SAMSUNG

DIGITAL CAMERA

WB850F/WB855F

SERVICE Manual

DIGITAL CAMERA

CONTENTS

1. Repair information

2. Product specifications

3. Disassembly and Reassembly

4. PCB diagram

5. Block diagram

6. Firmware update

7. Adjustment

8. Exploded view and parts list

Contents

1. Repair information

1-1 Customer satisfaction statement 1-1

1-2 Warranty and repair service information 1-1

1-3 Precaution for disassembly and reassembly 1-4

2. Product specifications

2-1 Specifications 2-1

2-2 Product comparison 2-2

2-3 Accessories information..... 2-3

2-4 About the memory card..... 2-5

2-5 About the battery..... 2-6

3. Disassembly and Reassembly

3-1 Screw parts list 3-1

3-2 Camera Disassembly..... 3-2

3-3 Barrel Disassembly 3-12

3-4 Barrel Reassembly 3-18

4. PCB diagram

4-1 MAIN PCB 4-1

4-2 STROBE PCB 4-2

4-3 TOP FPCB 4-2

4-4 GPS PCB..... 4-3

5. Block diagram

5-1 Block diagram 5-1

Contents

6. Firmware update

6-1 Product reset 6-1

6-2 Version check 6-3

6-3 Upgrade 6-4

6-4 How to update the fimware when forced to quit 6-6

7. Adjustment

7-1 Basic guide for adjustment 7-1

7-2 Lens shading 7-3

7-3 Shutter close time ADJ 7-4

7-4 IRIS ADJ 7-5

7-5 CMOS gain ADJ 7-6

7-6 Flash & AWB ADJ 7-7

7-7 Punt ADJ 7-8

7-8 CMOS defect ADJ 7-10

7-9 OIS centering ADJ 7-10

7-10 Serial number writing process 7-11

8. Exploded view and parts list

8-1 BODY ASSEMBLY 8-1

8-2 MAIN ASSEMBLY 8-2

8-3 MAIN SUB ASSEMBLY 8-4

8-4 CHAMBER ASSEMBLY 8-6

8-5 TOP COVER ASSSEMBLY 8-7

8-6 FRONT COVER ASSEMBLY 8-9

8-7 BACK COVER ASSEMBLY 8-10

8-8 BARREL ASSEMBLY 8-11

8-9 PACKING ITEMS 8-14

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.

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(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	

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(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>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>

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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>

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.

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2. Product specifications

2-1 Specifications

Image Sensor	1/2.3” (Approximately 7.77 mm) BSI CMOS
Effective Pixels	Approximately 16.2 mega-pixels
Total Pixels	Approximately 16.8 mega-pixels
Wight	232g (without battery and memory card)
Dimensions(W X H X D)	109.5 X 62.2 X 24.9(35.1) mm (without protrusions)
Display	AMOLED, 3.0” (7.62 cm) 614K
Focal Length	Schneider-KREUZNACH 21x Zoom Lens f = 4.1-86.1 mm (35 mm film equivalent: 23-483 mm)
F-stop Range	F2.8 (W)-F5.9 (T)
Digital Zoom	Still image mode: 1.0-4.0X (Smart Zoom: 1.33X)
Shutter Speeds	Auto: 1/8-1/2,000 sec. Program: 1-1/2,000 sec. Night: 8-1/2,000 sec. Manual: 16-1/2,000 sec.
Flash Range	Wide: 0.3-4.96 m (ISO Auto) Tele: 0.5-2.35 m (ISO Auto)
ISO Range	Auto, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600, ISO 3200
Storage	External memory (Optional): SD card (up to 2 guaranteed), SDHC card (up to 32 GB guaranteed), SDXC card (up to 64 GB guaranteed)
Shake Reduction	DUAL IS [Optical Image Stabilization (OIS) + Digital Image Stabilization (DIS)]
Power Source	Lithium-ion battery (SLB-10A, 1030 mAh)
Connector Type	Micro USB (7 pin)
Wireless Network	Social Sharing, Email, MobileLink, Remote Viewfinder, Cloud, Auto Backup, TV Link, Log-in Browser, Wi-Fi Direct

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2-2 Product comparison

Model / Specifications	WB850F/WB855F	WB750
Product Image		
Image Sensor	1/2.3” (Approximately 7.77 mm) BSI CMOS	1/2.3” (Approx. 7.76mm) BSI CMOS
Effective Pixels	Approximately 16.2 mega-pixels	Approx. 12.5 mega-pixels
Total Pixels	Approximately 16.8 mega-pixels	Approx. 14.6 mega-pixels
Wight	232g (without battery and memory card)	193.4g (6.822 oz.) (without battery and memory card)
Dimensions(W X H X D)	109.5 X 62.2 X 24.9(35.1) mm (without protrusions)	105.3 X 59.4 X 24.9 mm (without protrusions)
Display	AMOLED, 3.0” (7.62 cm) 614K	TFT LCD, 3.0” (7.62 cm) hVGA
Focal Length	Schneider-KREUZNACH 21 x Zoom Lens f = 4.1-86.1 mm (35 mm film equivalent: 23-483 mm)	Schneider-KREUZNACH Lens f = 4.0-72.0 mm (35 mm film equivalent: 24-432 mm)
F-stop Range	F2.8 (W)-F5.9 (T)	F3.2 (W)-F5.8 (T)
Digital Zoom	Still image mode: 1.0-4.0X (Smart Zoom: 1.33X)	Still image mode: 1.0-18.0X (Optical zoom X Digital zoom: 72.0X, Smart zoom X Digital zoom: 72.0X)
Shutter Speeds	Auto: 1/8-1/2,000 sec. Program: 1-1/2,000 sec. Night: 8-1/2,000 sec. Manual: 16-1/2,000 sec.	Auto: 1/8-1/2,000 sec. Program: 1-1/2,000 sec. Night: 8-1/2,000 sec. Manual: 16-1/2,000 sec.
ISO Range	Auto, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600, ISO 3200	Auto, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600, ISO 3200
Storage	External memory (Optional): - SD card (up to 2 guaranteed) - SDHC card (up to 32 GB guaranteed) - SDXC card (up to 64 GB guaranteed)	Internal memory: Approximately 8.3 MB External memory (Optional): - SD card (1-2 GB guaranteed) - SDHC card (up to 32 GB guaranteed) - SDXC card (up to 64 GB guaranteed)
Shake Reduction	DUAL IS [Optical Image Stabilization (OIS) + Digital Image Stabilization (DIS)]	DUAL IS [Optical Image Stabilization (OIS) + Digital Image Stabilization (DIS)]
Power Source	Lithium-ion battery (SLB-10A, 1030 mAh)	Lithium-ion battery (SLB-10A, 1050 mAh)
Wireless Network	Social Sharing, Email, MobileLink, Remote Viewfinder, Cloud, Auto Backup, TV Link, Log-in Browser, Wi-Fi Direct	-

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2-3 Accessories information

- The illustrations may differ slightly from the items shipped with your product.
- You can purchase optional accessories at a retailer or a Samsung service center. Samsung is not responsible for any problems caused by using unauthorized accessories.

	Image	Description		Parts No.
Packing items		Camera		WB850F/WB855F
		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		AD39-00190A
		Battery		4302-001221
		Strap	BLACK	AD63-02604A
			SILVER	AD63-02596A
		User Manual CD-ROM (WB850F)		AD46-00434A
		Quick Start Guide	WB850F_EUR1	AD68-06971A
			WB850F_EUR2	AD68-06972A
			WB850F_EUR3	AD68-06973A
			WB850F_ASIA	AD68-06974A
			WB850F_S.CHI	AD68-06970A
			WB850F_CANADA	AD68-06975A
			WB850F_TUR	AD68-06977A
			WB850F_SEA	AD68-06976A
			WB850F_S.CHI	AD68-06970A

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	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
		HDMI cable		-
		A/V cable		AD39-00146A
		Battery charger		AD44-00176A
		Memory card	2GB	1109-001446
			4GB	1109-001420
			8GB	1109-001396

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2-4 About the memory card

The memory capacity may differ depending on shooting scenes or shooting conditions.
These capacities are based on a 2 GB SD card (Number of photos).

Size			Super Fine	Fine	Normal
Photo	16M	4608 X 3456	244	302	396
	14MP	4608 X 3072	280	346	452
	12M	4608 X 2592	322	396	516
	10M	3648 X 2736	380	468	608
	8M	2832 X 2832	468	572	738
	5M	2592 X 1944	708	856	1,086
	3M	1984 X 1488	1,106	1,318	1,626
	2M	1920 X 1080	1,452	1,702	2,058
	1M	1024 X 768	2,674	2,980	3,364

Size		480fps	240fps	30fps
Video	FULL HD 1920X1080	-	-	Approx. 17' 30''
	HD 1280X720	-	-	Approx. 26' 06''
	VGA 640X480	-	-	Approx. 51' 30''
	240 WEB For Sharing	-	-	Approx. 300'
	384 384X288	-	Approx. 43' 28''	-
	176 176X128	Approx. 29' 10''	-	-

*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.

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2-5 About the battery

<Battery specifications>

Specification	Description
Model	SLB-10A
Type	Lithium-ion battery
Cell capacity	1030 mAh
Voltage	3.7 V
Charging time *(when the camera is switched off)	Approximately 240 min

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

<Battery life>

Average shooting time/ Number of photos		Test conditions (when the battery is fully charged)
Photos	Approximately 120 min/ Approximately 220 photos	The battery life was measured under the following conditions: in **P** 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	Approximately 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.
• The above values are measured while the GPS is off.

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3. Disassembly and Reassembly

3-1 Screw parts list

Page No.	Type	Part No.	Qty
3-2	SCREW MACHINE	6001-002152	6
3-4	SCREW MACHINE	6001-002152	1
3-5	SCREW TAPTYPE	6003-001717	5
3-11	SCREW TAPTYPE	6003-001288	3

<Table 3-1>

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3-2 Camera Disassembly

1. SCREW from the main unit

1) Remove the 6 screws from the main unit.

Fig. 3-1

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2. COVER

1) Run a safe open pry tool around the join of locking structure part to release the COVER located on the bottom first. Then remove the COVER located on the side as illustrated in image below. Slightly wiggle the locking structure part to widen the gap. You'll have to apply a little force to remove it.

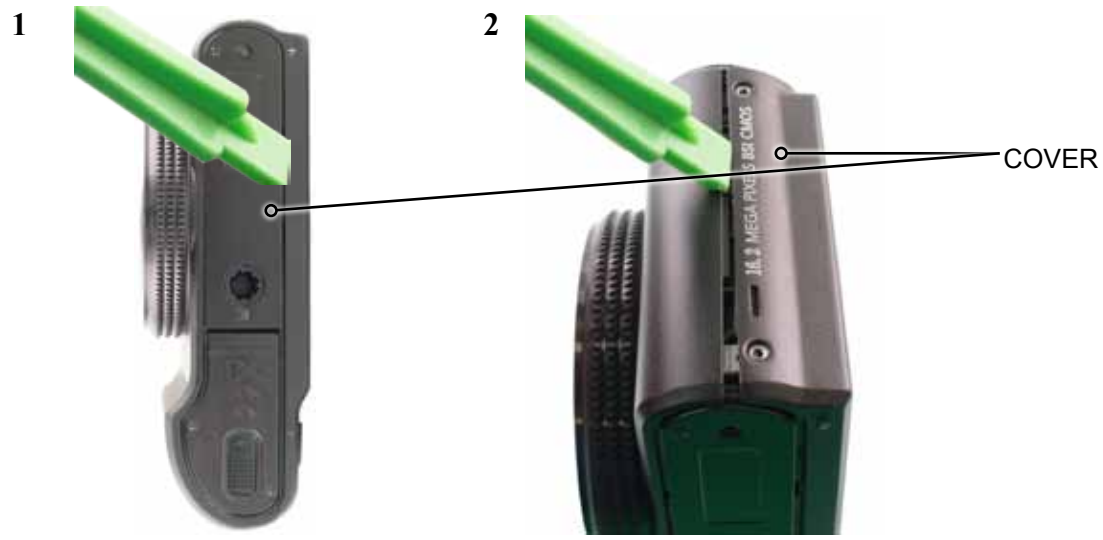

Fig. 3-2

3. ASSY COVER BACK

1) Remove the ASSY COVER BACK in the direction of the arrow.

