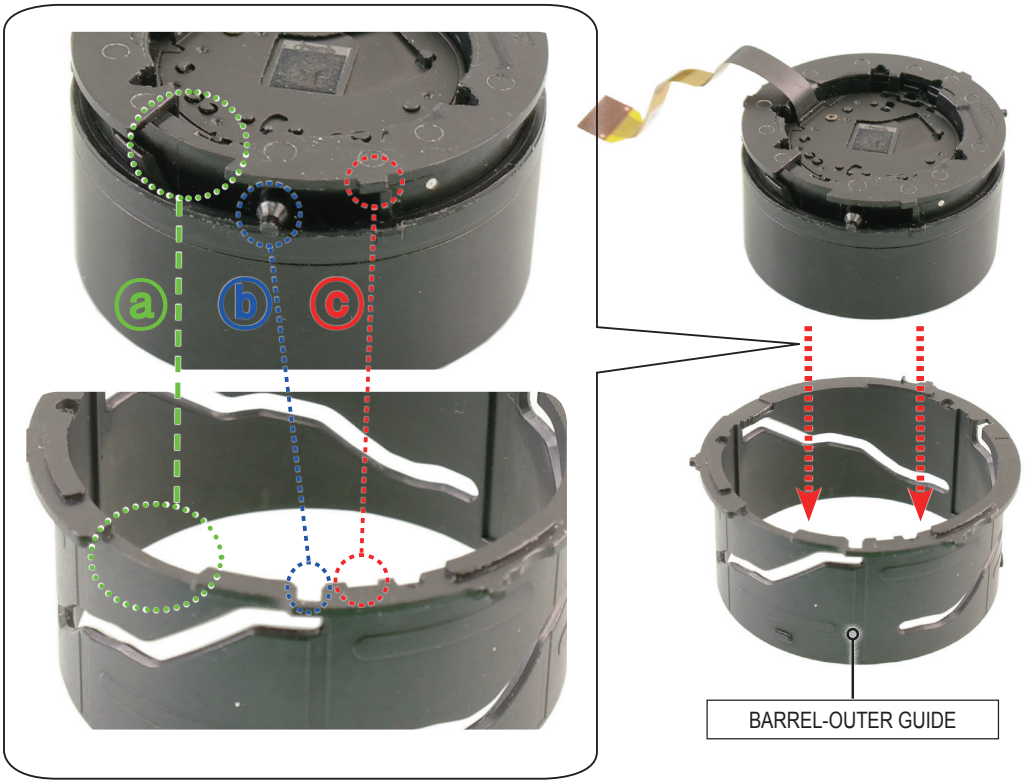


Fig 3-40

(g) Assemble the BARREL-OUTER CAM by aligning the part “a", "b” as "Fig. A".

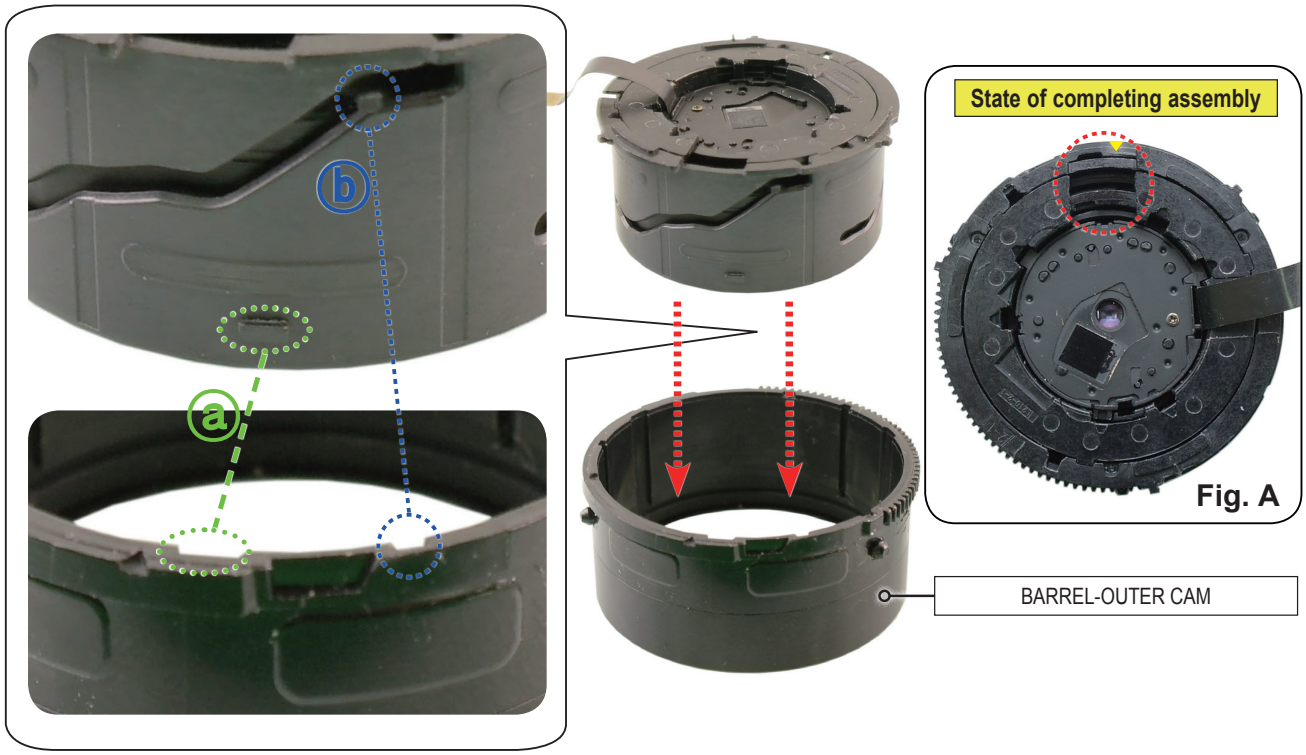


Fig 3-41

(h) Assemble the BARREL-BASE by aligning the part “a”, "b" as illustrated.

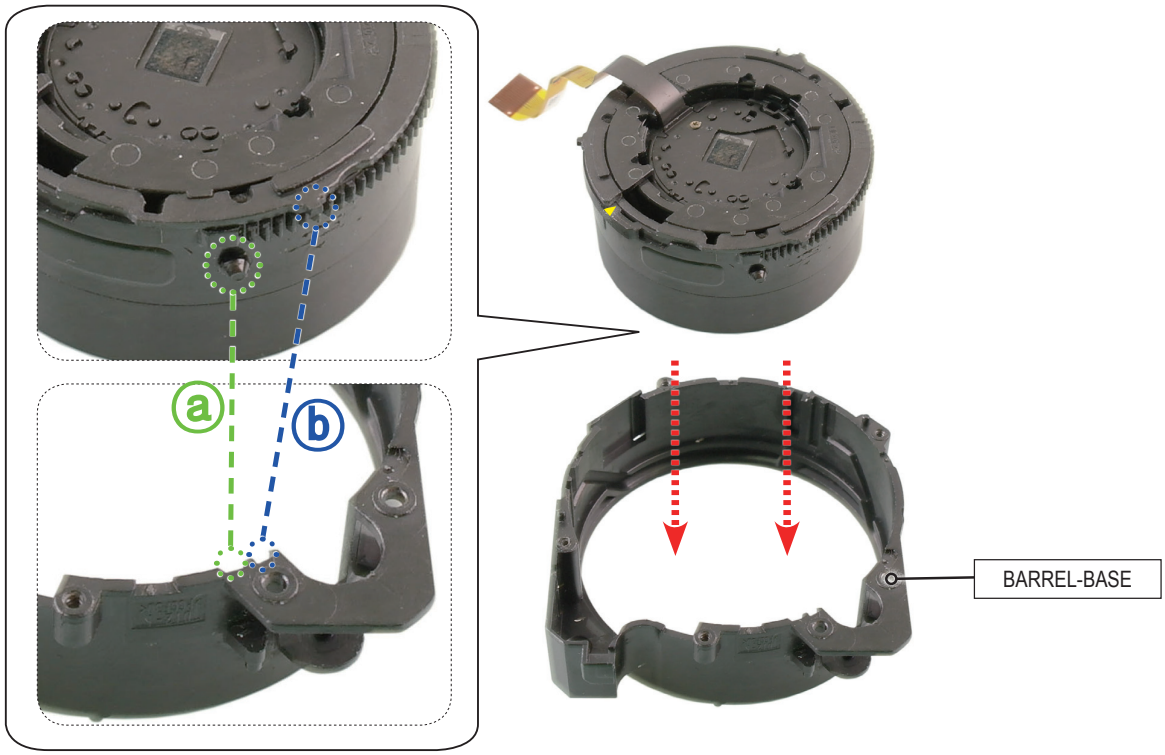


Fig 3-42

(i) Assemble the FPCB as "Fig.A" and then make the BARREL by TELE state. Assemble the SHUTTER FPCB GUIDE by aligning the “a”, "b" as illustrated. Be especially careful not to Bend the SHUTTER FPCB GUIDE when Assemble it.

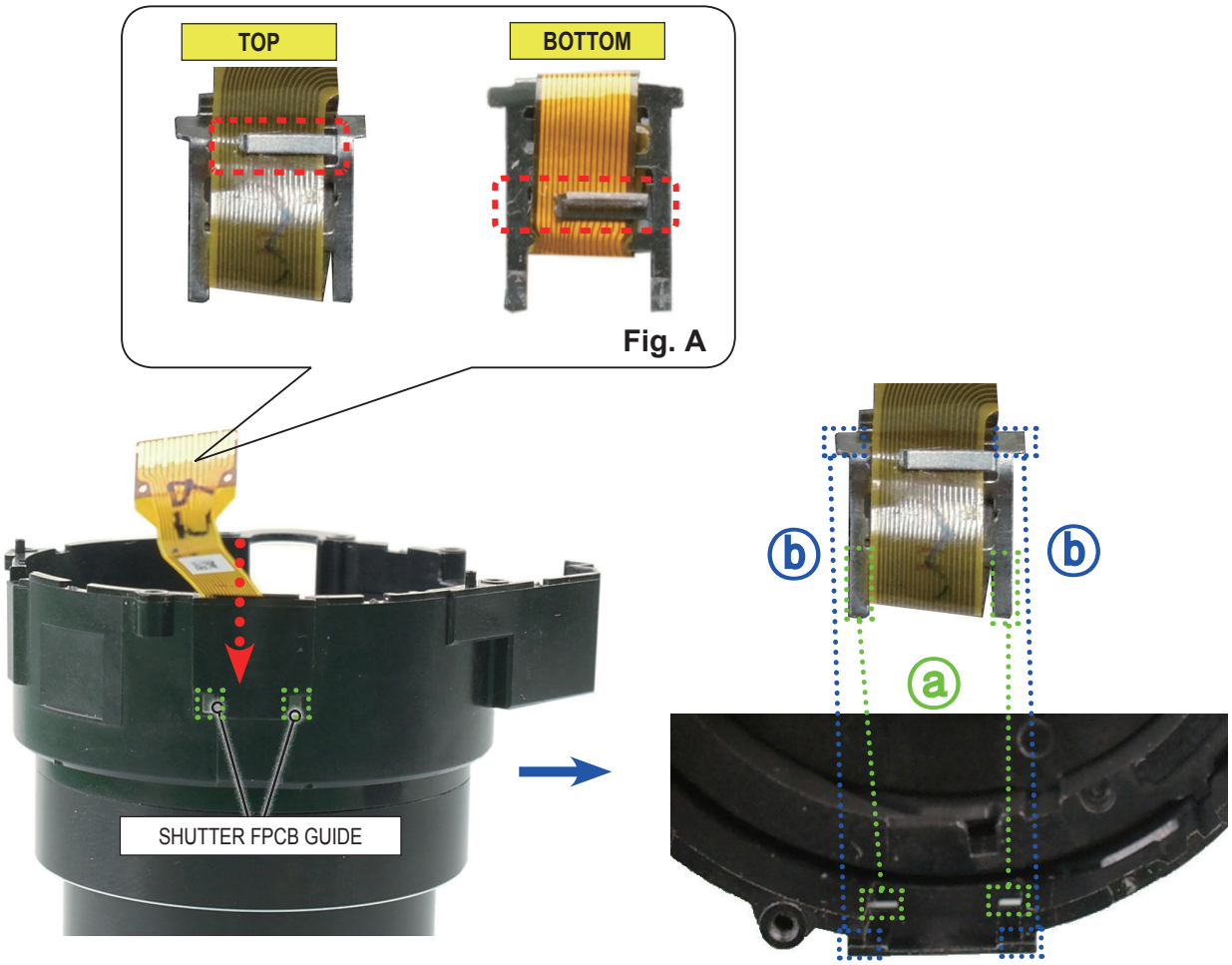


Fig 3-43

(j) Check the location of AF CLIP to Tele state as "Fig. A" and then assemble the ASSY SUB BARREL-LENS BASE by aligning “a”, "b". Assembled state of pin to top and bottom as "Fig. B" check it.