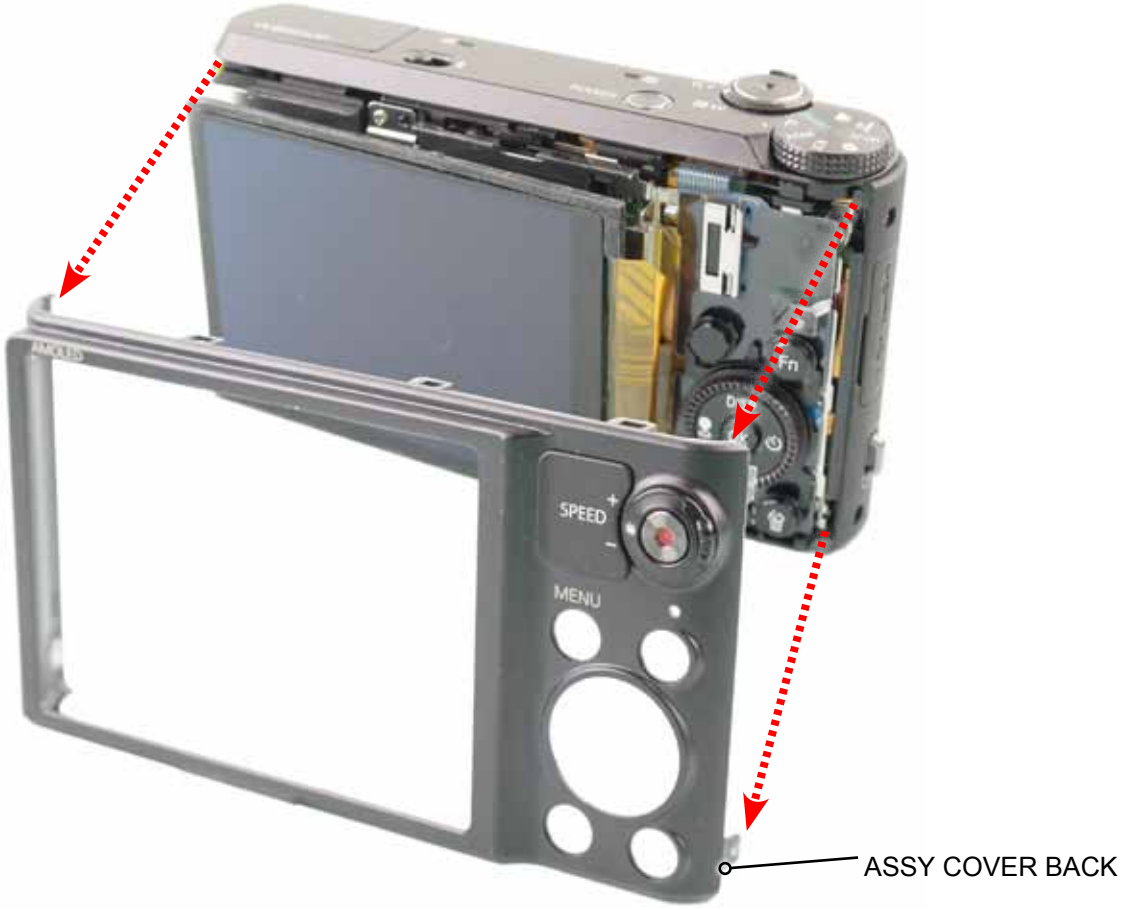

Fig. 3-3

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4. ASSY AMOLED 3.0"

1) Remove the screw. Remove the FPCB from the connector as illustrated in image A.
Then remove the KEY FPCB.

CAUTION

Make sure not to fold the other area except the board of KEY FPCB when remoing and installint the KEY FPCB.

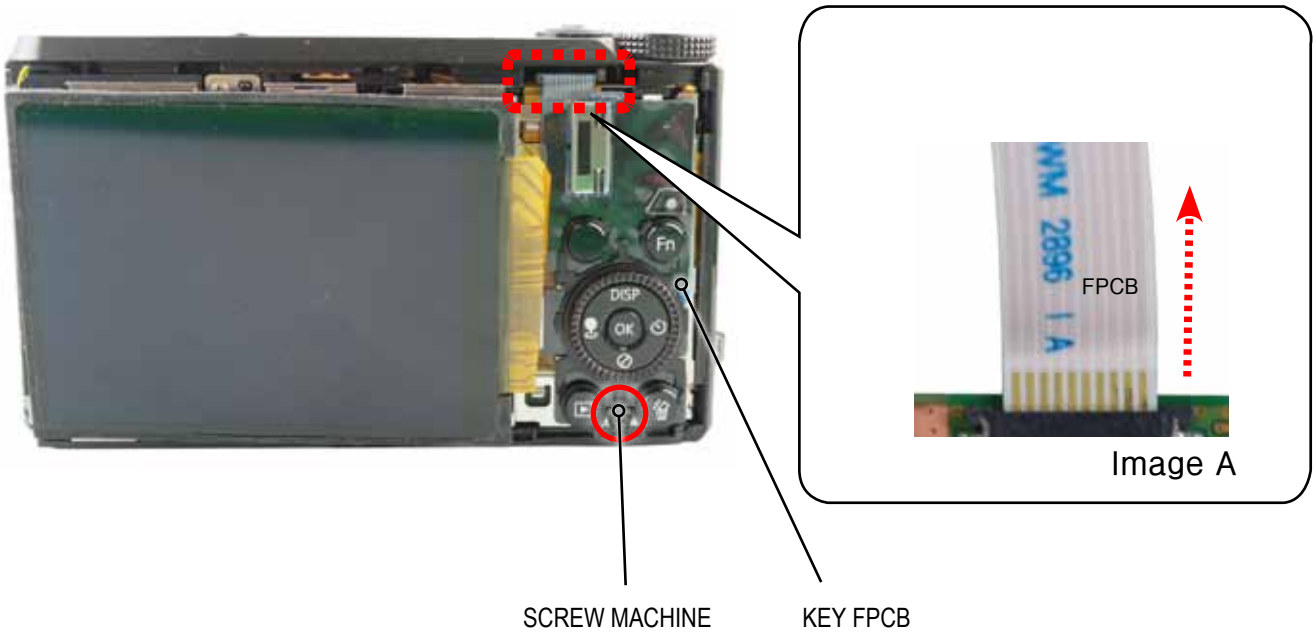

Fig. 3-4

2) Remove the FPCB from the connector in the direction of the arrow as illustrated in image B.
Then, remove the ASSY LCD.

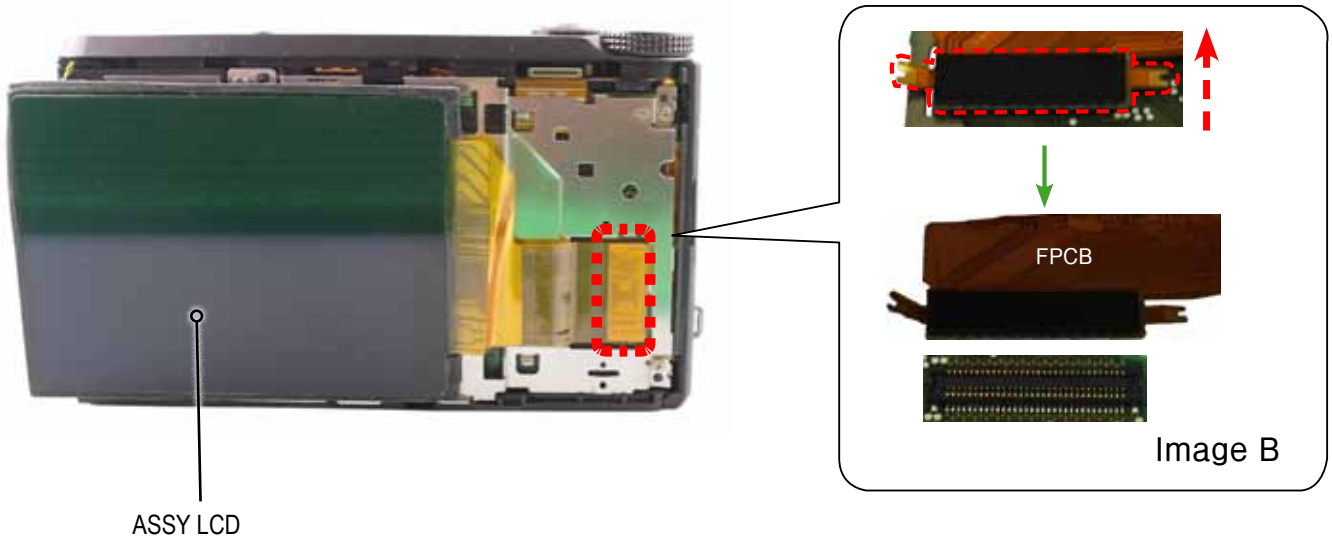

Fig. 3-5

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5. FRAME MAIN SCREW

1) Remove the 5 screws from the FRAME MAIN.

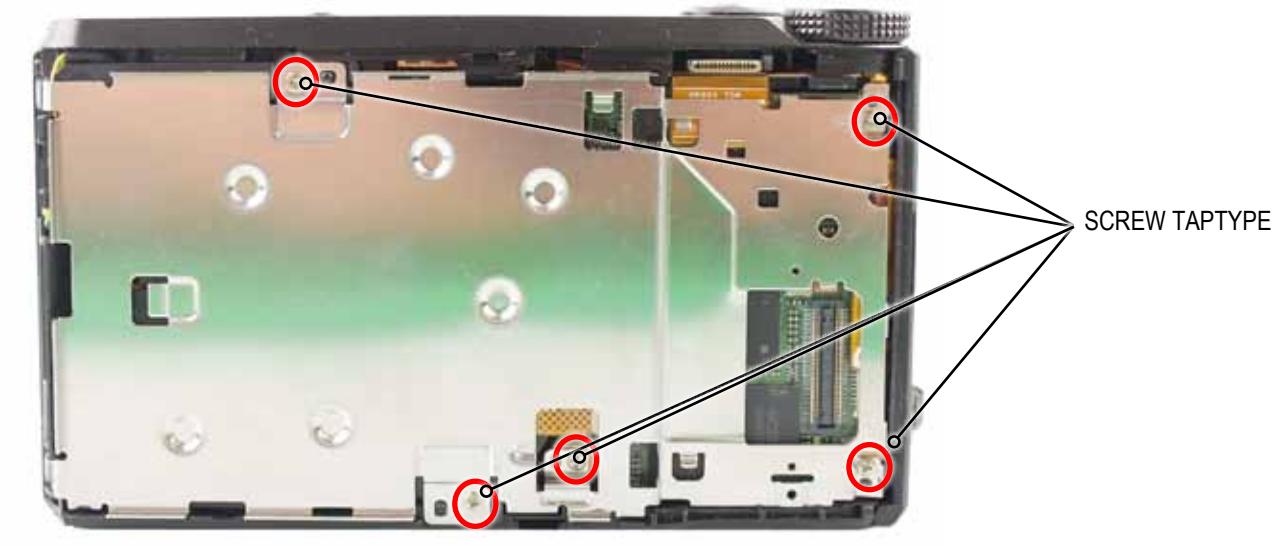

Fig. 3-6

6. FRAME MAIN

1) Remove the FRAME MAIN in the direction of the arrow.

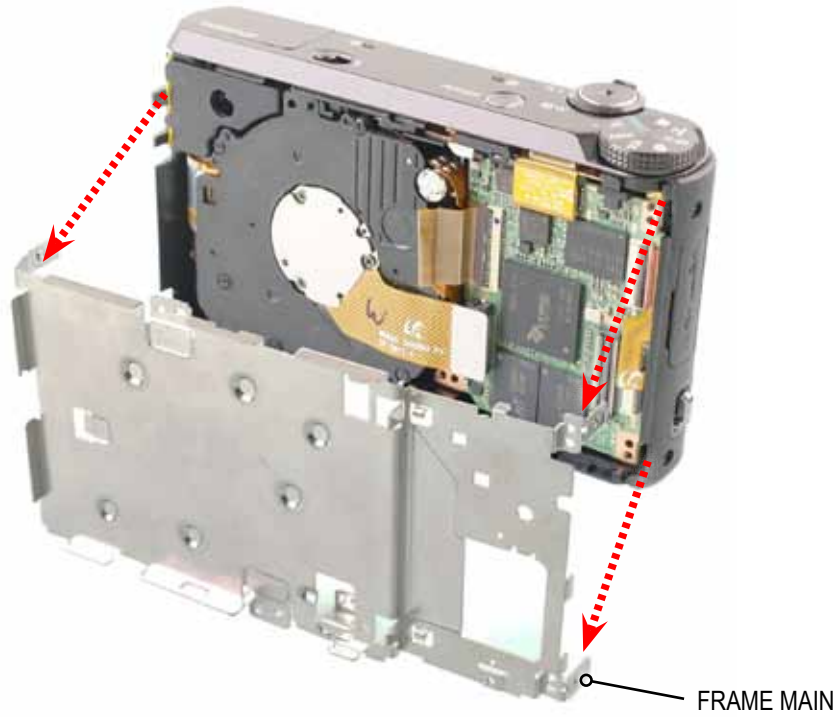

Fig. 3-7

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7. FPCB

1) Remove the FPCB from the connector as illustrated in image A and B.

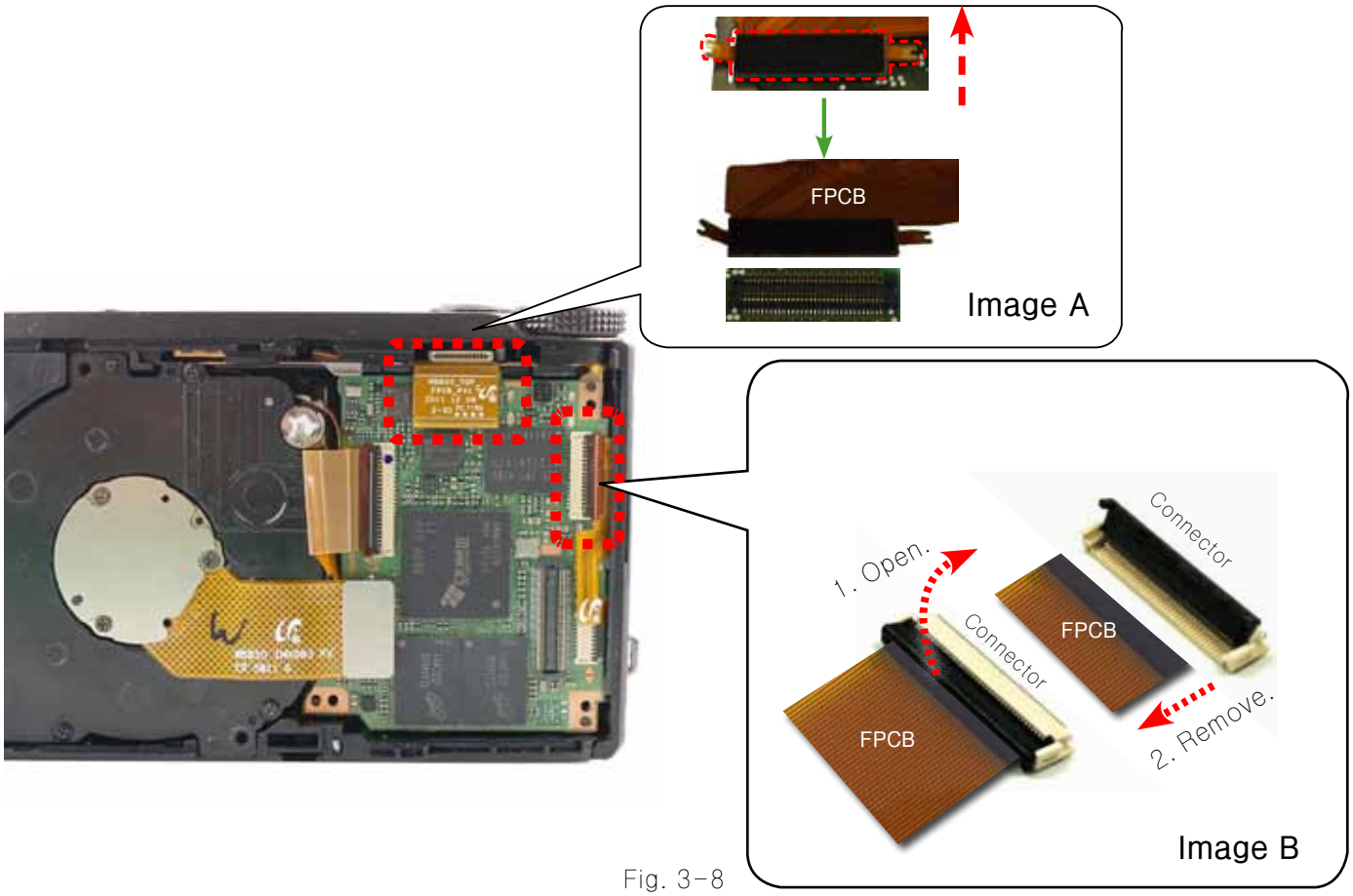

Fig. 3-8

8. ASSY BARREL MAIN PCB

1) Remove the ASSY BARREL MAIN PCB in the direction of the arrow.

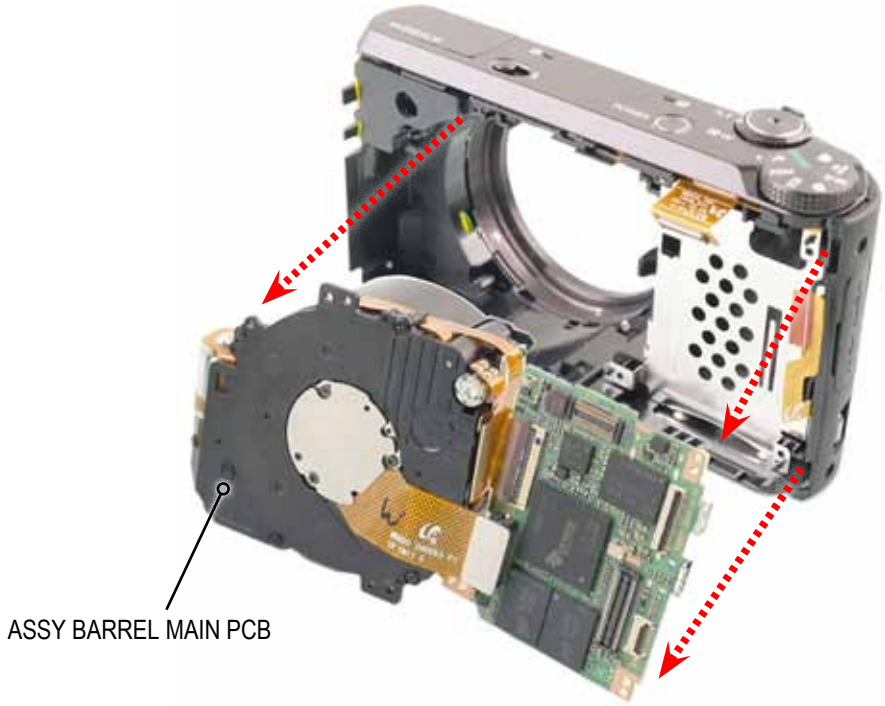

Fig. 3-9

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9. ASSY COVER FRONT

1) Remove the ASSY COVER FRONT in the direction of the arrow.

CAUTION

Make sure to lift up the part around the USB/HDMI connector area first indicated in blue box when removing the ASSY COVER FRONT. Be sure to install the part around the USB/HDMI connector area first.

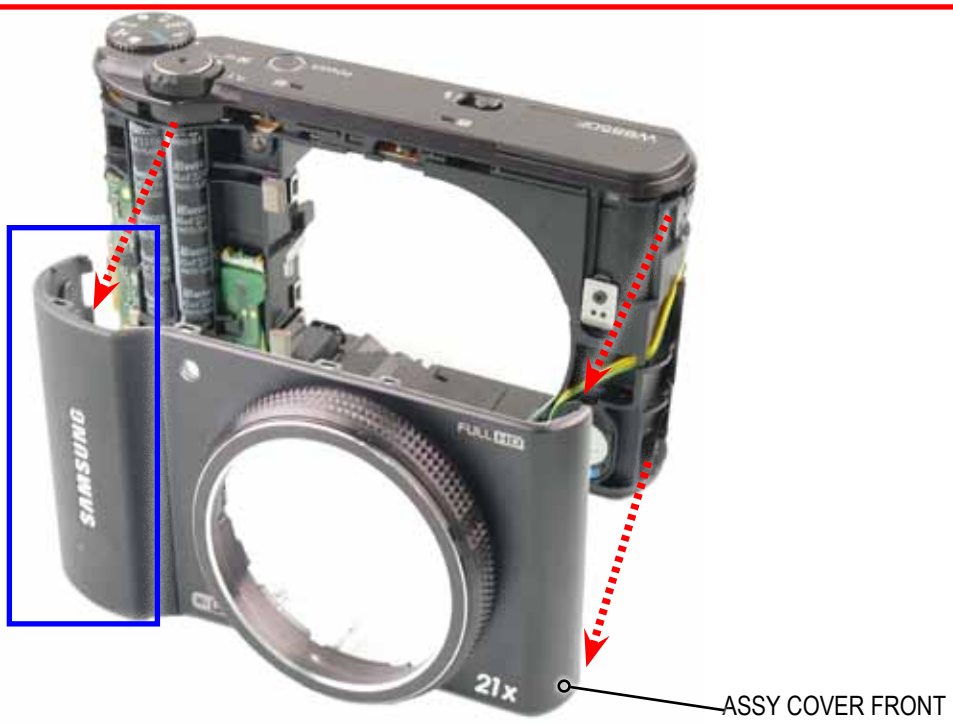

Fig. 3-10

10. LOCKING STRUCTURE PART

1) Remove the 4 LOCKING structure parts.

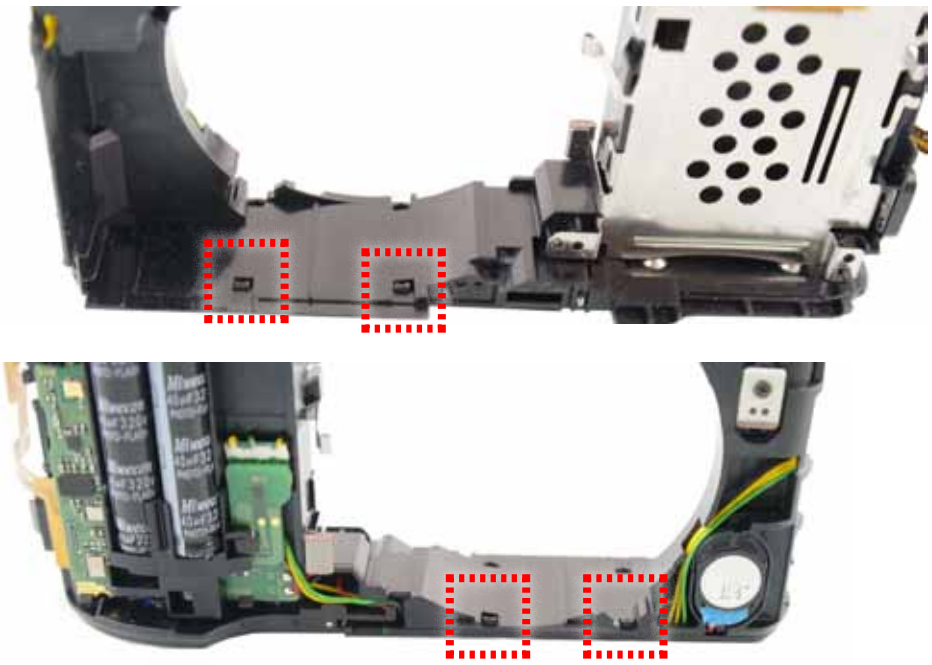

Fig. 3-11

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11. COVER BOTTOM

1) Remove the COVER BOTTOM in the direction of the arrow

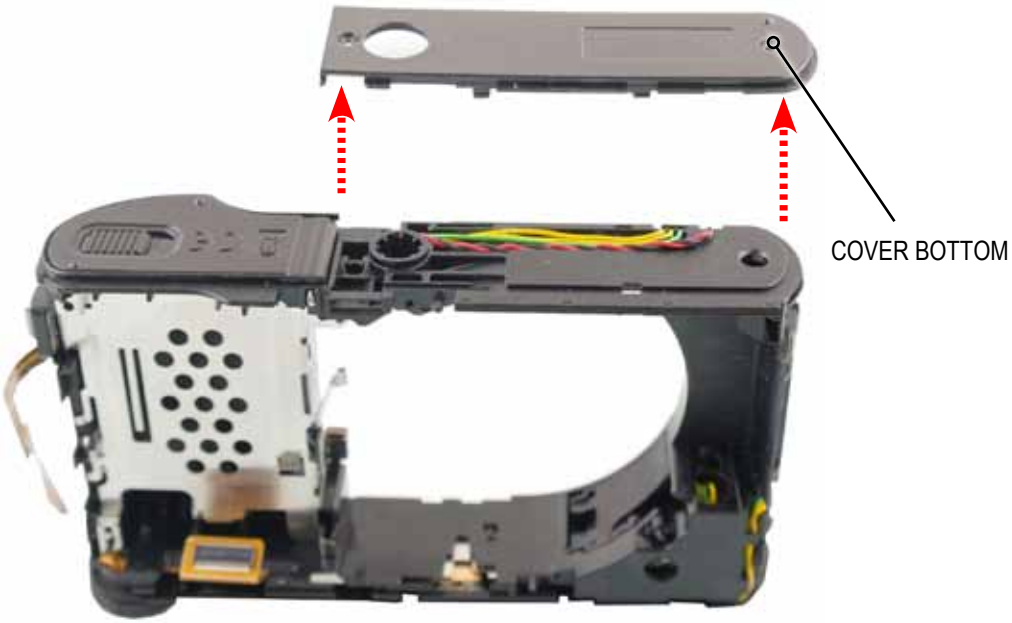

Fig. 3-12

12. DISCHARGING

CAUTION

Make sure to discharge the area not being soldered on WiFi-strobo PCB according to the instructions as illustrated.

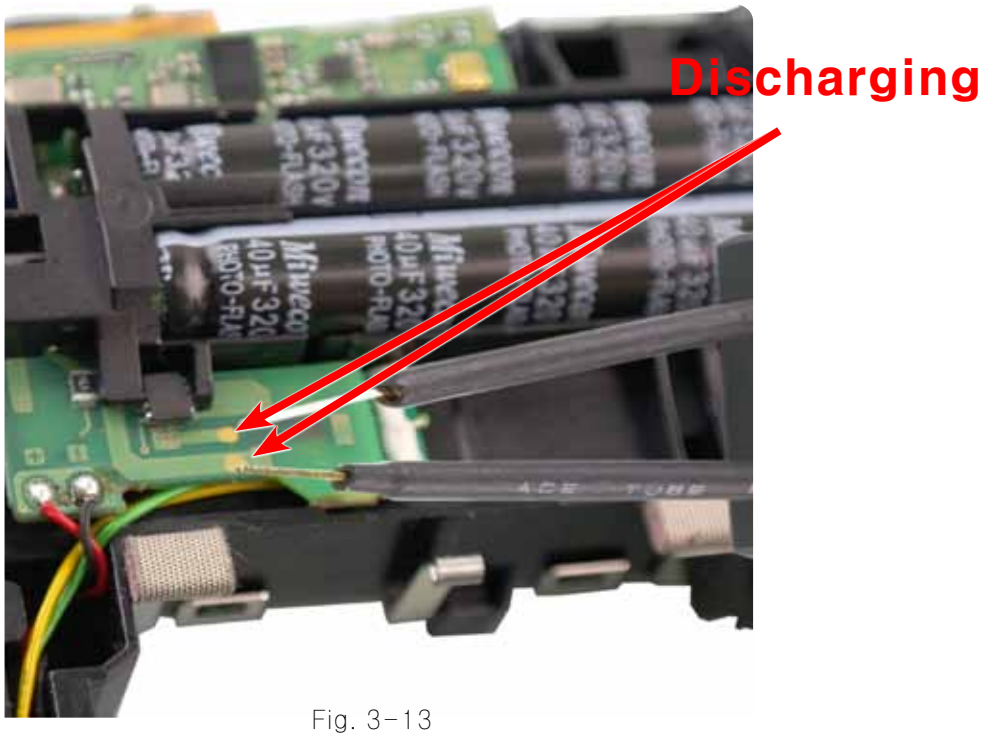

Fig. 3-13

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13. LOCKING STRUCTURE PART / WIRE

1) Remove the 4 LOCKING structure parts and remove the wire as illustrated in image below.