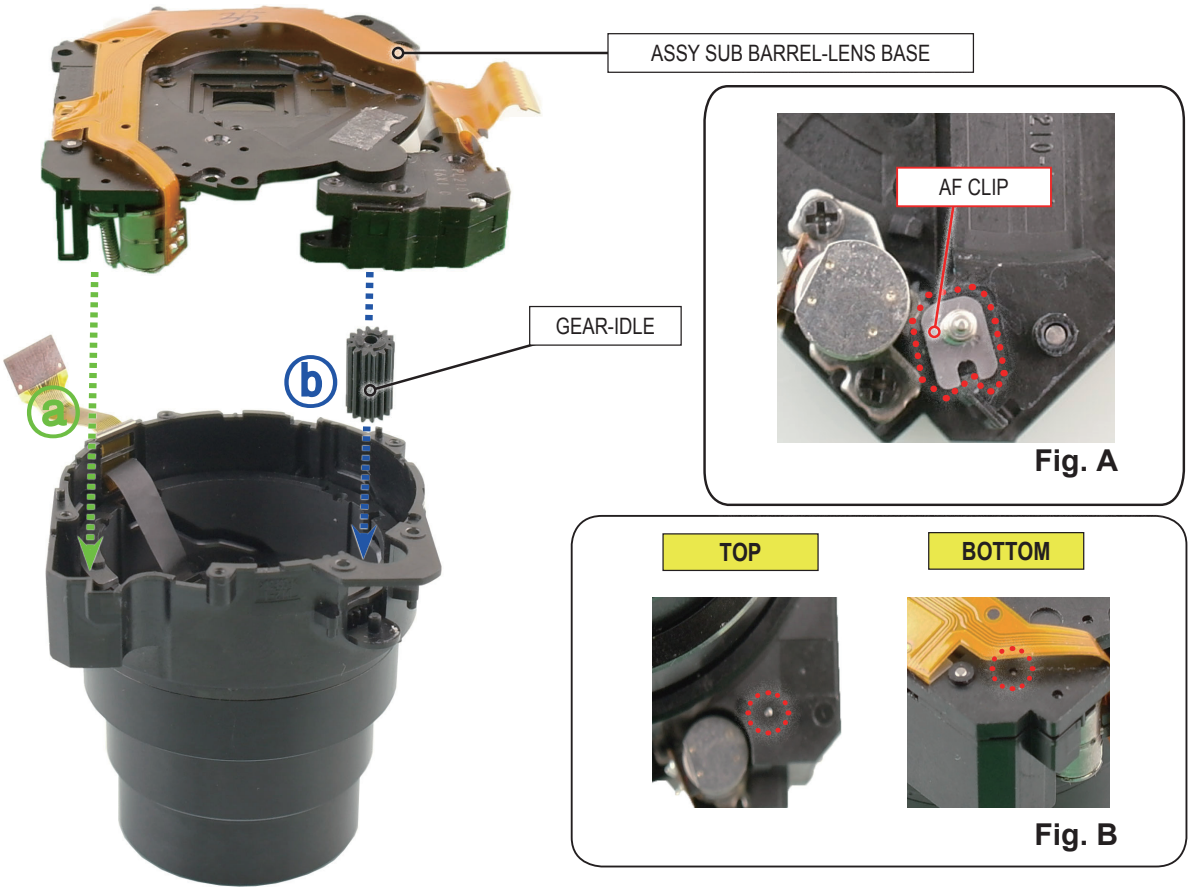


Fig 3-44

(k) Tighten the four SCREWs.

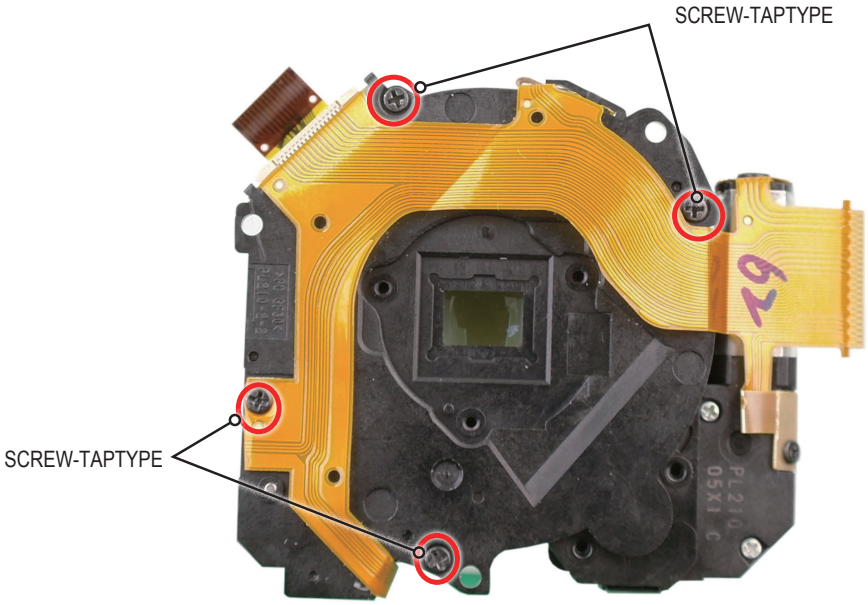


Fig 3-45

(l) Assemble the ZOOM MODULE ASSY by aligning the part “a”, "b" as illustrated.

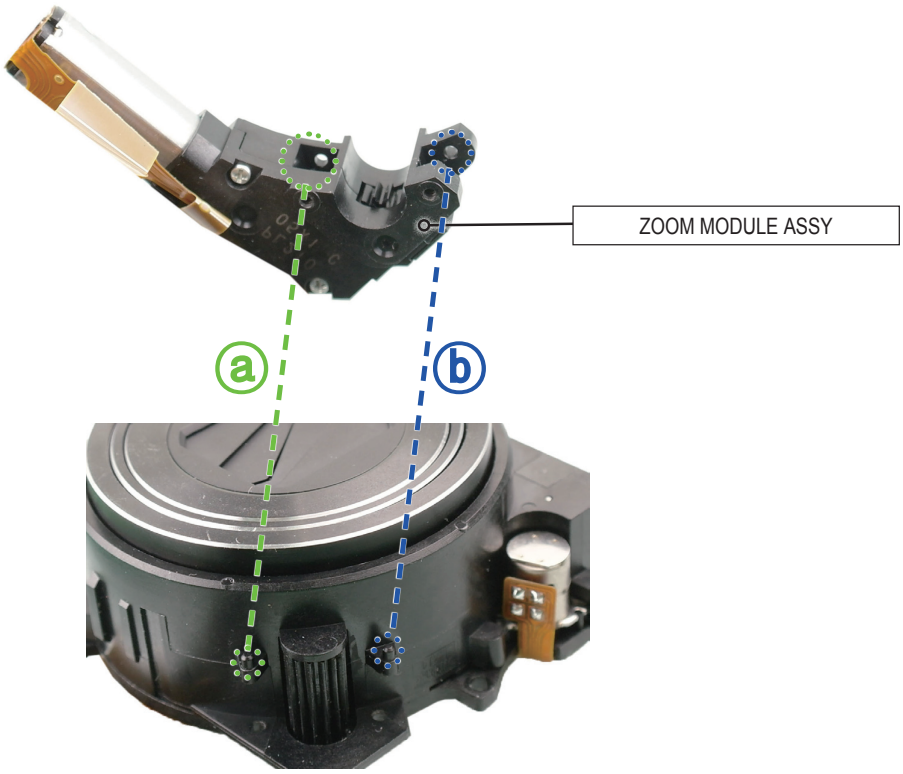


Fig 3-46

(m) Tighten the two SCREWs.

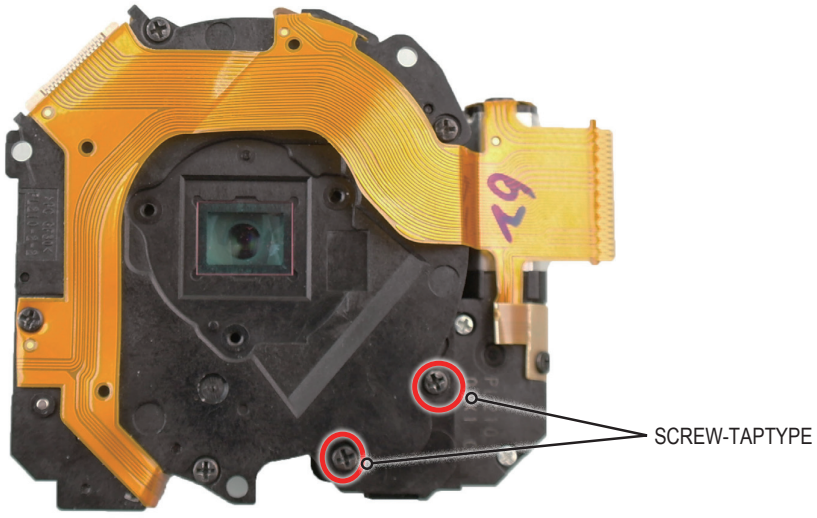


Fig 3-47

2. Reassembly of BARREL FPCB.

(a) Assemble the FPCB as "Fig. A".

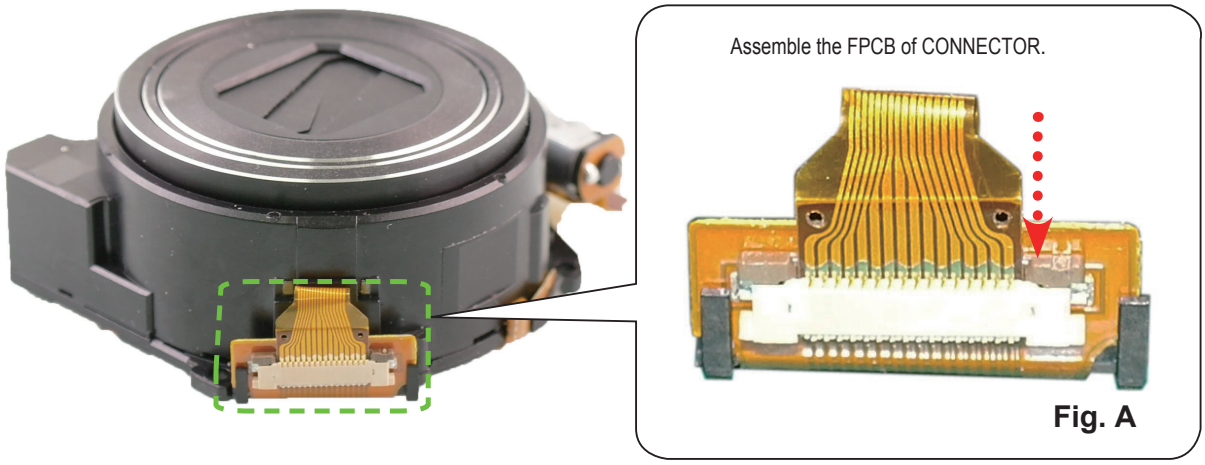
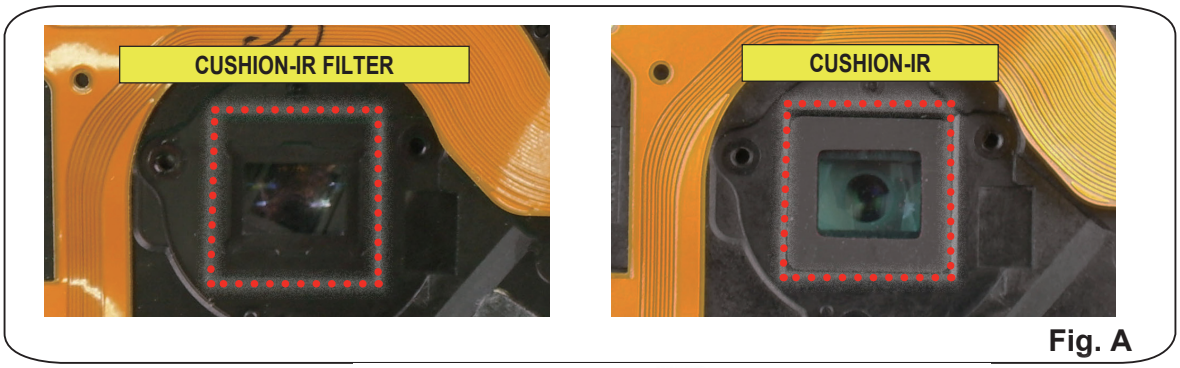


Fig 3-48

3. Reassembly of BARREL FPCB.

(a) Assemble the CUSHION-IR FILTER and CUSHION-IR and PCB FPC-CCD ASSY by order in shown location to "Fig.A" as below and then tighten the three SCREWs.