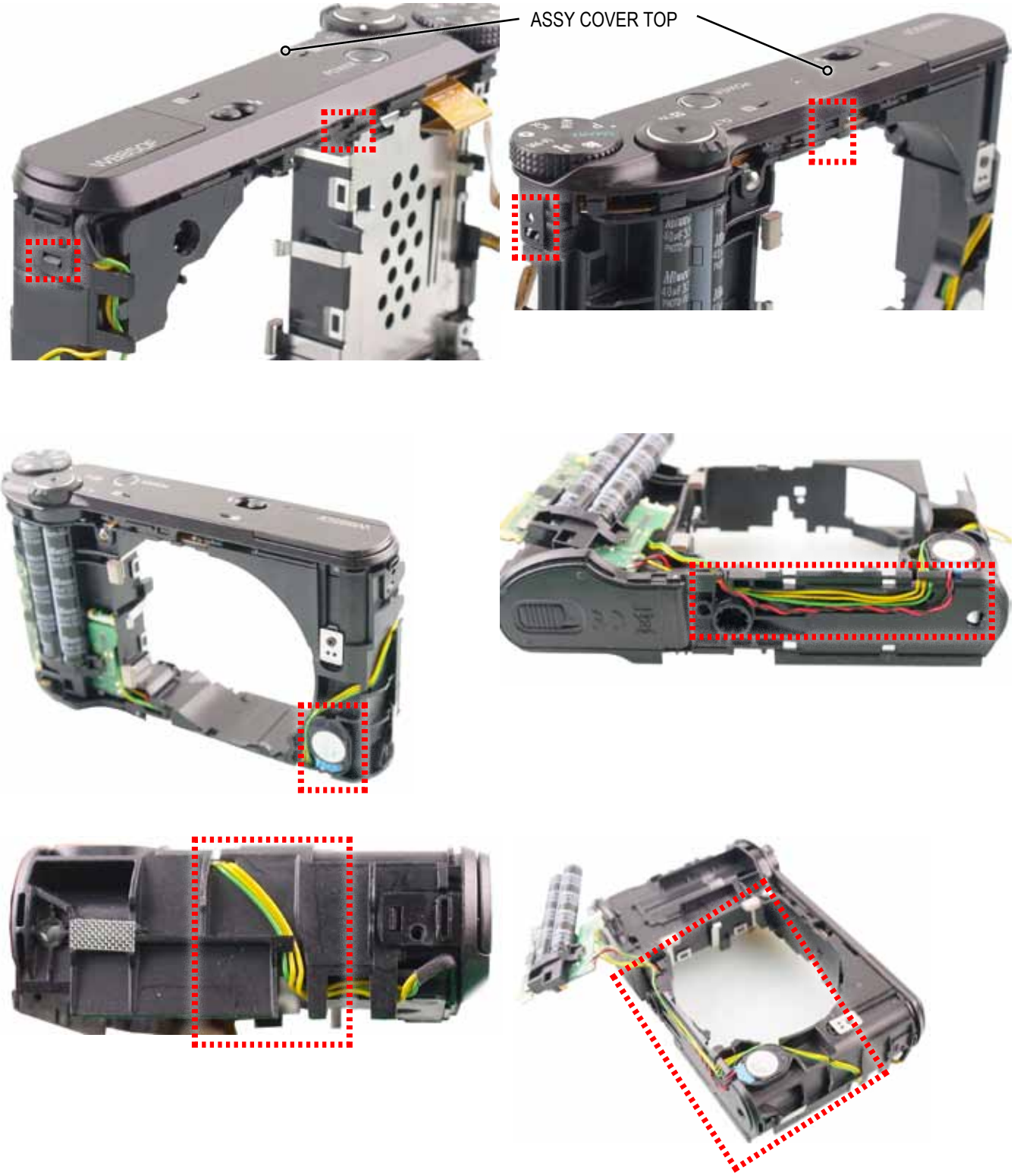

Fig. 3-14

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14. ASSY COVER TOP

1) Remove the ASSY COVER TOP in the direction of the arrow.

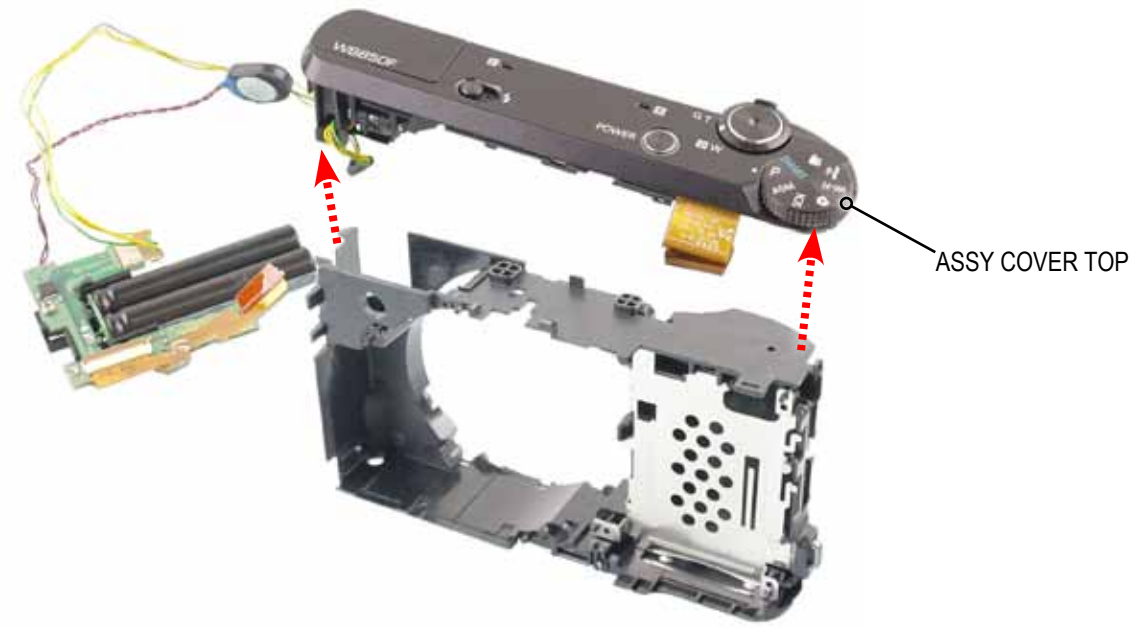

Fig. 3-15

15. FPCB

1) Remove the FPCB from the connectora s illustrated in image A and B. Then remove the FPCB from the ASSY BARREL MAIN PCB

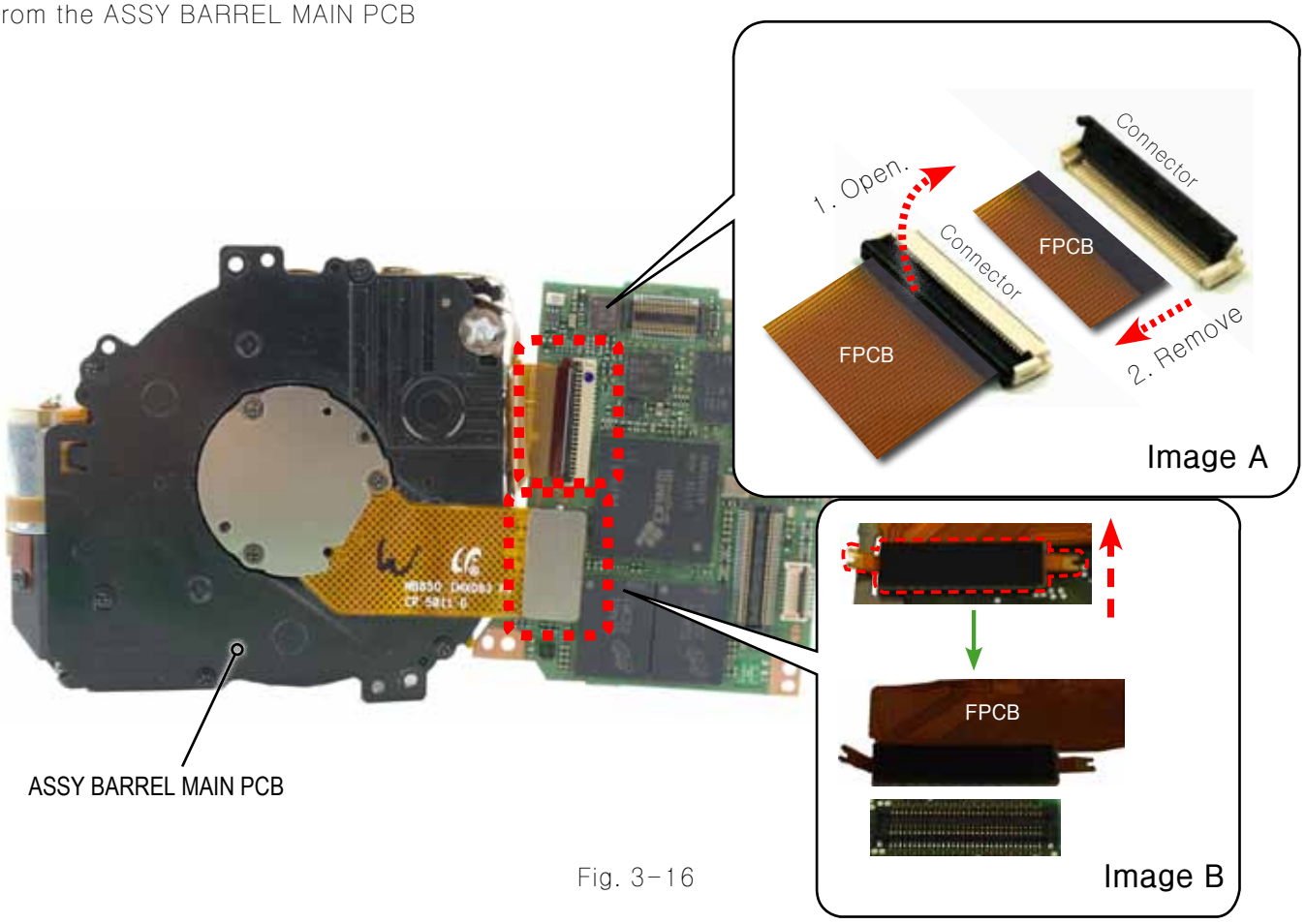

Fig. 3-16

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16. CMOS FPCB ASSY

1) Remove the 3 screws on the BARREL. Then remove the CMOS FPCB ASSY.

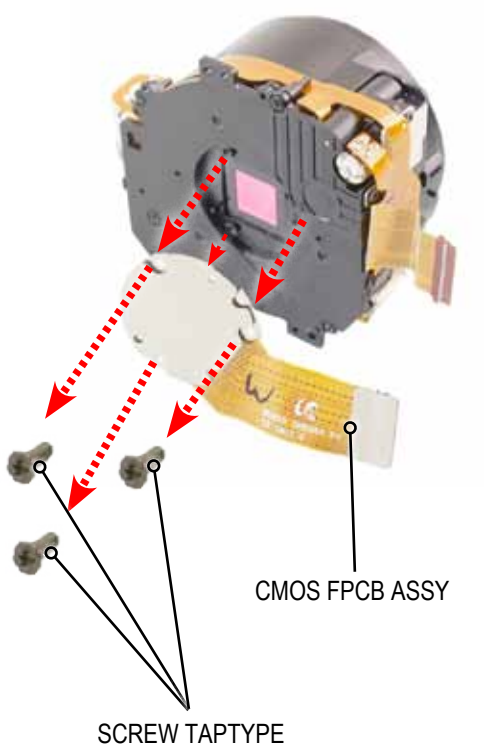

Fig. 3-17

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3-3 Barrel Disassembly

1. ASSY LENS BASE-D5 SCREW

1) Remove the 5 screws.

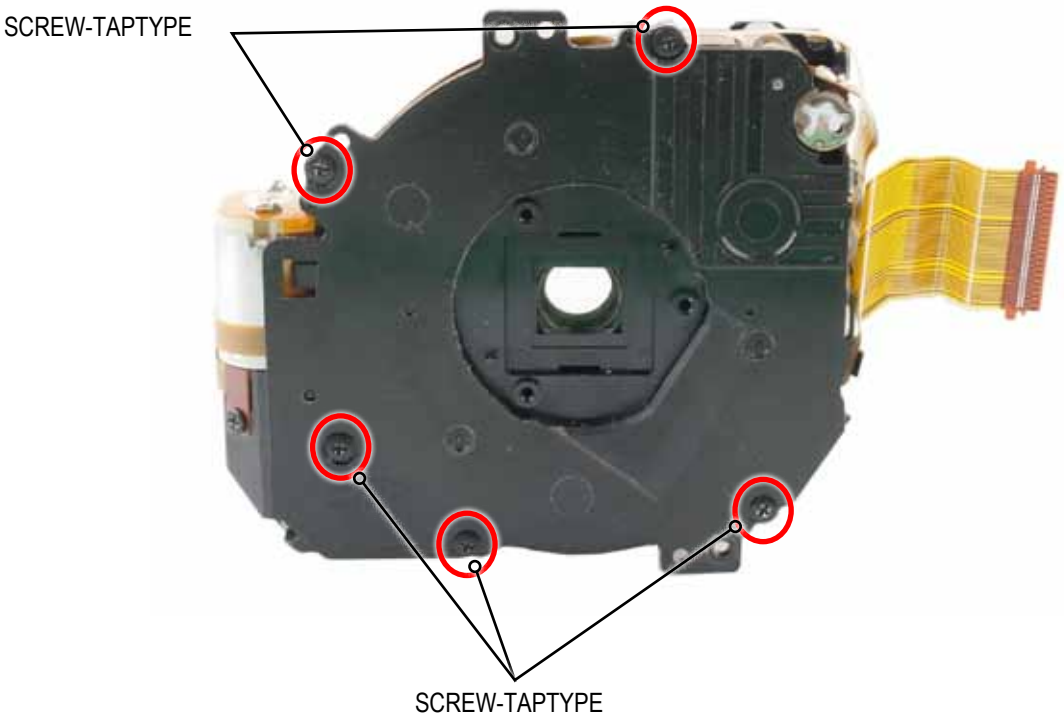

Fig. 3-18

2. FPCB

1) Remove the FPCB from the connector as illustrated in image A.