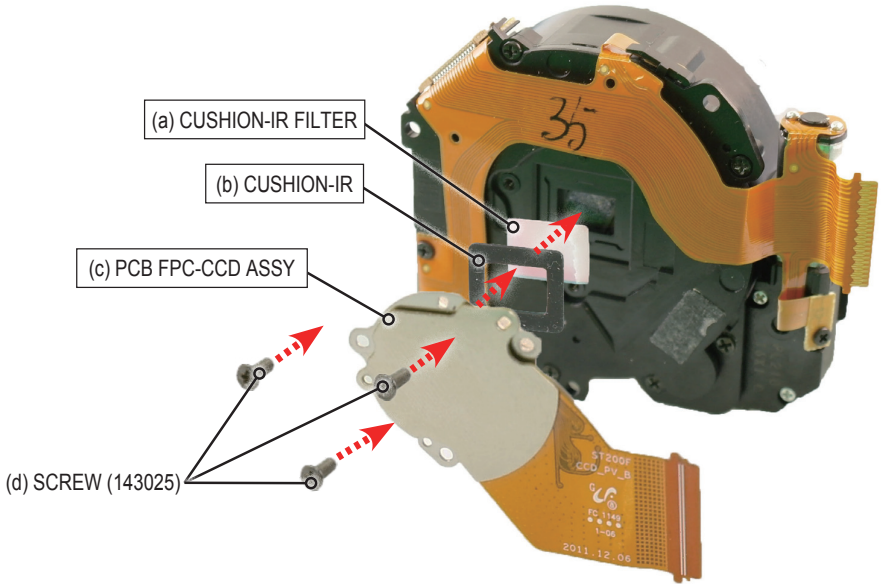
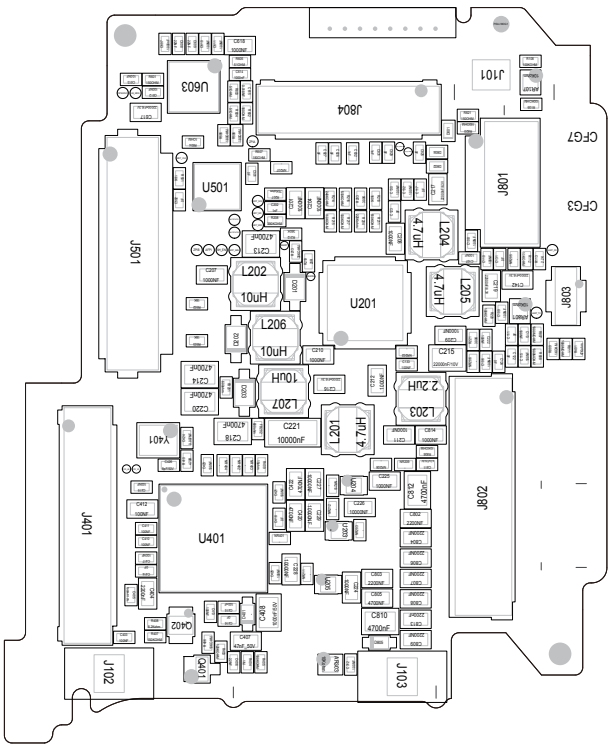