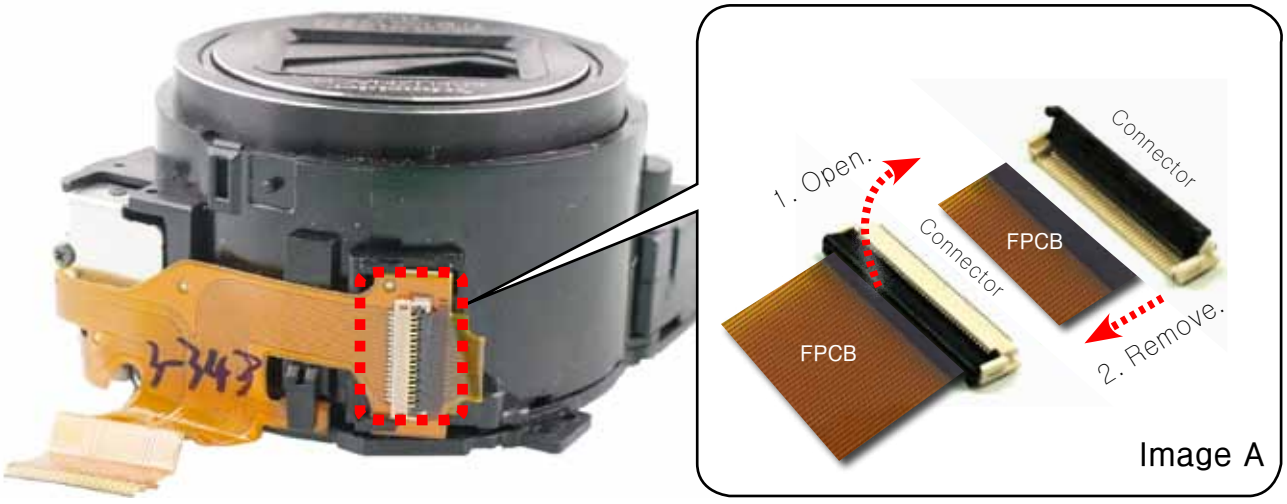

Fig. 3-19

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3. ASSY LENS BASE

1) Remove the ASSY LENS BASE in the direction of the arrow.

Fig. 3-20

4.BARREL OUTER GUIDE

1) Turn the ripple-shaped part counter-clock wise.
Remove the BARREL BASE from the BARREL OUTER GUIDE in the direction of the arrow.

Fig. 3-21

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5. BARREL BASE

1) Remove the PLATE-OUTER GUIDE from the BARREL BASE in the direction of the arrow.

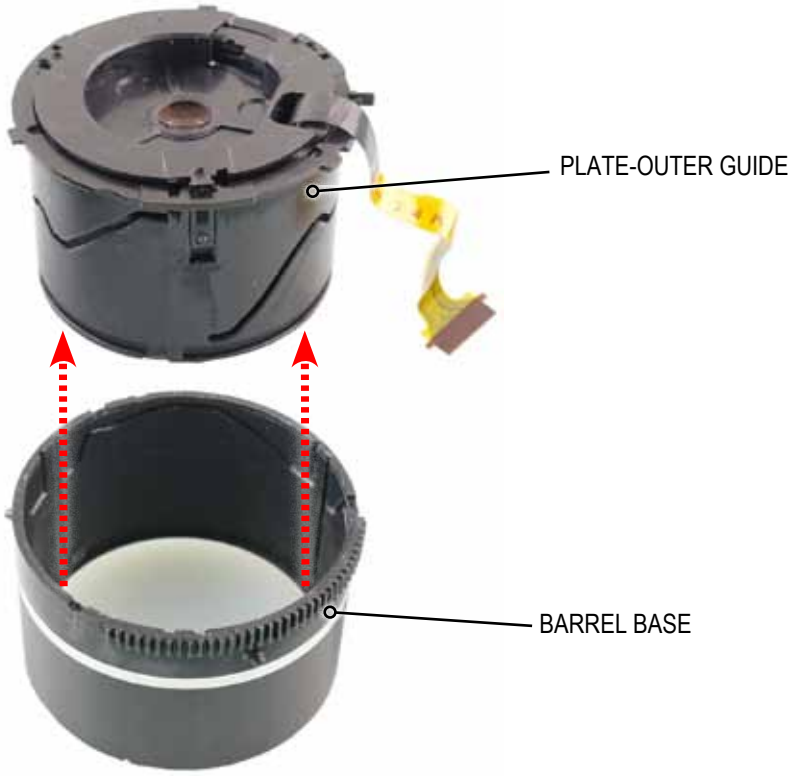

Fig. 3-22

6. BARREL-OUTER GUIDE

1) Remove the BARREL-OUTER GUIDE from the PLATE-OUTER GUIDE in the direction of the arrow.

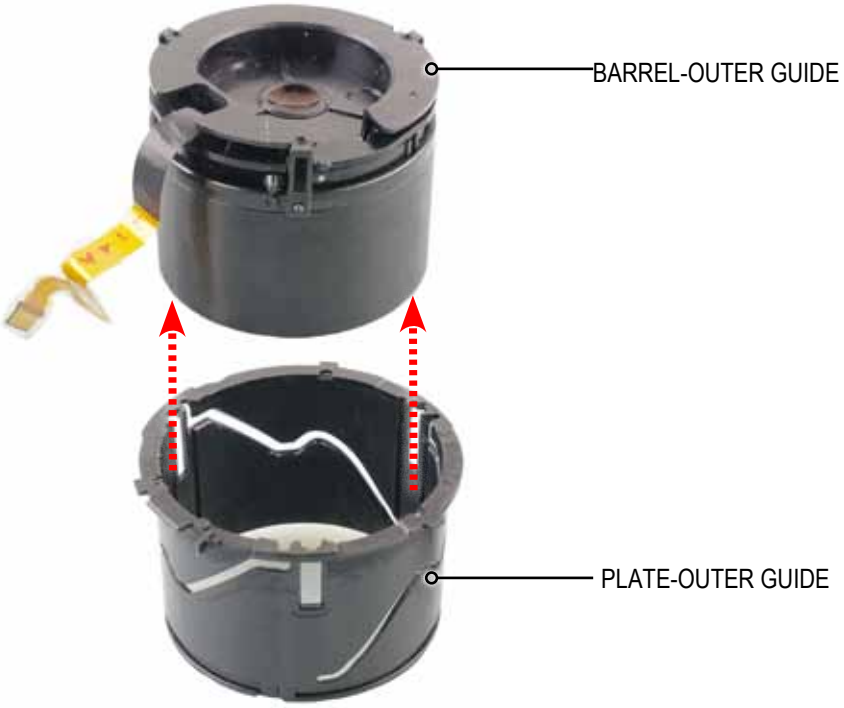

Fig. 3-23

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7. BARREL-OUTER GUIDE

1) Remove the BARREL-OUTER GUIDE from the BARREL-OUTER GUIDE PLATE in the direction of the arrow.

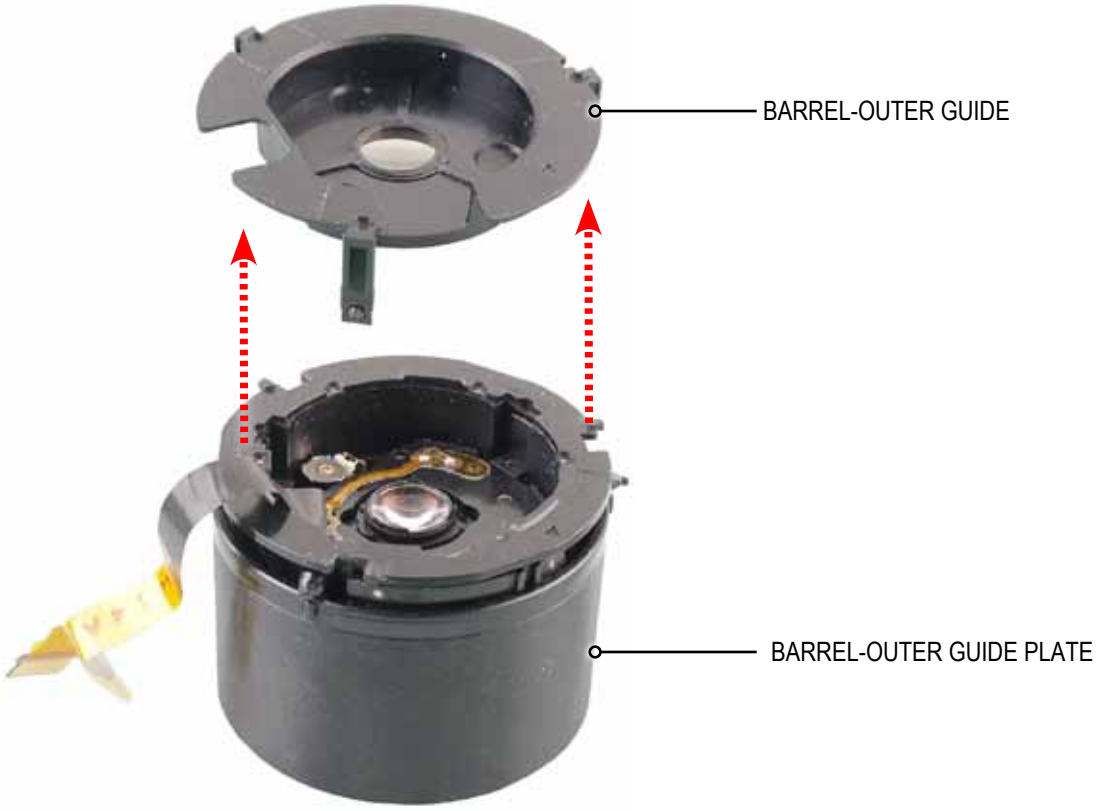

Fig. 3-24

8. PLATE-INNER GUIDE

1) Turn the BARREL ZOOM clock wise.
Remove the PLATE-INNER GUIDE from the BARREL ZOOM in the direction of the arrow.

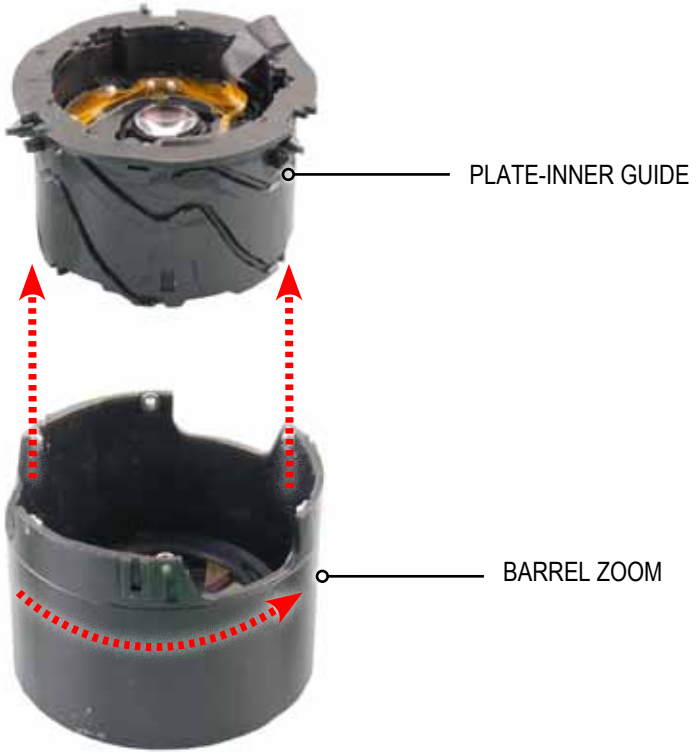

Fig. 3-25

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9. ASSY SUB BARREL-ZOOMRING

1) Turn the PLATE-INNER GUIDE clock wise.
Remove the ASSY SUB BARREL-ZOOMRING from the PLATE-INNER GUIDE in the direction of the arrow.

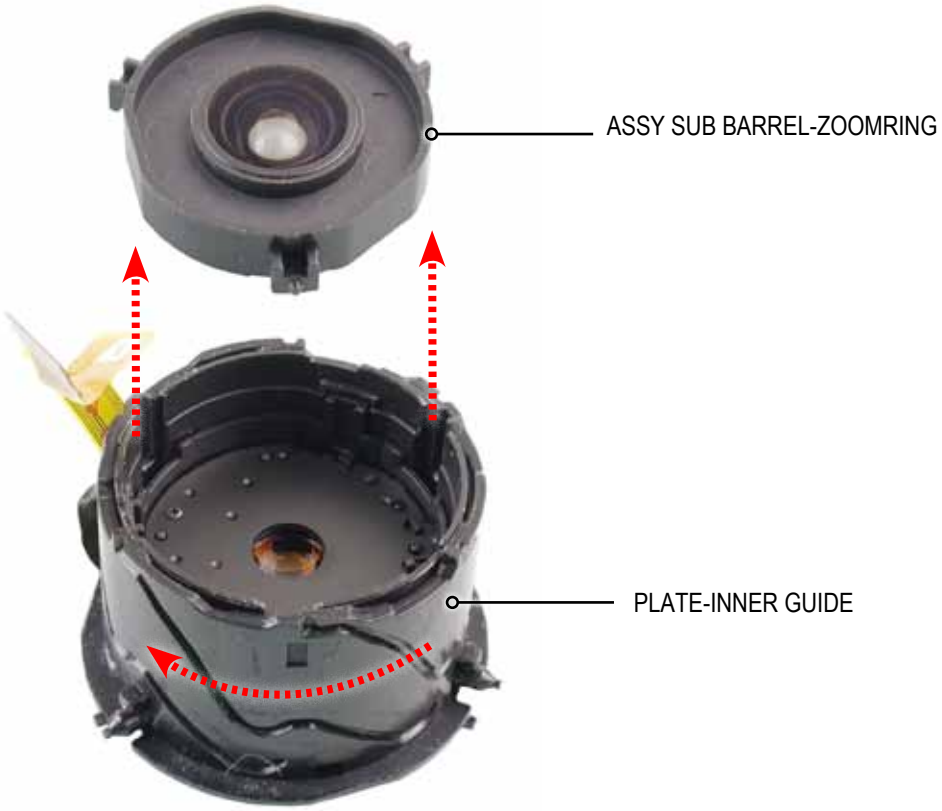

Fig. 3-26

10. BARREL-INNER CAM

1) Turn the PLATE-INNER GUIDE clock wise.
Remove the BARREL-INNER CAM from the PLATE-INNER GUIDE in the direction of the arrow.