Fig 3-49

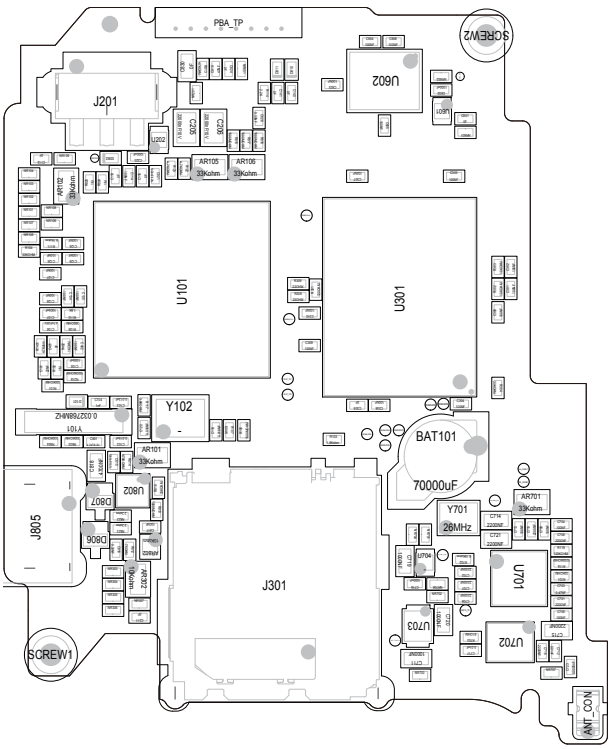
4. PCB diagrams

4-1 MAIN PCB

TOP

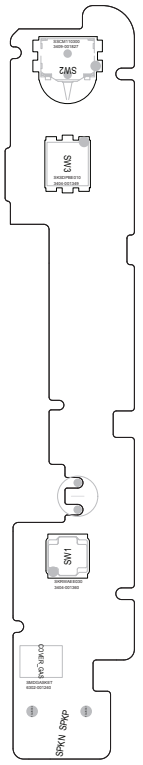


BOTTOM

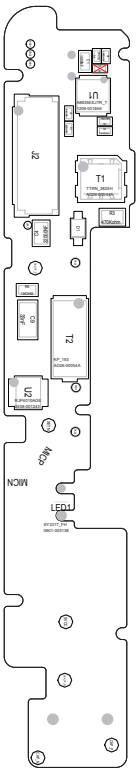


4-2 TOP PCB

TOP

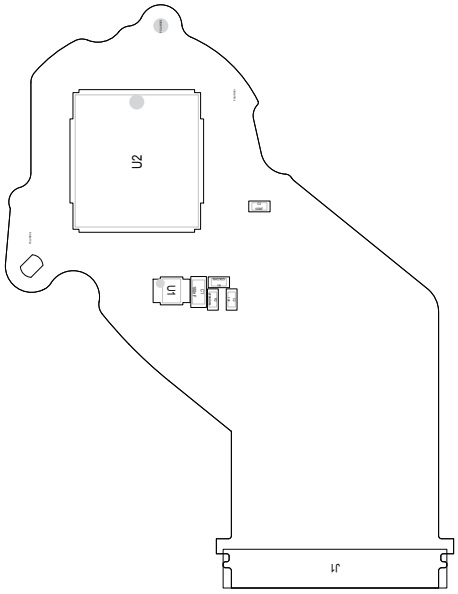


BOTTOM



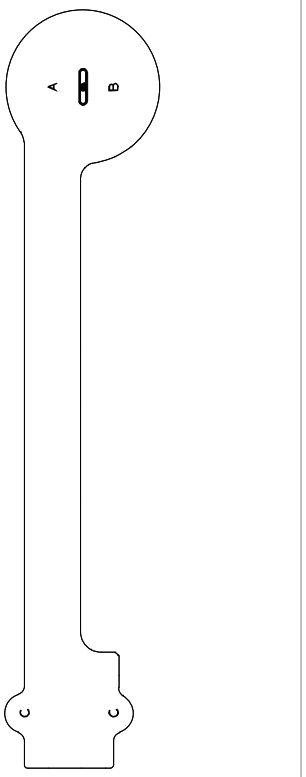
4-3 CCD FPCB

TOP

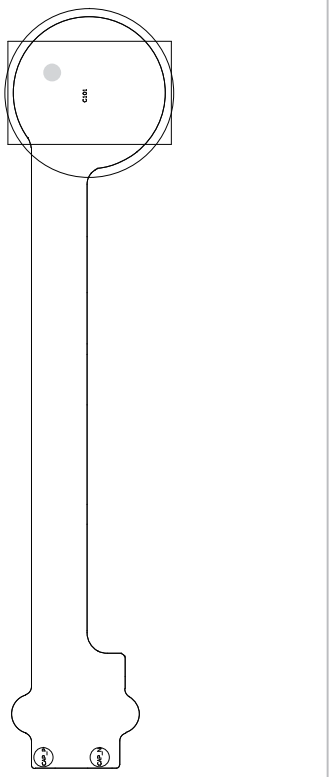


4-4 CAP FPCB

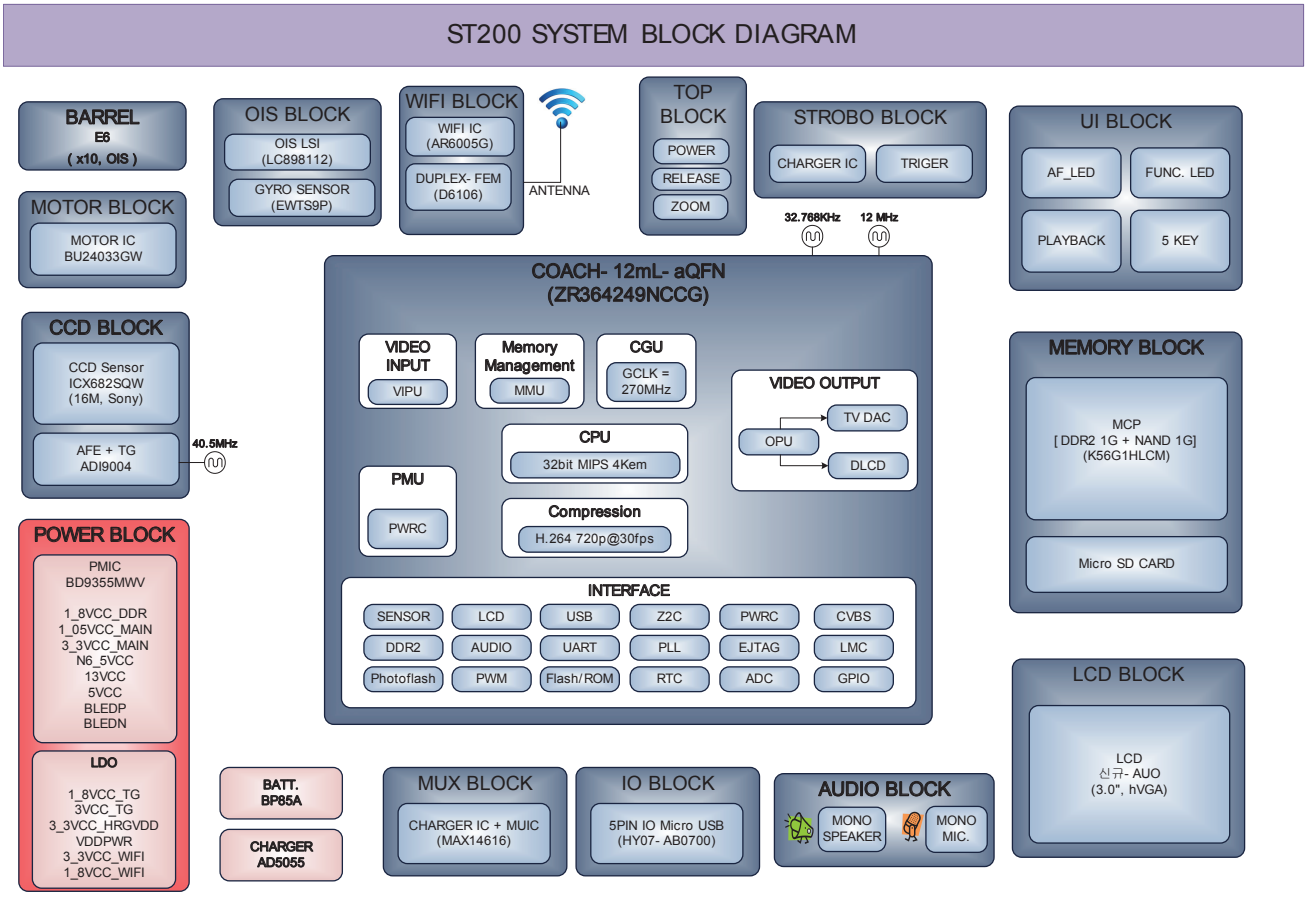
TOP



BOTTOM



5. Block diagram



6. Firmware update

6-1 Product reset

▪ This describes how to reset the camera to factory default setting.

1. First turn on the power of the camera.

Fig. 6-1

2. Press the ❶ WIDE button + DOWN button and then turn the ❷ POWER off.

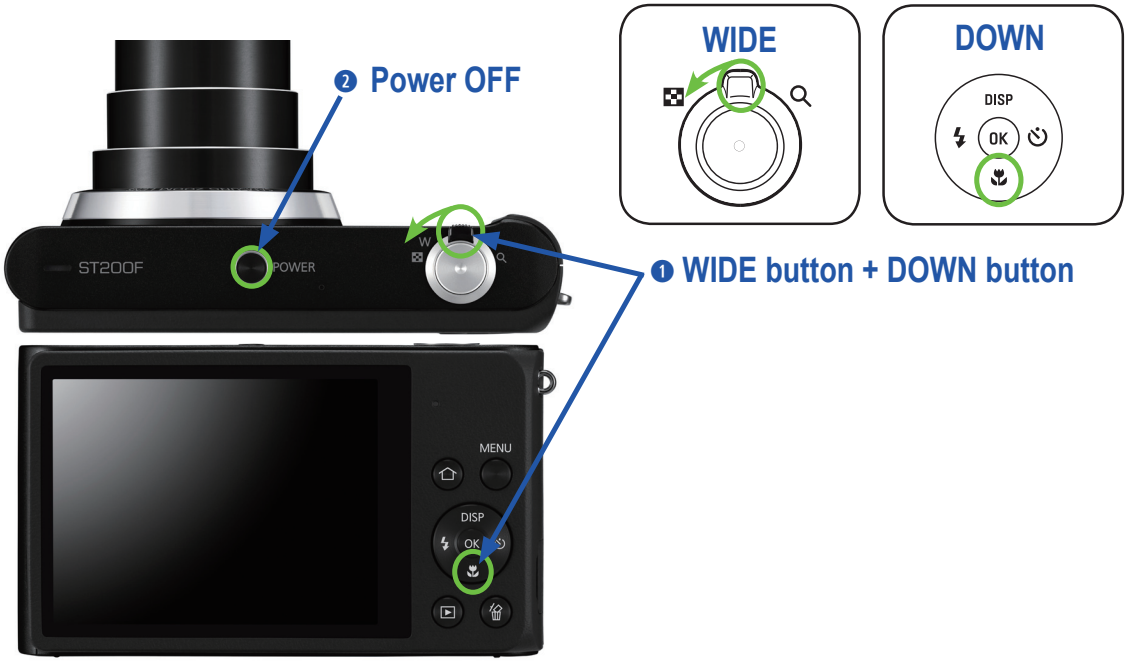


Fig. 6-2

3. Turn the power of the camera on again to check whether it has been reset.

Fig. 6-3

6-2 Version check

▪ This describes how to check the version of the current firmware of the camera.

1. Use fully charged batteries for power.

2. First turn off the power of the camera.

3. Press the ❶ SHUTTER button + DOWN button, and then turn the ❷ POWER on.

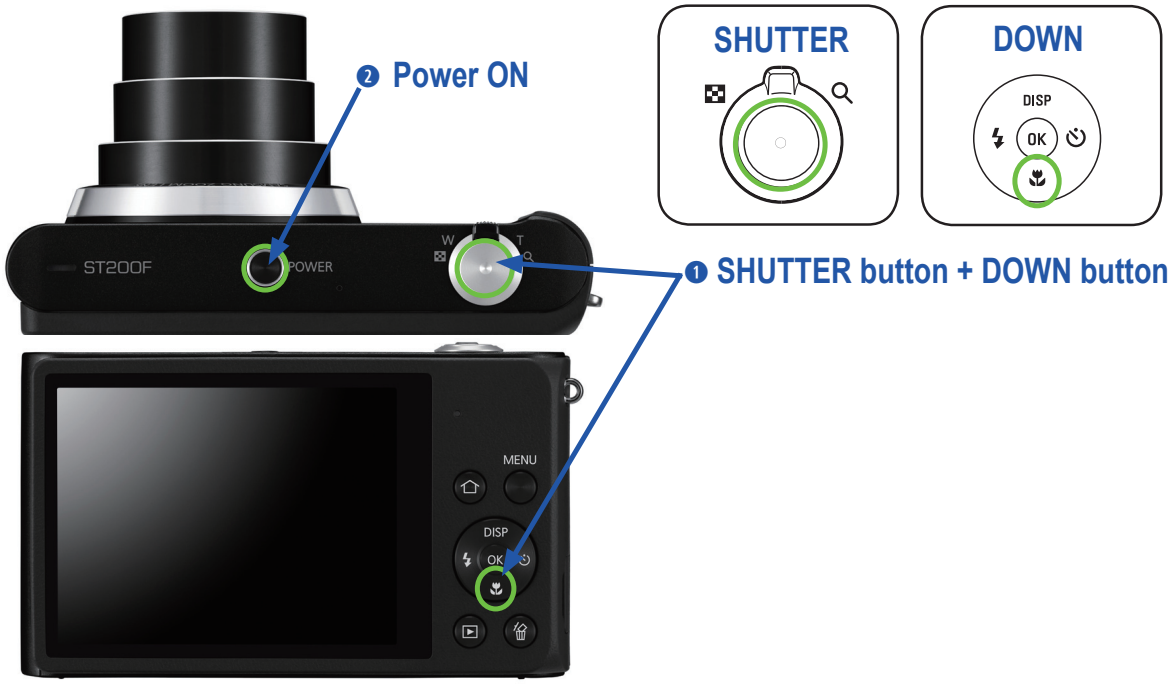


Fig. 6-4

4. Check the version of the firmware and then turn the power off.

Fig. 6-5

6-3 Upgrade

♦ **How to execute the firmware**

The firmware is configured in the following structure.
Code area is where the execution codes to operate the camera are located, and the Partition [1:3] area is where the various resources necessary to operate the camera are saved. Among these areas, Partition 3 area is where the Defective Pixel adjustment data and Lens Shading adjustment data are saved.
User Area is where the setting values are saved through the menu when the user uses the camera, and the adjusted data through integrated process is saved.

<Table. 6-1>

Code	partition1	partition2	partition3	User Area

► **Reference of general version:**

- As the version to update the Code + Partition [1:2] area, this protects both the adjusted data saved in the User Area and the Partition 3 area.

1. Insert the memory card containing the firmware data file and Upgrade Script file into the camera.

* You need two files to upgrade the firmware and the required files are firmware data file and Upgrade Script file.
* Because all data saved on the FLASH memory will be reset when you upgrade the firmware, back up your data before proceeding with the upgrade.

fwup.txt
ST200-DSP-1201194-full.elf

2. Use the AC adaptor or fully charged batteries for the power.

* You can proceed with the upgrade only when the battery level is full (Icon showing full up to 3rd level).

3. Turn on the power of the camera.

Fig. 6-6

4. The version of the firmware to upgrade will be displayed on the LCD screen. When you press the SHUTTER button, the firmware upgrade will start.

Fig. 6-7

5. The progress of the firmware upgrade will be displayed on the LCD and the upgrade will proceed.

Fig. 6-8

6. When the upgrade is completed, the camera will automatically be turned off.

7. Adjustment

7-1 Basic guide for adjustment

■ After replacing an electronic part, you must make changes for each adjustment item in the **ST200/ST200F**.
■ The following table shows the necessary adjustment item for replacing each part.
■ The camera must be fixed with a tripod and levelled condition must be maintained.

1. After replacing an electronic part, you must make adjustments for each item by referring to the following table.

<Table. 7-1 Adjustment information>

	MAIN PCB	TOP PCB	BARREL ASSY	CCD ASSY
FIRMWARE UPGRADE	O	X	O	O
LENS SHADING ADJ	O	X	O	O
SHUTTER CLOSE TIME ADJ	O	X	O	O
FLASH ADJ	O	O	O	O
PUNT ADJ	O	O	O	O
VERTICAL LINE ADJ	O	X	O	O
CCD DEFECT PIXEL ADJ	O	X	O	O
OIS CENTERING	O	X	O	O
SERIAL NUMBER WRITING ADJ	O	X	X	X

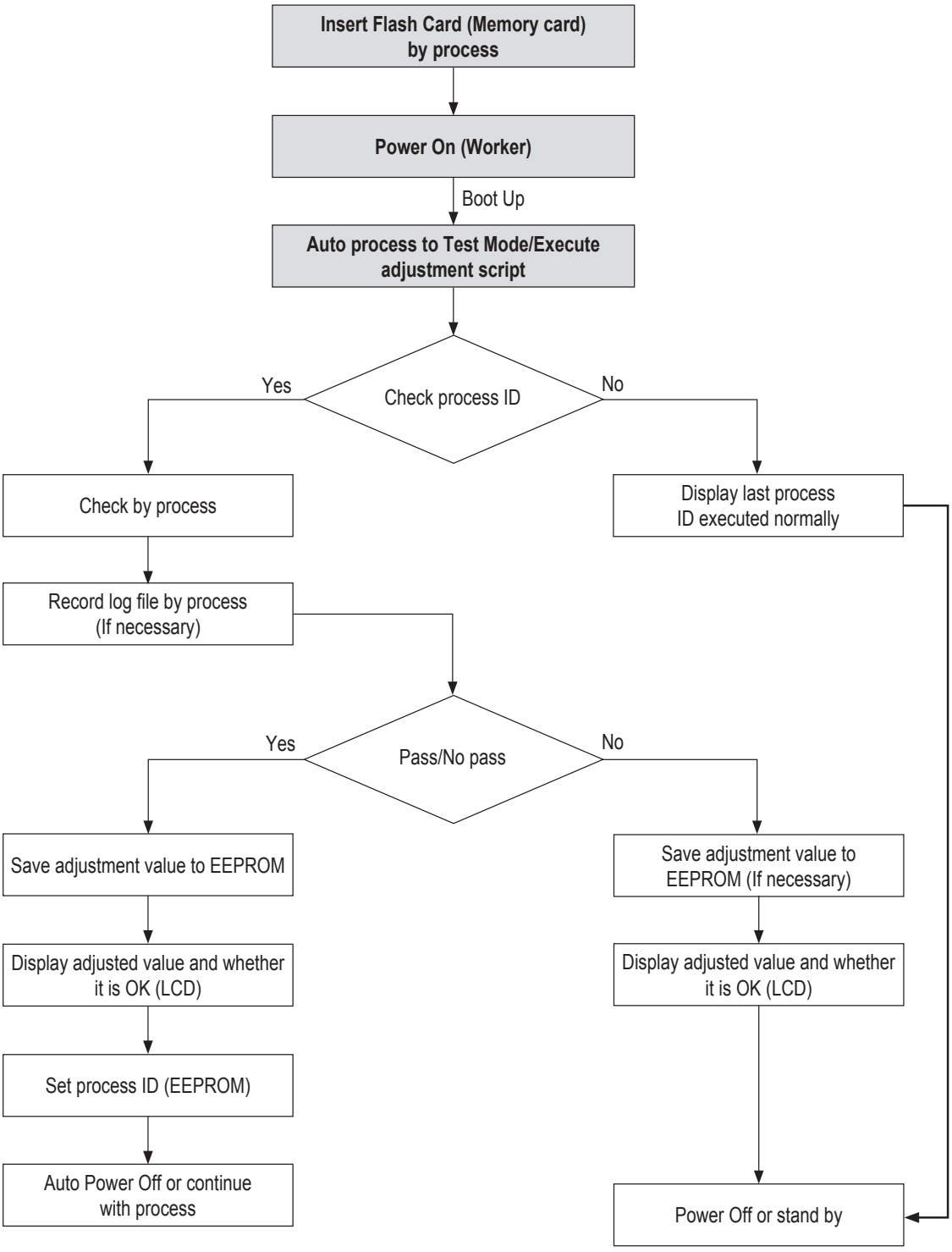
2. Adjustment equipment

- AE TESTER: AE TESTER that enables **LV 12**.
- The colour temperature specification of the Light box is **5500K**.
- Infinity Collimator for PUNT adjustment
- Gray chart (18%) for FLASH & AWB, DARK BOX)
- POWER SUPPLY: 4.2V/2A

3. Adjustment program file

Save and use the program for each adjustment item on the memory card to adjust each item.
The file name for each adjustment item is the same as **"ST200_ADJ.TXT", "ST200F_ADJ.TXT"**.

4. Operating procedure of adjustment program



7-2 Lens shading ADJ

■ Make adjustments to the Lens Shading to the surrounding brightness of each camera.
■ Because the surrounding brightness is lower compared to the centre for each set, separately adjust each set so that the surrounding brightness is higher.

<Adjustment method>

1. Prepare the AE TESTER.
* Luminance specification of the Light box is **LV 12**.
* The Light box is located at 10mm ± 1mm with the body tube open.
* The colour temperature specification of the Light box is **5500K**.

2. Save the applicable adjustment file to the memory card.

3. After inserting the memory card containing the program file to the camera, set the camera to the AE TESTER.

Fig. 7-1

4. Adjust the LV value of the AE METER to 12.

5. When you turn on the power of the camera, the adjustment will start automatically.
❶ Adjust the Lens Shading with large lense, Zoom 0 condition.
❷ Refer to the EEPROM WRITE information and write the adjustment result to EEPROM.
❸ Refer to the CARD WRITE INFORMATION to write the adjustment result to the data file.
❹ Set the lower and upper specification.

6. When the adjustment is completed, the camera will automatically be turned off.

<Adjustment result>
On the memory card, open and check if a CSV file was generated from the adjustment..

<Restriction>
If the capacity of CSV file is more than 30KB, clear all of the previous data and then, record

7-3 Shutter close time ADJ

■ Adjust the Close timing of the device shutter by camera.
■ Because there is a deviation of shutter closing time by each set, make adjustments by each set to reduce this deviation.
■ CCD Gain item and AWB LOW are adjusted simultaneously.

<Adjustment method>

1. Prepare the AE TESTER that can be adjusted to LV 12.

2. Install the camera to the AE TESTER.
* Luminance specification of the Light box is **LV 12**.
* The colour temperature specification of the Light box is **5500K**.

Fig. 7-2

3. After inserting the memory card containing the program file to the camera, turn on the power of the camera.

4. The adjustment process will automatically start.
❶ Refer to the specification (Illuminance) for testing.
-Line delay and Sub delay are adjusted so that the appropriate value can be identified to the specification illuminance.
❷ If the result line delay wish within the min and max range, it is OK. If it is outside of the range, process as NG.
❸ Refer to the EEPROM WRITE information and write the adjustment result to EEPROM.
❹ Refer to the CARD WRITE INFORMATION to write the adjustment result to the data file.

5. When the adjustment is completed, the camera will automatically be turned off.

<Adjustment result>
On the memory card, open and check if a CSV file was generated from the adjustment.

<Restriction>
If the capacity of CSV file is more than 30KB, clear all of the previous data and then, record

7-4 Flash ADJ

■ Set a limit to the illuminance by the Strobo light to classify the hardware defect.
■ Classify the set that deviates from the specifications by illuminating times and then calculate the flash R, B gain.
■ AWB HIGH item is adjusted simultaneously.

<Adjustment method>

1. Attach an 18% reflective paper in the dark room where the light is blocked.

2. Set up the camera in the dark room.

3. Set the distance between the reflective paper and camera to 50cm.

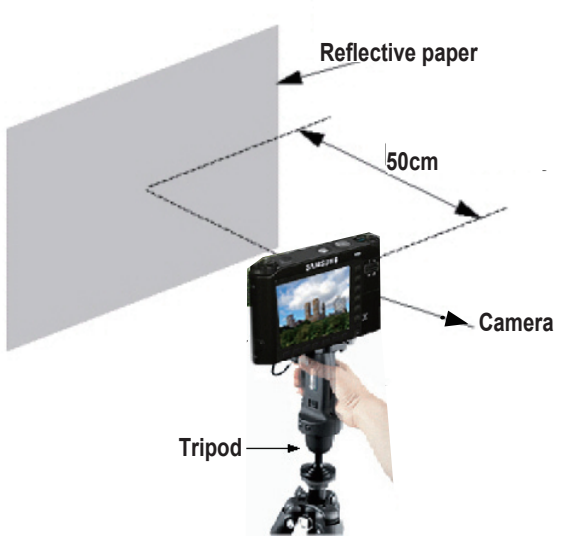


Fig. 7-3

4. Save the applicable adjustment file to the memory card.

5. After installing the memory card containing the program file, turn on the power of the camera.

6. The adjustment will automatically start.

❶ Compare the reference illumination for 2 illuminations using the flash algorithm, and make a judgment.
❷ By using the average value of the illuminance of 2 times, check the R and B gain to make Pass/No Pass judgment.
❸ Record the R and B gain to EEPROM during flash process and R, B gain success.

<Adjustment result>
On the memory card, open and check if a CSV file was generated from the adjustment.

<Restriction>
If the capacity of CSV file is more than 30KB, clear all of the previous data and then, record

7-5 Punt ADJ

■ **Adjustment objective:** After replacing the MAIN PCB and BARREL, you must decide the AF search range so that the optimal focus can be identified by the body tube.
■ **Necessary equipment:** Infinity Collimator

<Adjustment method>

1. Save the adjustment file to the memory card and install it on the camera.

2. Refer to the following adjustment environment specification to adjust the focus.

1) Used specification of Infinity Collimator

- Set the illuminance specification of the Collimator to 6 LV.
- Maintain distance of less than 1cm between the end of the camera body tube to the lens surface of the Infinity Collimator.
- The camera must be fixed while the adjustment is made.

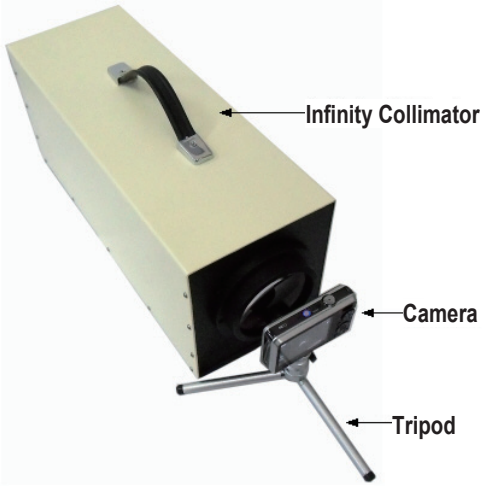


Fig. 7-4

2) Used specification for infinite object

- The camera must be fixed with a tripod and levelled condition must be maintained.
- Set up the camera toward a building or object in infinite distance (more than 500m). (Do not use the chart)
- Set a cathedral, apartment or object with high contrast in day environment/AF area display.

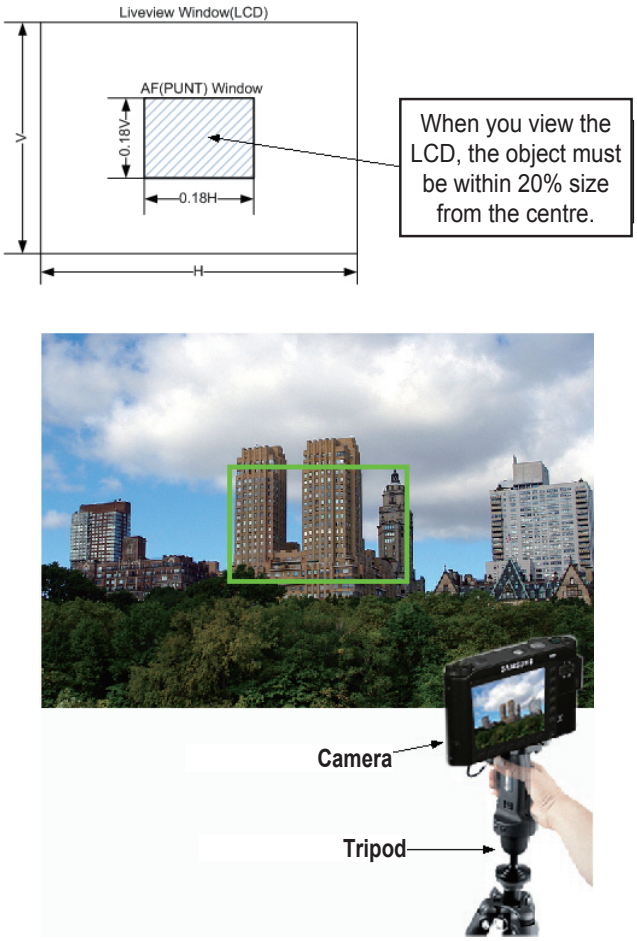


Fig. 7-5

CAUTION

For the object, exclude full glass buildings or objects with low contrast, and this cannot be adjusted for night time.
For the adjustment in these environments, AF may not be accurate when shooting Tele or macro.

3. Turn on the power of the camera.

4. The adjustment will automatically start.

<Adjustment result>

On the memory card, open and check if a CSV file was generated from the adjustment.

7-6 Vertical line ADJ

■ Set the maximum number of vertical line to prevent displaying a big vertical line.

<Adjustment method>

1. Prepare the AE TESTER.
* Luminance specification of the Light box is **LV 12**.
* The Light box is located at 10mm+-1mm with the body tube open.
* The colour temperature specification of the Light box is **5500K**.

2. Save the applicable adjustment file to the memory card.

3. After inserting the memory card containing the program file to the camera, set the camera to the AE TESTER.

Fig. 7-6

4. Adjust the LV value of the AE METER to 12.

5. When you turn on the power of the camera, the adjustment will start automatically.
1. To do the compensation of vertical line, check the minimum and maximum ratio of EVC and ISO
2. Compare the checked information with basic information. (Record the real q'ty and ratio of vertical line)
3. Write the vertical line at the file.

6. When the adjustment is completed, the camera will automatically be turned off.

<Adjustment result>
On the memory card, open and check if a CSV file was generated from the adjustment.

<Restriction>
If the capacity of CSV file is more than 30KB, clear all of the previous data and then, record

7-7 CCD defect ADJ

■ Calibrate the Defective pixel of CMOS for each camera.