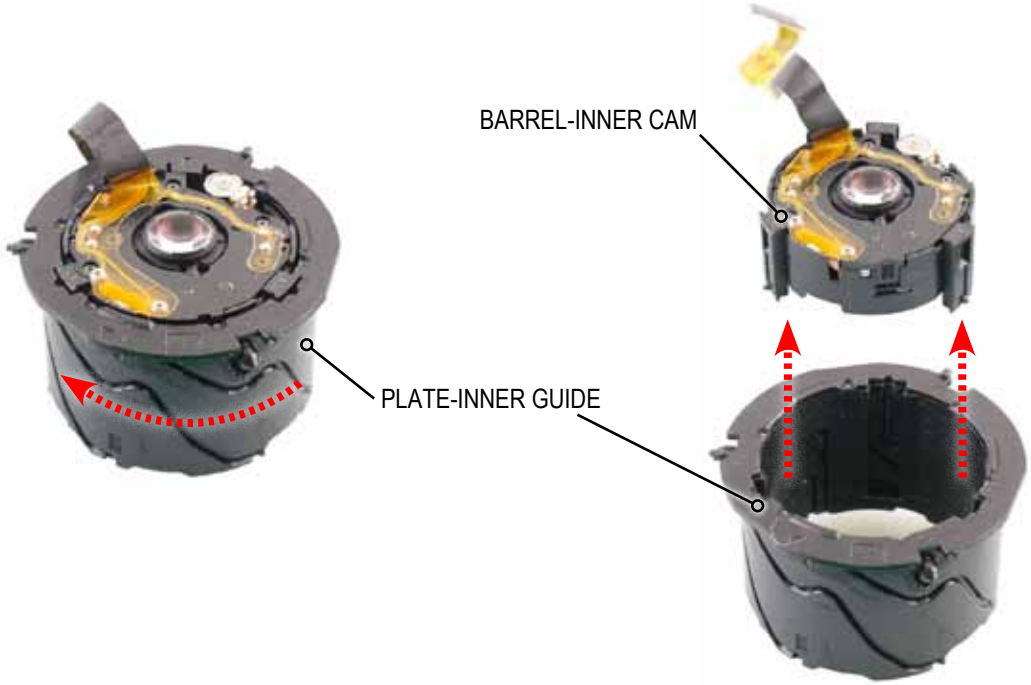

Fig. 3-27

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11. ASSY SUB BARREL-2ND_OIS

1) Remove the ASSY SUB BARREL-2ND_OIS from the PLATE-INNER GUIDE in the direction of the arrow.

Fig. 3-28

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3-4 Barrel Reassembly

3-4-1 How to use the anti-friction lubricant to 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 barrel assembly.

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

Component Name	Where to apply	Name of lubricant
Lens Base	Sliding contact surfaces of AF Lens.	Grease NFH-743C
Others components	Inside and outside friction surface	HANARL UD-420K

■ Lubricant brand name : Kanto Kasei (http://www.kanto-kasei.co.jp/e/index.html)

Please contact us (KIHYUNG CO.,LTD Distributor) by email if you are interested in purchasing.

e-mail : keeheung2000@yahoo.co.kr

<Table 3-2>

2. Instructions

1) Lubricating with Grease: Lens Base

Apply the Grease to the Lens Base where is the sliding contact surfaces of AF Lens.

- Do not get any Grease on the AF lens.
- Apply a light coating of the Grease and make sure not to get any on the AF lens and other components.

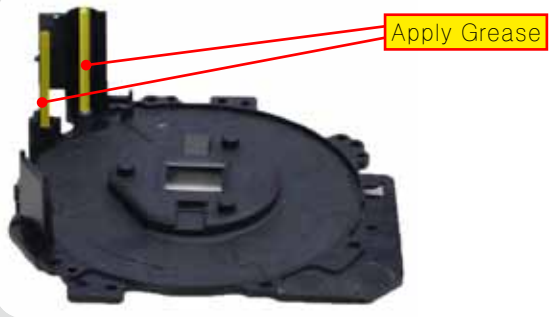

Fig. 3-29

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2) 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.

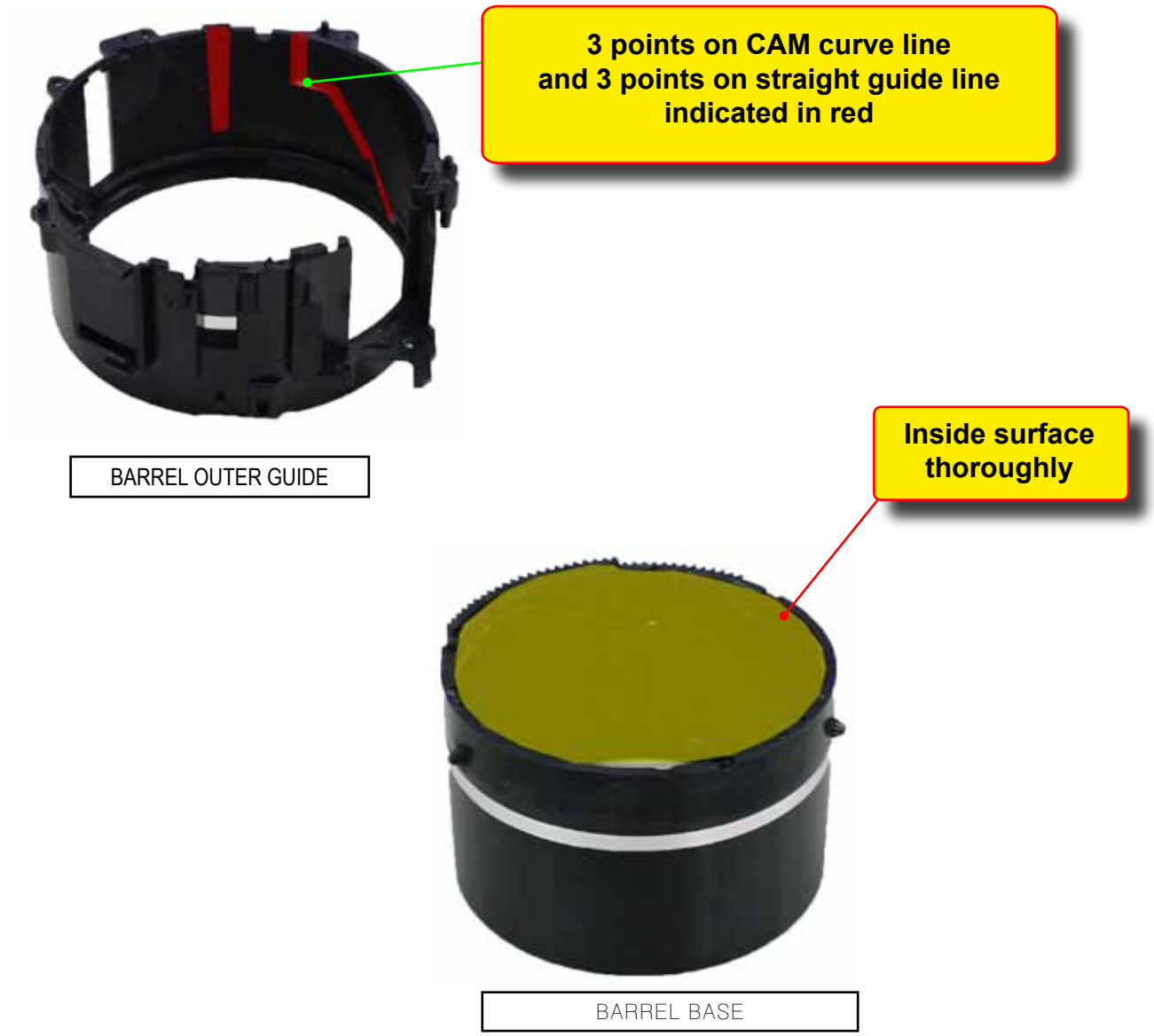

Fig. 3-30

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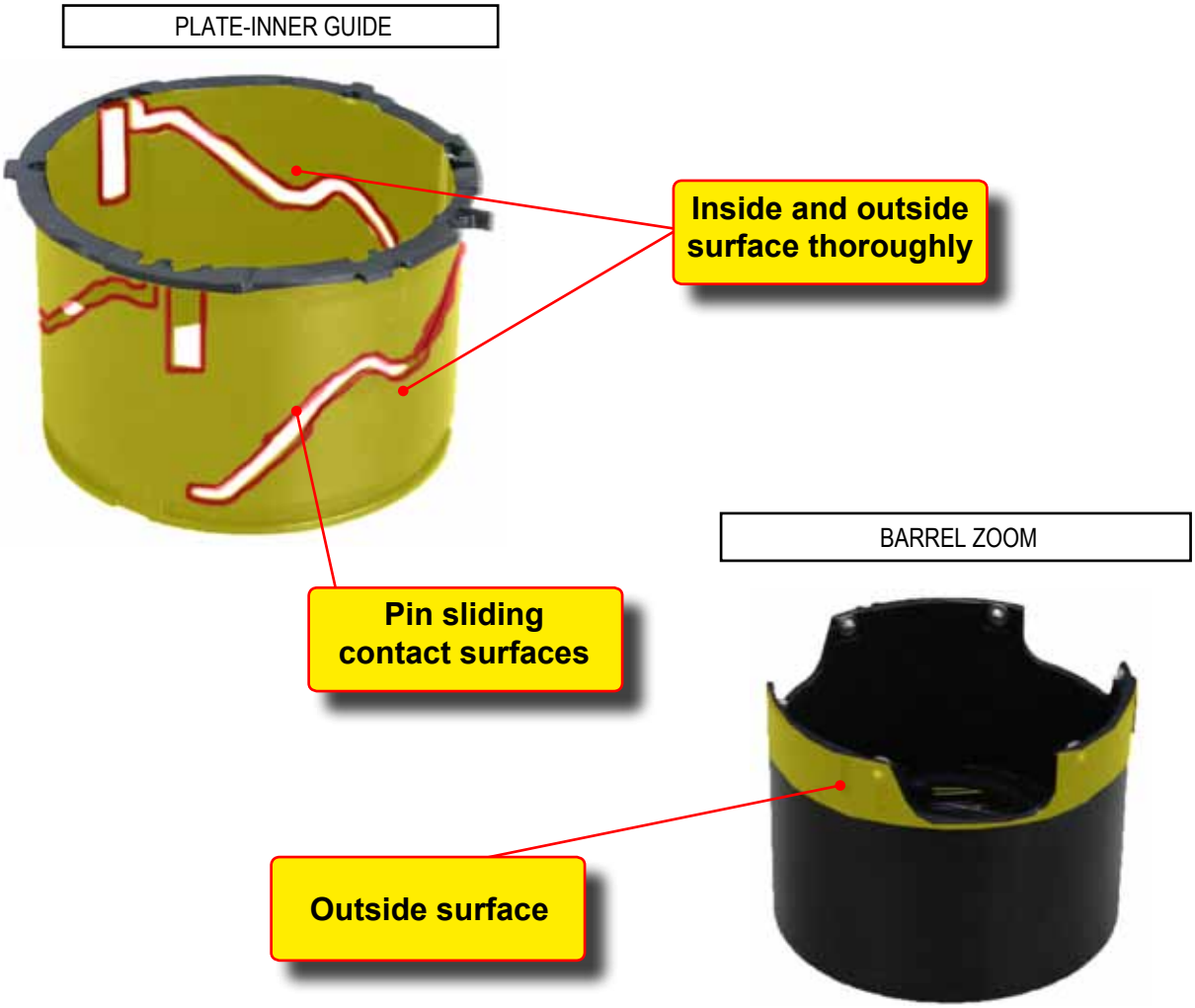

Fig. 3-31

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3-4-2 **Barrel Reassembly**

1. ASSY SUB BARREL-2ND_OIS

1) Align to the point indicated ⓐ.
Then install the PLATE-INNER GUIDE and ASSY SUB BARREL-2ND_OIS in the direction of the arrow.

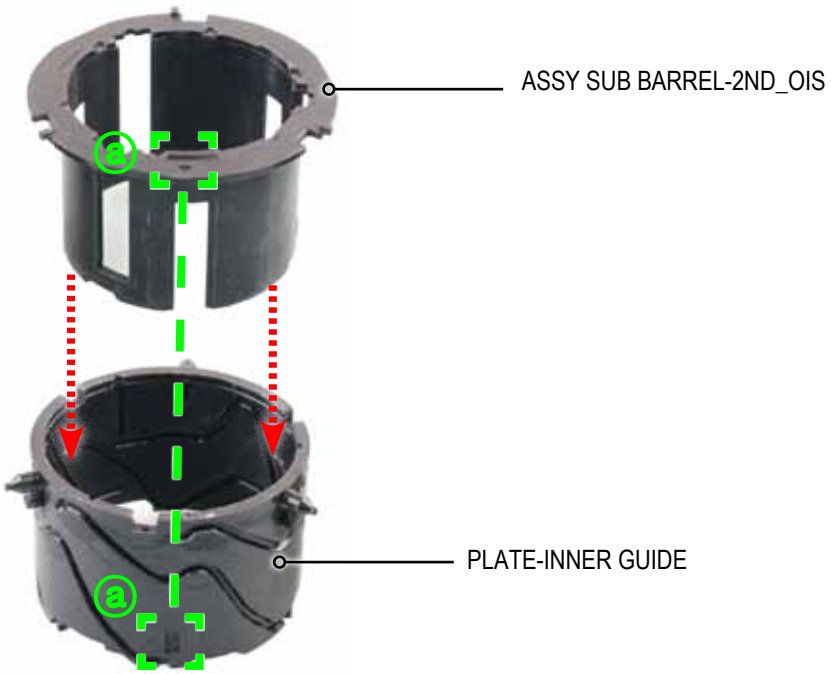

Fig. 3-32

2. BARREL-INNER CAM

1) Align the point indicated ⓐ with the point indicated ⓑ.
Then install the ASSY SUB BARREL-2ND_OIS and BARREL-INNER CAM in the direction of the arrow.