<Adjustment method>

1. Save the applicable adjustment file to the memory card.

2. After inserting the memory card containing the program file, turn on the power of the camera.

3. The adjustment will automatically start.

❶ Check the set reference level, exposure time and loop, and execute the Defective Pixel calibration.
❷ Refer to the specification (Maximum number of defective cells) and execute the check.
❸ Refer to the CARD WRITE information to write the number of defective cells to the data file.

4. When the adjustment is completed, the camera will automatically be turned off.

<Adjustment result>
On the memory card, open and check if a CSV file was generated from the adjustment.

7-8 OIS centering ADJ

■ Process to check if OIS performs well or not.

<Adjustment method>

1. Save OIS .hex file and script file on memory card.

2. Install memory card with a program file and then, turn the camera on.

3. Adjustment is made automatically.
OIS module will be operated left/right/up/down 2-3 times.

4. When the adjustment is completed, the camera will be off automatically.

<Adjustment result>
On the memory card, open and check if a CSV file was generated from the adjustment.

CAUTION

Put your camera, face up, on a steady surface such as a table or anything solid that won't move.
Don't put your camera on a highly unstable surface. Also don't put your camera down or hold it.
The noise may significantly affect degrading the Gyro Sensor and Hall Sensor performance.

7-9 Serial number writing process

■ Save S/N on the label of the camera in non-volatile memory due to the illegal distribution of DSC.
■ When checking the version, check S/N to see if the camera is original or illegally distributed one.

<Process method>

1. Create the "ST200_ADJ.txt" or "ST200F_ADJ.txt" File with below contents at PC and save into the memory card.

- For Serial Number, put the Serial Number(Red text) at the previous main board.

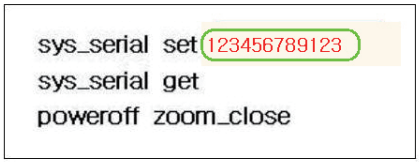


Fig. 7-7

2. Insert the memory card that has modified file into the Main board.

3. Turn on the power of the camera

Fig. 7-8

4) The change of Serial Number will be done automatically.

5) When the adjustment is completed, the camera will automatically be turned off.

<Process result>

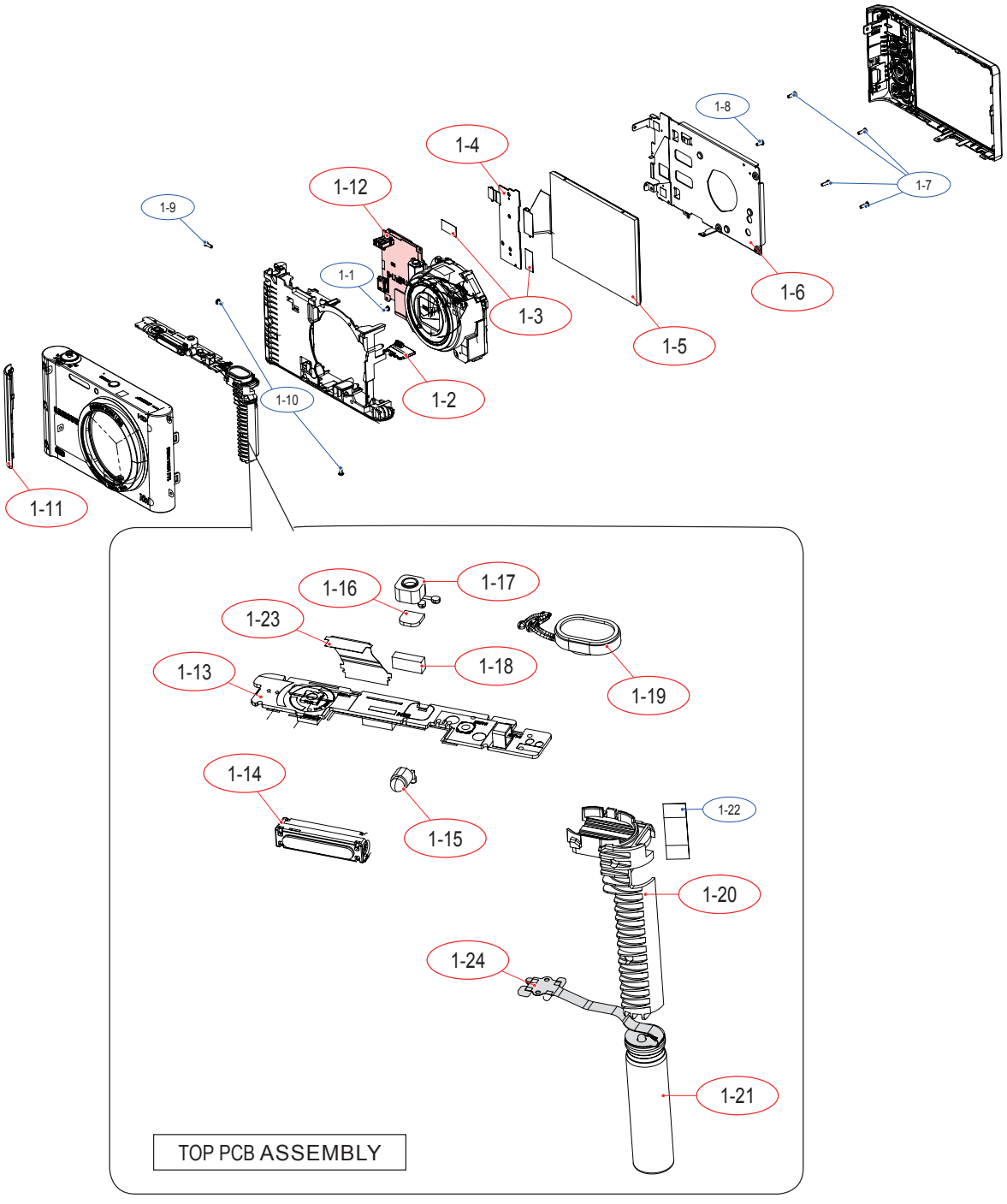
When checking the version (Press SHUTTER button and DOWN button to turn on), S/N appears on the screen.

Fig. 7-9

8. Exploded view and parts list

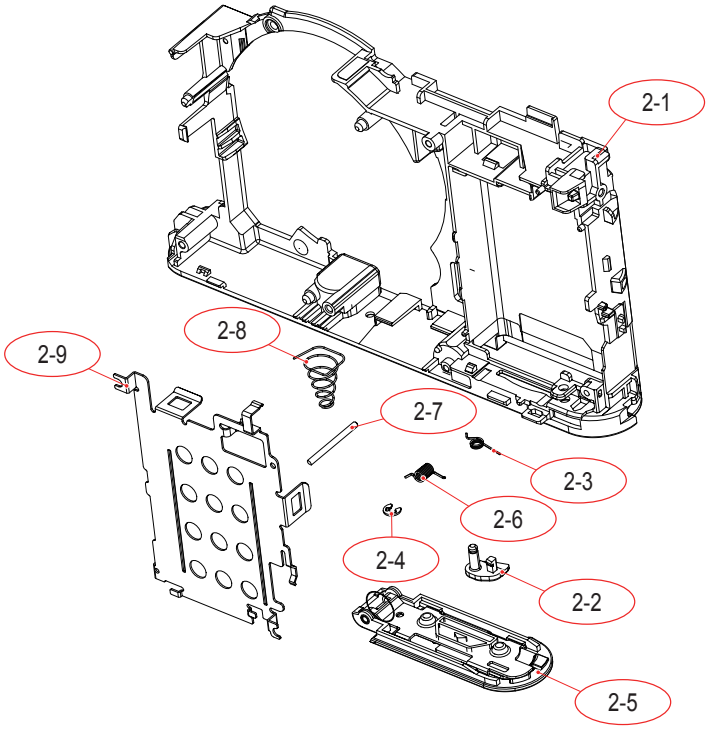
8-1 BODY ASSEMBLY

Item	Service Info
	Service is available.
	Service is not available.



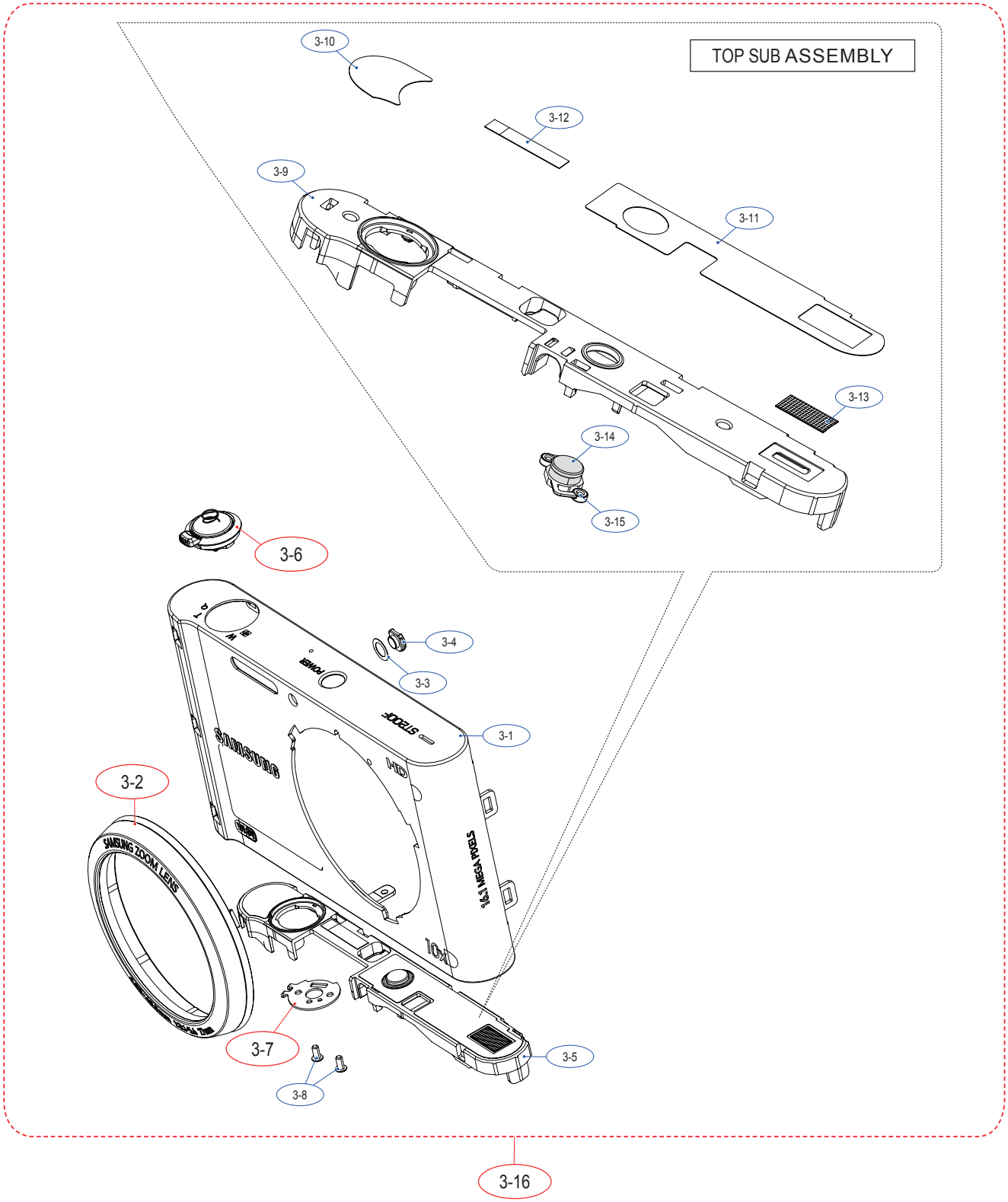
Loc. No	Parts No.	Description	Q ty	Available	Remark
1-1	6003-001717	SCREW(M1.4 L4.5 TAPPING)	1	X	
1-2	AD42-00013A	INTENNA-WIFI ANTENNA for ST200F	1	O	
1-3	AD63-04837A	T/SHEET-FPCB A	2	O	
1-4	AD92-01830A	ASSY KEY FPCB	1	O	
1-5	AD97-22033A	ASSY LCD	1	O	
1-6	AD97-22288A	ASSY MAIN FRAME	1	O	
1-7	6003-001717	SCREW(M1.4 L4.5 TAPPING)	4	X	
1-8	6003-001630	SCREW(M1.4 L3.5 TAPPIG)	1	X	
	AD97-22040A	ASSY COVER BACK_BK	1		
1-9	6003-001717	SCREW(M1.4 L4.5 TAPPING)	1	X	
1-10	6001-002640	SCREW(M1.4 L3.5 MACHINE)	2	X	
1-11	AD63-06677A	DECO FRONT GRIP_BK	1	O	BLACK
	AD63-06677B	DECO FRONT GRIP_SL	1	O	SILVER
	AD63-06677C	DECO FRONT GRIP_PP	1	O	PLUM
	AD63-06677D	DECO FRONT GRIP_RD	1	O	RED
1-12	AD92-01842A	ASSY PCB MAIN-ST200F	1	O	
	AD92-01861A	ASSY PCB MAIN-ST200	1	O	
1-13	AD94-00302A	ASSY SMD PCB TOP	1	O	
1-14	AD97-21942A	ASSY FLASH MODULE	1	O	
1-15	0601-003138	AF LED	1	O	
1-16	AD63-05453A	CUSHION MIC	1	O	
1-17	3003-001183	MIC	1	O	
1-18	AD63-06897A	CUSHION-MIC SEALING	1	O	
1-19	3001-002641	SPEAKER	1	O	
1-20	AD61-05580A	HOLDER CONDENSOR	1	O	
1-21	2401-004886	CONDENSOR	1	O	
1-22	AD63-05406A	T/SHEET-CONDENSOR	1	X	
1-23	AD41-01587A	TOP FPCB	1	O	
1-24	AD41-01850A	FPC-ST200 CAP FPCB	1	O	