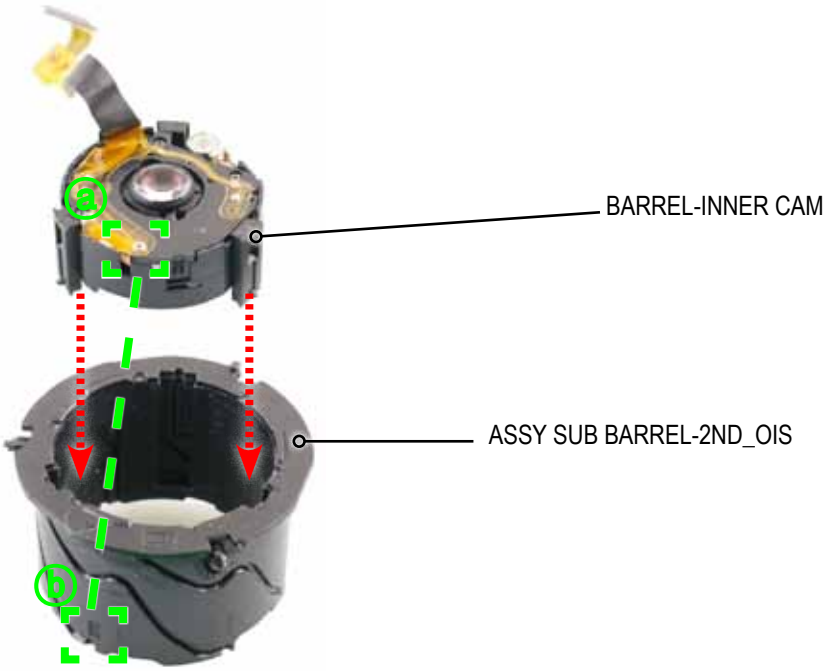

Fig. 3-33

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3. ASSY SUB BARREL-ZOOMRING

1) Align to the point indicated ⓐ as illustrated in image below.
Install the LATE-INNER GUIDE and ASSY SUB BARREL-ZOOMRING in the direction of the arrow.
Then turn the PLATE-INNER GUIDE clock wise to the end as illustrated in image A.
Then turn the PLATE-INNER GUIDE counter-clock wise to the end just enough to hold the unit into the position as illustrated in image B.

Fig. 3-34

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4. PLATE-INNER GUIDE

1) Align to the point indicated ⓐ. Then install the BARREL ZOOM and PLATE-INNER GUIDE in the direction of the arrow. Then turn the BARREL ZOOM clock wise to the end.

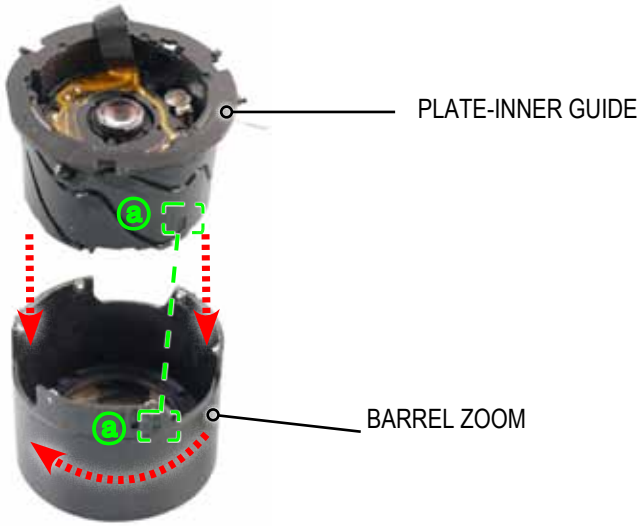

Fig. 3-35

5. PLATE-OUTER GUIDE

1) Install the BARREL ZOOM and BARREL-OUTER GUIDE in the direction of the arrow. Then install the PLATE-OUTER GUIDE and BARREL ZOOM in the direction of the arrow.

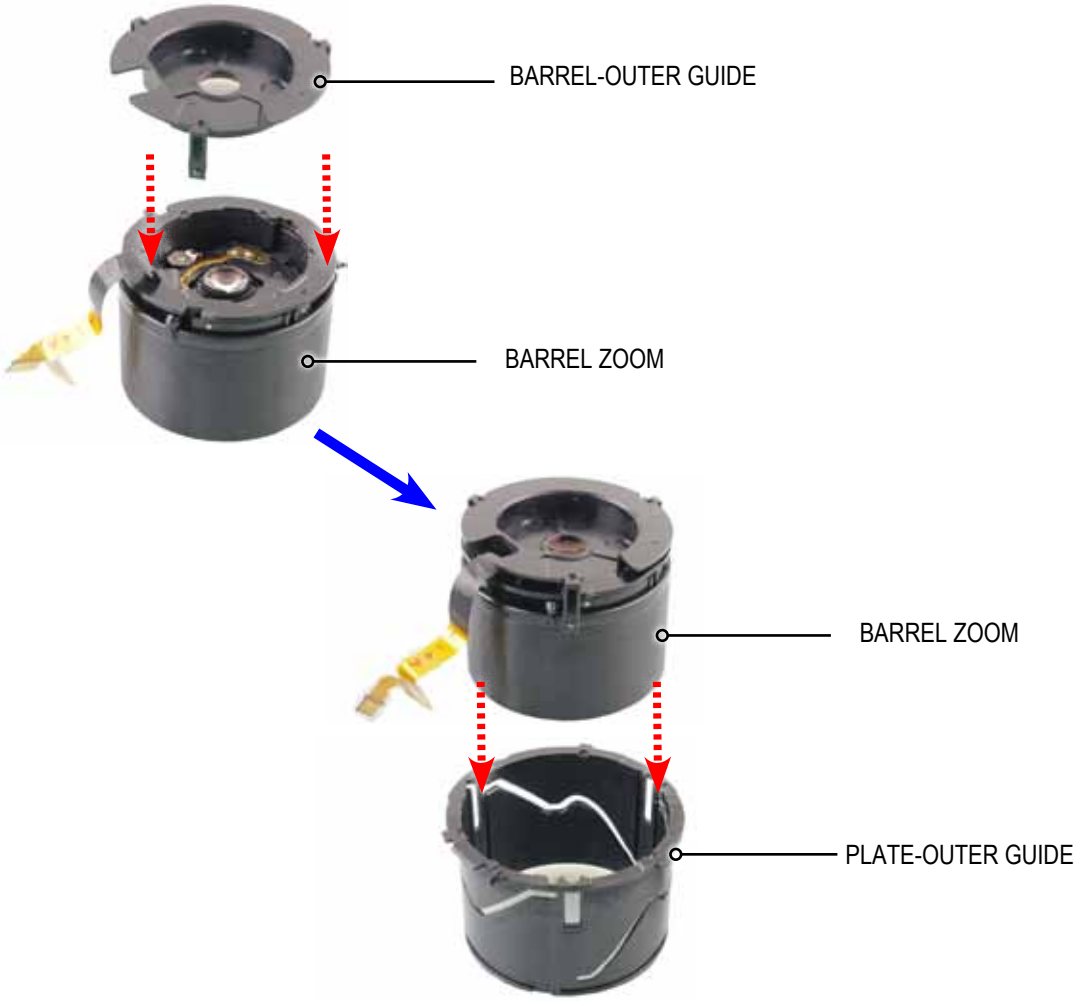

Fig. 3-36

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6. BARREL-OUTER

1) Align to the two points indicated ⓐ and ⓑ respectively. Then install the BARREL-OUTER and BARREL ZOOM in the direction of the arrow.

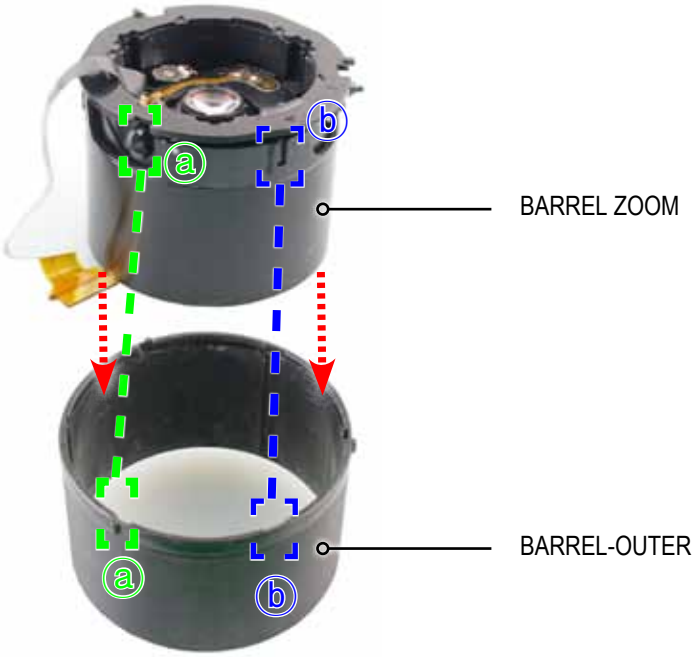

Fig. 3-37

7. BARREL BASE

1) Align to the point indicated ⓐ. Then install the BARREL BASE and PLATE-INNER GUIDE in the direction of the arrow.

Fig. 3-38

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8. BARREL OUTER GUIDE

1) Align to the point indicated ⓐ. Then install the BARREL OUTER GUIDE and BARREL BASE in the direction of the arrow.

Fig. 3-39

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9. ASSY LENS BASE

1) Align to the point indicated ⓐ as illustrated in image A and B.
Then install the ASSY LENS BASE in the direction of the arrow

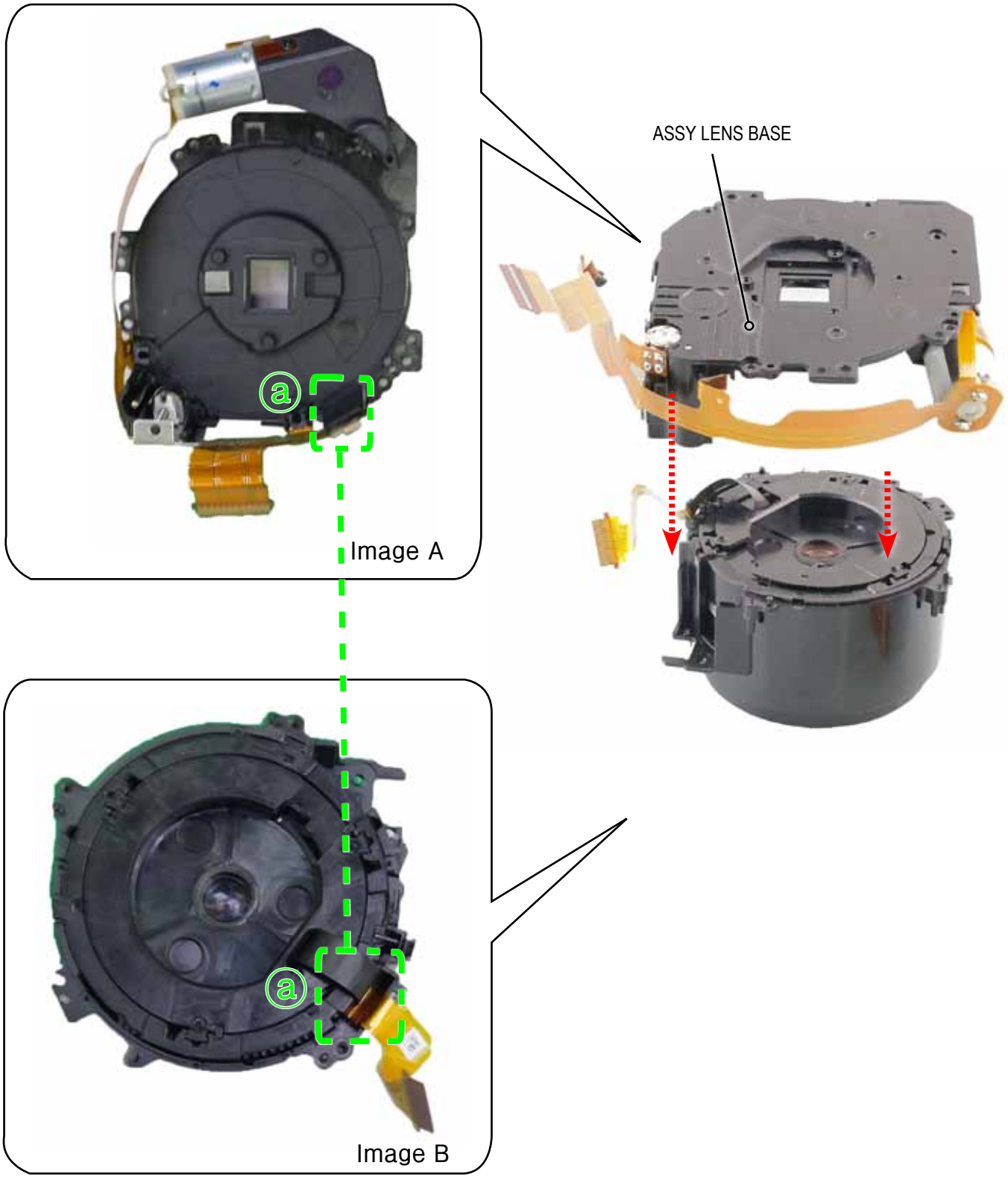

Fig. 3-40

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10. SCREW

1) Tighten the 3 screws.

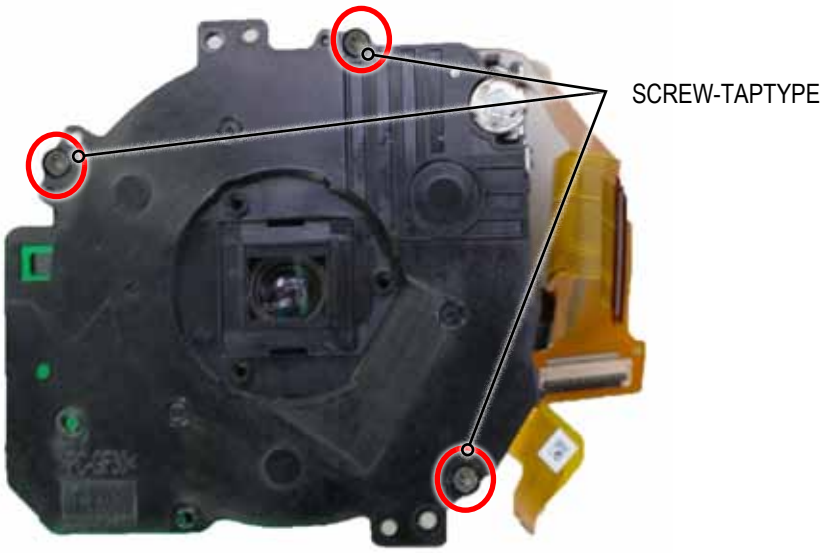

Fig. 3-41

11. ASSY SHUTTER

1) Insert the BARREL completely. Turn the ripple-shaped part clock wise to the end to close the shutter completely.