8-2 CHAMBER ASSEMBLY



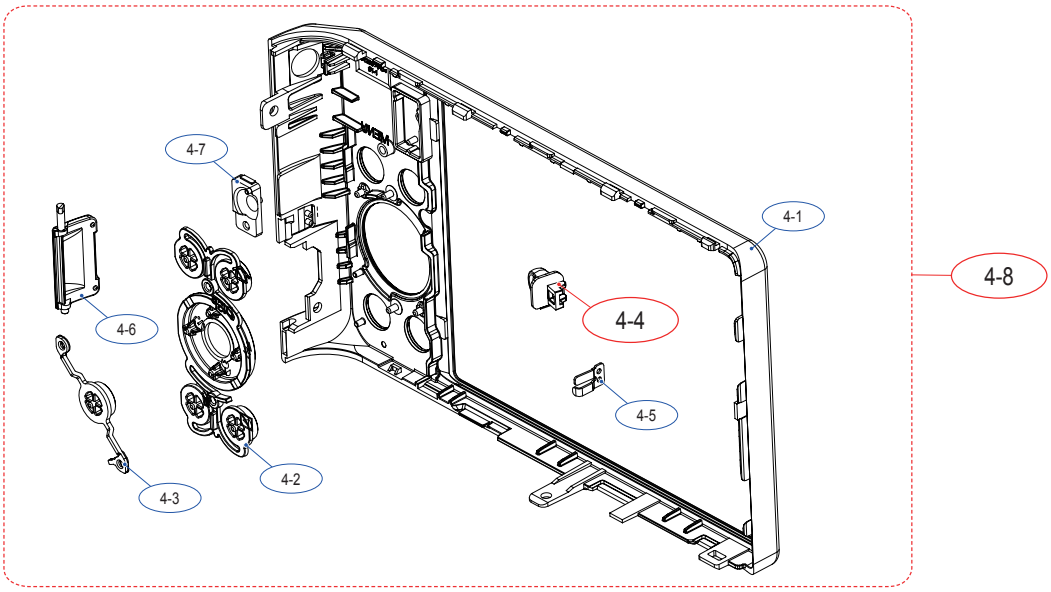
Loc. No	Parts No.	Description	Q ty	Available	Remark
2-1	AD62-00196A	CHAMBER BODY_BK	1	O	BLACK
	AD62-00196B	CHAMBER BODY_SL	1	O	SILVER
	AD62-00196C	CHAMBER BODY_PP	1	O	PLUM
	AD62-00196D	CHAMBER BODY_RD	1	O	RED
2-2	AD66-00885A	LEVER BATTERY LOCK	1	O	
2-3	6107-001766	SPRING TS(BATTERY LOCK LEVER)	1	O	
2-4	6044-001137	RING E	1	O	
2-5	AD97-22035A	ASSY COVER BATTERY_BK	1	O	BLACK
	AD97-22035B	ASSY COVER BATTERY_SL	1	O	SILVER
	AD97-22035C	ASSY COVER BATTERY_PP	1	O	PLUM
	AD97-22035D	ASSY COVER BATTERY_RD	1	O	RED
2-6	6107-002238	SPRING TS(BATTERY COVER)	1	O	
2-7	AD61-05131A	SHAFT COVER BATTERY	1	O	
2-8	AD61-05388A	SPRING CS (BATTERYY PUSH)	1	O	
2-9	AD61-05583A	PLATE BATTERY HOLDER	1	O	

8-3 FRONT COVER ASSEMBLY



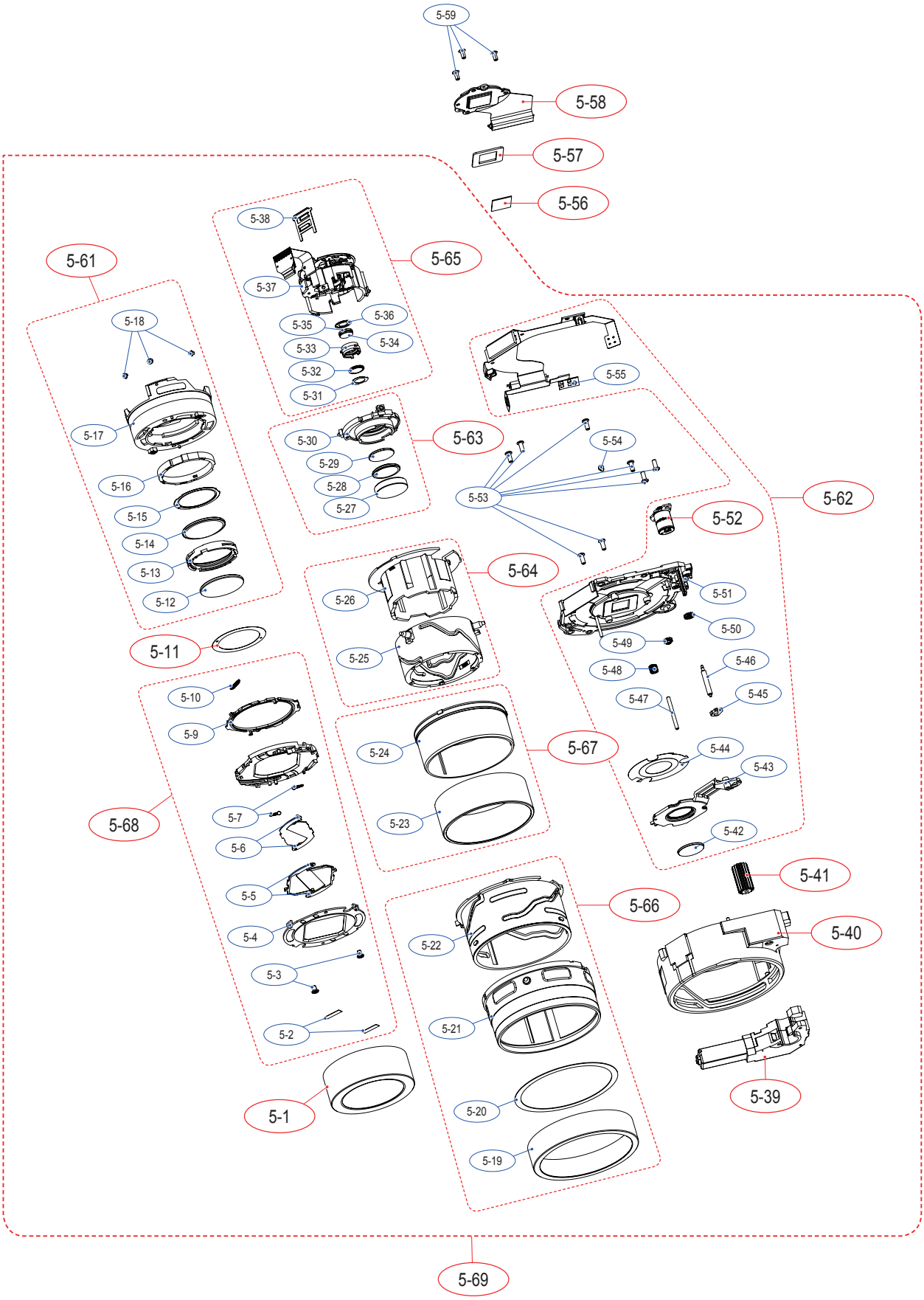
Loc. No	Parts No.	Description	Q ty	Available	Remark
3-1	AD63-06758A	COVER FRONT_ST200F_BK	1	X	BLACK
	AD63-06758B	COVER FRONT_ST200F_SL	1	X	SILVER
	AD63-06758C	COVER FRONT_ST200F_PP	1	X	PLUM
	AD63-06758D	COVER FRONT_ST200F_RD	1	X	RED
	AD63-06758E	COVER FRONT_ST200_BK	1	X	BLACK
	AD63-06758F	COVER FRONT_ST200_SL	1	X	SILVER
	AD63-06758G	COVER FRONT_ST200_PP	1	X	PLUM
	AD63-06758H	COVER FRONT_ST200_RD	1	X	RED
3-2	AD97-22038A	ASSY DECO FRONT_BK	1	O	BLACK
	AD97-22038B	ASSY DECO FRONT_SL	1	O	SILVER
	AD97-22038C	ASSY DECO FRONT_PP	1	O	PLUM
	AD97-22038D	ASSY DECO FRONT_RD	1	O	RED
3-3	AD63-06326A	T/SHEET - AF LED	1	X	
3-4	AD64-03607A	WONDOW LED AF	1	X	
3-5	AD97-22037A	ASSY TOP SUB_ST200F_BK	1	X	BLACK
	AD97-22037B	ASSY TOP SUB_ST200F_SL	1	X	SILVER
	AD97-22037C	ASSY TOP SUB_PP	1	X	PLUM
	AD97-22037D	ASSY TOP SUB_RD	1	X	RED
3-6	AD97-22036A	ASSY KNOB ZOOM	1	O	
3-7	AD61-05614A	ASSY PLATE ZOOM	1	O	
3-8	6003-001630	SCREW(M1.4 L3.5 TAPPING)	2	X	
3-9	AD61-05578A	HOLDER TOP	1	X	
3-10	AD63-06681A	T/SHEET-HOLDER TOP A	1	X	
3-11	AD63-06682A	T/SHEET-HOLDER TOP B	1	X	
3-12	AD63-06001A	T SHEET CONDENSER	1	X	
3-13	AD63-06857A	MESH-SPEAKER HOLE	1	X	
3-14	AD64-03628E	DECO-BUTTON POWER_BK	1	X	
3-15	AD64-03593A	BUTTON POWER	1	X	
3-16	AD97-22041A	ASSY COVER FRONT_ST200F_BK	1	O	BLACK
	AD97-22041B	ASSY COVER FRONT_ST200F_SL	1	O	SILVER
	AD97-22041C	ASSY COVER FRONT_ST200F_PP	1	O	PLUM
	AD97-22041D	ASSY COVER FRONT_ST200F_RD	1	O	RED
	AD97-22285A	ASSY COVER FRONT_ST200_BK	1	O	BLACK
	AD97-22285B	ASSY COVER FRONT_ST200_SL	1	O	SILVER
	AD97-22285C	ASSY COVER FRONT_ST200_PP	1	O	PLUM
	AD97-22285D	ASSY COVER FRONT_ST200_RD	1	O	RED

8-4 BACK COVER ASSEMBLY



Loc. No	Parts No.	Description	Q ty	Available	Remark
4-1	AD63-06676A	COVER BACK_BK	1	X	BLACK
	AD63-06676B	COVER BACK_SL	1	X	SILVER
	AD63-06676C	COVER BACK_PP	1	X	PLUM
	AD63-06676D	COVER BACK_RD	1	X	RED
4-2	AD64-03609V	BUTTON BACK_BK	1	X	BLACK
	AD64-03609S	BUTTON BACK_SL	1	X	SILVER
	AD64-03609T	BUTTON BACK_PP	1	X	PLUM
	AD64-03609U	BUTTON BACK_RD	1	X	RED
4-3	AD64-03608T	BUTTON OK_BK	1	X	BLACK
	AD64-03608Q	BUTTON OK_SL	1	X	SILVER
	AD64-03608R	BUTTON OK_PP	1	X	PLUM
	AD64-03608S	BUTTON OK_RD	1	X	RED
4-4	AD61-05575A	HOLDER STRAP	1	O	
4-5	AD61-05548A	PLATE COVER SOCKET	1	X	
4-6	AD63-06678A	COVER SOCKET_BK	1	X	BLACK
	AD63-06678B	COVER SOCKET_SL	1	X	SILVER
	AD63-06678C	COVER SOCKET_PP	1	X	PLUM
	AD63-06678D	COVER SOCKET_RD	1	X	RED
4-7	AD64-03606A	WINDOW LED REAR	1	X	
4-8	AD97-22040A	ASSY COVER BACK_BK	1	O	BLACK
	AD97-22040B	ASSY COVER BACK_SL	1	O	SILVER
	AD97-22040C	ASSY COVER BACK_PP	1	O	PLUM
	AD97-22040D	ASSY COVER BACK_RD	1	O	RED

8-5 BARREL ASSEMBLY

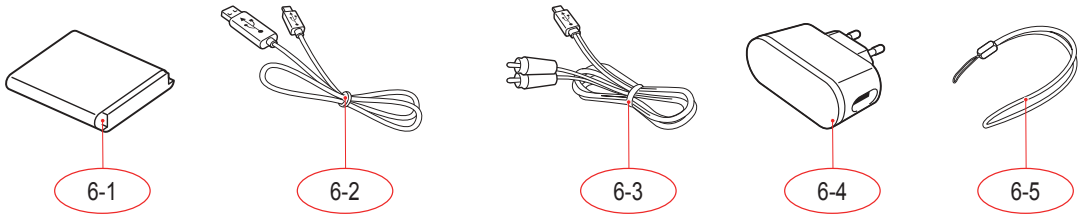


Loc. No	Parts No.	Description	Q ty	Available	Remark
5-1	AD64-03081B	DECORING-FRONT_BK	1	O	BLACK
	AD63-06563A	DECORING-FRONT-SL	1	O	SILVER
	AD64-03614A	DECORING-FRONT-PL	1	O	PLUM
	AD64-03620A	DECORING-FRONT-RD	1	O	RED
5-2	AD63-05567A	T/SHEET-BARRIER-PL210	2	X	
5-3	6003-001684	SCREW (142525)	2	X	
5-4	AD63-06173A	BARRIER-PANEL_BK	1	X	BLACK
	AD63-06716A	BARRIER-PANEL_SL	1	X	SILVER
	AD63-06719A	BARRIER-PANEL_PL	1	X	PLUM
	AD63-06728A	BARRIER-PANEL_RD	1	X	RED
5-5	AD63-06172A	BARRIER-BLADE-B_BK	2	X	BLACK
	AD63-06715A	BARRIER-BLADE-B_SL	2	X	SILVER
	AD63-06718A	BARRIER-BLADE-B_PL	2	X	PLUM
	AD63-06727A	BARRIER-BLADE-B_RD	2	X	RED
5-6	AD63-06171A	BARRIER-BLADE-A_BK	2	X	BLACK
	AD63-06714A	BARRIER-BLADE-A_SL	2	X	SILVER
	AD63-06717A	BARRIER-BLADE-A_PL	2	X	PLUM
	AD63-06726A	BARRIER-BLADE-A_RD	2	X	RED
5-7	6107-002841	BARRIER_SPRING_CLOSE-PL210	2	X	
5-8	AD63-05523A	BARRIER-BASE-PL210	1	X	
5-9	AD63-05524A	BARRIER-LEVER-PL210	1	X	
5-10	6107-002840	BARRIER_SPRING_OPEN-PL210	1	X	
5-11	AD63-05542A	SHEET_G1-PL210	1	O	
5-12	AD67-01979A	G1 LENS	1	X	
5-13	AD67-01940A	BARREL-1ST-PL210	1	X	
5-14	AD67-01983A	G2 LENS(ASP)	1	X	
5-15	AD63-05566A	SHEET_G2-PL210	1	X	
5-16	AD67-01951A	BARREL-SLIP RING-PL210	1	X	
5-17	AD67-01950A	BARREL-ZOOM-PL210	1	X	
5-18	AD66-00848A	SHAFT_MOVE_PIN_ZOOM-PL210	3	X	
5-19	AD64-03082B	DECORING-OUT CAM_BK	1	X	BLACK
	AD64-03082A	DECORING-OUT CAM_SL	1	X	SILVER
	AD64-03615A	DECORING-OUT CAM_PL	1	X	PLUM
	AD64-03621A	DECORING-OUT CAM_RD	1	X	RED
5-20	AD63-06889A	SHEILD OUT CAM	1	X	
5-21	AD67-01946A	BARREL-OUTER CAM-PL210	1	X	
5-22	AD67-01945A	BARREL-OUTER GUIDE-PL210	1	X	

Loc. No	Parts No.	Description	Q ty	Available	Remark
5-23	AD64-03083B	DECORING-CAM_BK	1	X	BLACK
	AD64-03083A	DECORING-CAM_SL	1	X	SILVER
	AD64-03616A	DECORING-CAM_PL	1	X	PLUM
	AD64-03622A	DECORING-CAM_RD	1	X	RED
5-24	AD67-01947A	BARREL-CAM-PL210	1	X	
5-25	AD67-01948A	BARREL-INNER CAM-PL210	1	X	
5-26	AD67-01949A	BARREL-INNER GUIDE-PL210	1	X	
5-27	AD67-01984A	G3 LENS(ASP)	1	X	
5-28	AD67-01980A	G4 LENS	1	X	
5-29	AD67-01985A	G5 LENS(ASP)	1	X	
5-30	AD67-01941A	BARREL-2ND-PL210	1	X	
5-31	AD63-06563A	SHEET_G6-B	1	X	
5-32	AD67-02455A	G6 LENS(ASP)	1	X	
5-33	AD67-02411A	BARREL-3RD-PL210	1	X	
5-34	AD67-01981A	G7 LENS	1	X	
5-35	AD67-01982A	G8 LENS	1	X	
5-36	AD63-05546A	SHEET_G8-PL210	1	X	
5-37	AD97-20078A	SHUTTER ASS'Y(OIS)	1	X	
5-38	AD61-04908A	SHUTTER FPCB GUIDE-PL210	1	X	
5-39	AD97-20076A	ZOOM MODULE ASSY	1	O	
5-40	AD67-01944A	BARREL-BASE-WB250	1	O	
5-41	AD66-00737A	GEAR-IDLE	1	O	
5-42	AD67-01987A	G9 LENS(ASP)	1	X	
5-43	AD67-01943A	BARREL-4TH-PL210	1	X	
5-44	AD63-05994A	T/SHEET-4TH-PL210	1	X	
5-45	AD61-03832A	AF CLIP	1	X	
5-46	AD66-00850A	AF_LEAD_SCREW-PL210	1	X	
5-47	AD66-00849A	SHAFT_AF_GUIDE_BAR-PL210	1	X	
5-48	6107-002839	AF_SPRING-PL210	1	X	
5-49	AD66-00637A	AF GEAR A	1	X	
5-50	AD66-00638A	AF GEAR B	1	X	
5-51	AD61-04905A	BASE-LENS-PL210	1	X	
5-52	AD97-20077A	MOTOR ASSY-AF	1	O	
5-53	6003-001630	SCREW (143525)	8	X	
5-54	6003-001288	SCREW (142025)	1	X	
5-55	AD92-01398A	FPCB-BARREL MAIN	1	X	
5-56	AD63-04360A	CUSHION IR FILTER	1	O	

Loc. No	Parts No.	Description	Q ty	Available	Remark
5-57	AD63-05576A	CUSHION-IR	1	O	
5-58	AD92-01840A	CCD FPCB ASSY	1	O	
5-59	6003-001633	SCREW (143025)	3	X	
5-60	AD63-06532A	SHEET-PROTECT		O	
5-61	AD97-20086B	ASSY SUB BARREL-ZOOM	1	O	
5-62	AD97-20087B	ASSY SUB BARREL-LENS BASE	1	O	
5-63	AD97-20080B	ASSY SUB BARREL-2ND LENS	1	O	
5-64	AD97-21247A	ASSY SUB BARREL-INNER CAM B	1	O	
5-65	AD97-21751A	ASSY SUB BARREL-3RD	1	O	
5-66	AD97-21755A	ASSY SUB BARREL-OUT CAM_BK	1	O	BLACK
	AD97-21967A	ASSY SUB BARREL-OUT CAM_SL	1	O	SILVER
	AD97-21969A	ASSY SUB BARREL-OUT CAM_PL	1	O	PLUM
	AD97-21968A	ASSY SUB BARREL-OUT CAM_RD	1	O	RED
5-67	AD97-21785A	ASSY SUB BARREL-CAM_BK	1	O	BLACK
	AD97-21971A	ASSY SUB BARREL-CAM_SL	1	O	SILVER
	AD97-21973A	ASSY SUB BARREL-CAM_PL	1	O	PLUM
	AD97-21972A	ASSY SUB BARREL-CAM_RD	1	O	RED
5-68	AD97-21791A	ASSY SUB BARREL-BARRIER_BK	1	O	BLACK
	AD97-21975A	ASSY SUB BARREL-BARRIER_SL	1	O	SILVER
	AD97-21977A	ASSY SUB BARREL-BARRIER_PL	1	O	PLUM
	AD97-21976A	ASSY SUB BARREL-BARRIER_RD	1	O	RED
5-69	AD97-21756A	ASSY BARREL_BK	1	O	BLACK
	AD97-21963A	ASSY BARREL_SL	1	O	SILVER
	AD97-21965A	ASSY BARREL_PL	1	O	PLUM
	AD97-21964A	ASSY BARREL_RD	1	O	RED

8-6 PACKING ITEMS



Loc. No	Parts No.	Description	Q ty	Available	Remark
6-1	AD43-00199A	BP85A_BATTERY	1	O	
6-2	AD39-00190A	USB CABLE	1	O	
6-3	AD39-00191A	AV_CABLE-MICRO USB	1	O	
6-4	AD44-00178A	AC ADAPTOR_5055_KOR	1	O	
	AD44-00184A	AD5055_CHI	1	O	
	AD44-00183A	AD5055_EXP	1	O	
	AD44-00179A	AD5055_USA	1	O	
	AD44-00182A	AD5055_UK	1	O	
	AD44-00185A	AD5055_AUS	1	O	
	AD44-00181A	AD5055_ARG	1	O	
	AD44-00180A	AD5055_BRA	1	O	
6-5	AD63-02604A	STRAP_KENOX_S860_BLACK	1	O	
	AD63-02596A	STRAP_KENOX_S730_SILVER	1	O	

Area	Web Site
Europe, MENA, CIS, Africa	https://gspn1.samsungcsportal.com
E.Asia, W.Asia, China, Japan	https://gspn2.samsungcsportal.com
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Printed in Korea
Code No: EC-ST200/ST200F