Fig. 3-42

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12. ASSY ZOOM MOTER

1) Align to the three points indicated ⓐ,ⓑ and ⓒ respectively. Then install the ASSY ZOOM MOTER.

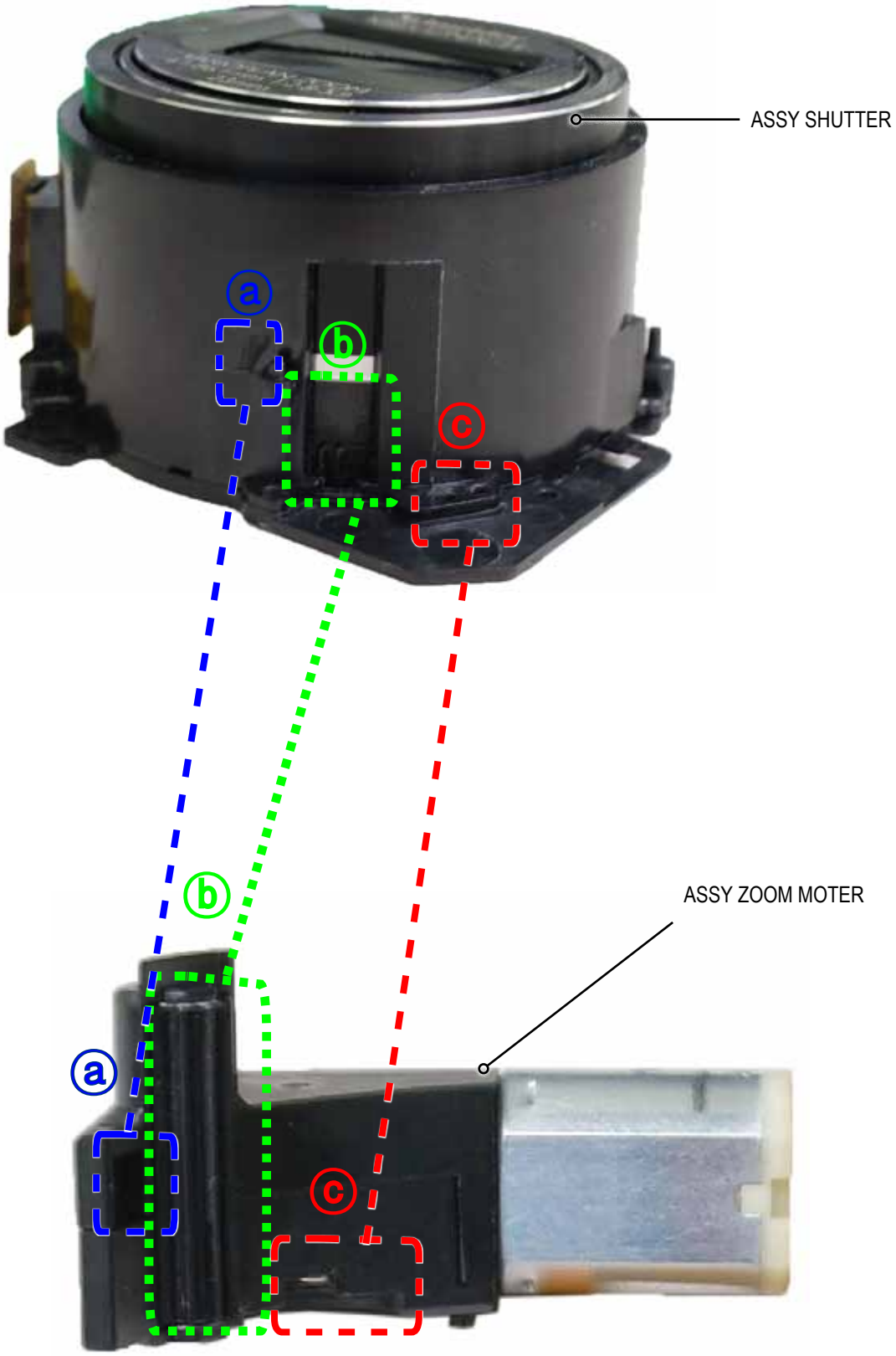

Fig. 3-43

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13. ASSY LENS BASE-D5

1) Tighten the 2 screws.

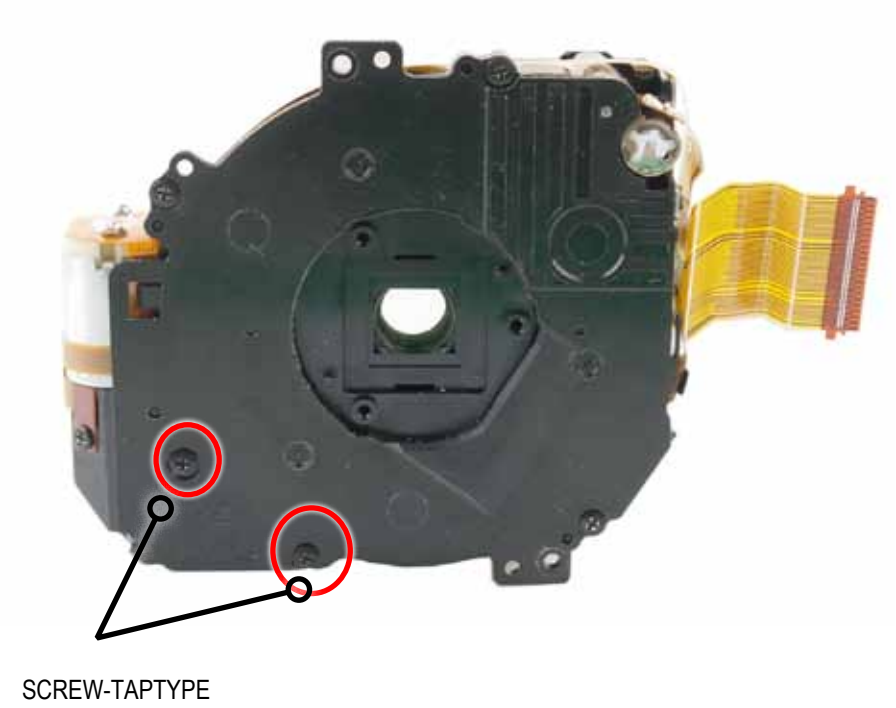

Fig. 3-44

14. FPCB

1) Connect the FPCB to the connector as illustrated in image A. Solder the FPCB on red posion and install it.

Fig. 3-45

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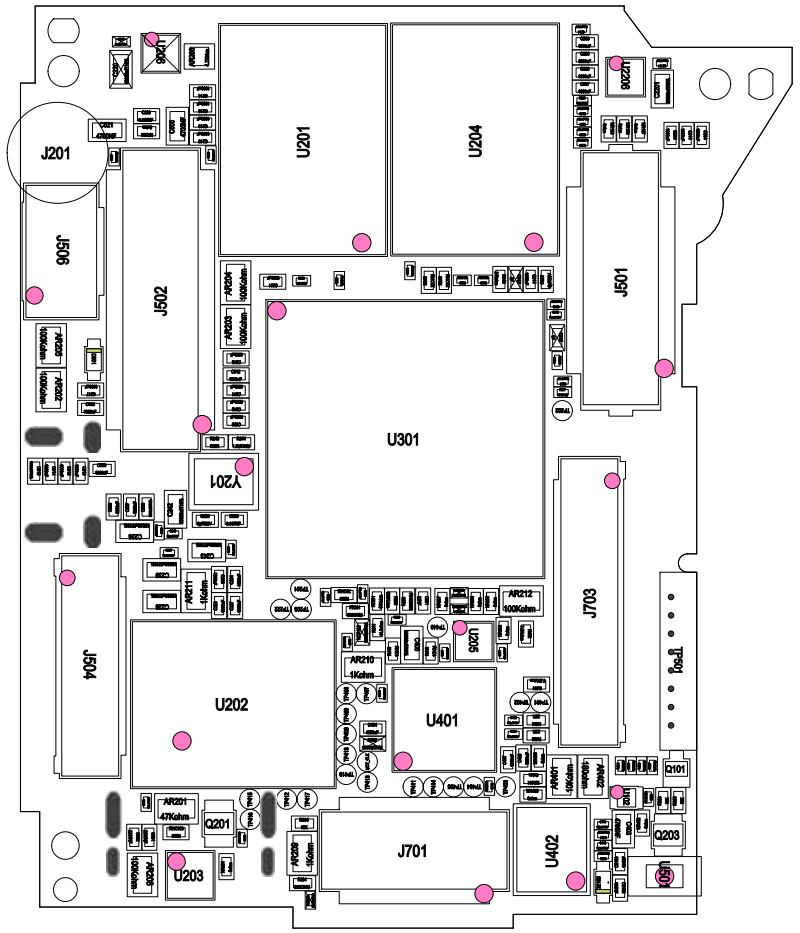
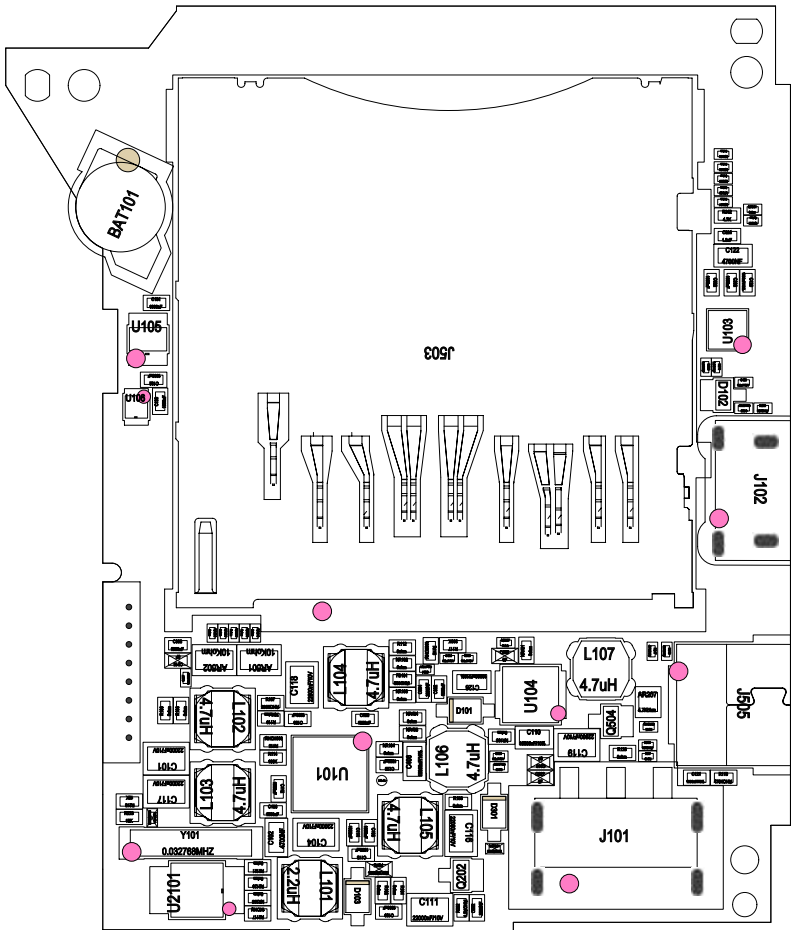
4. PCB diagram

4-1 MAIN PCB

TOP



BOTTOM



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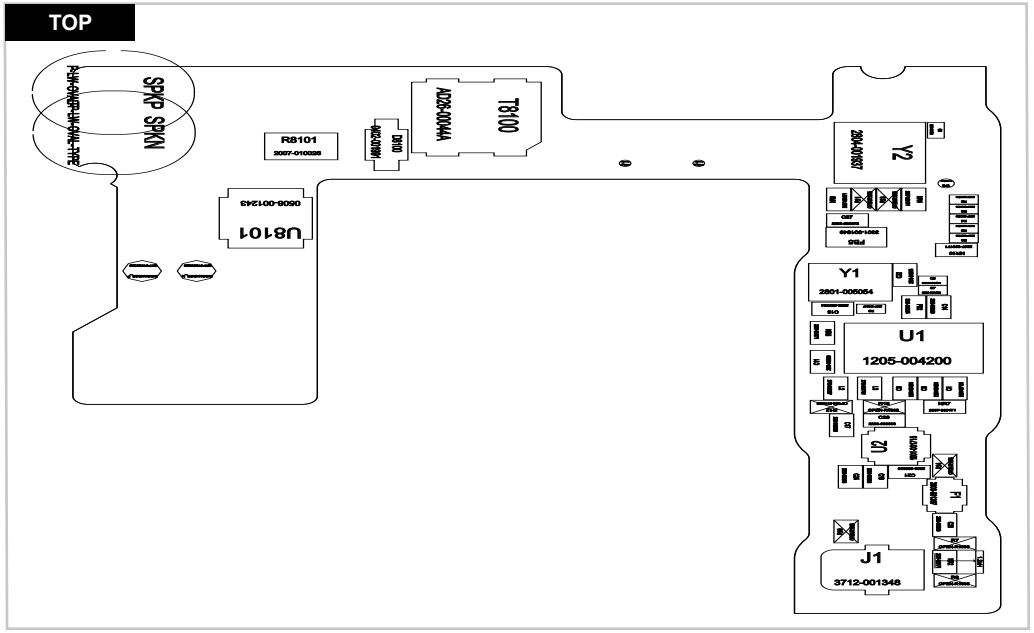
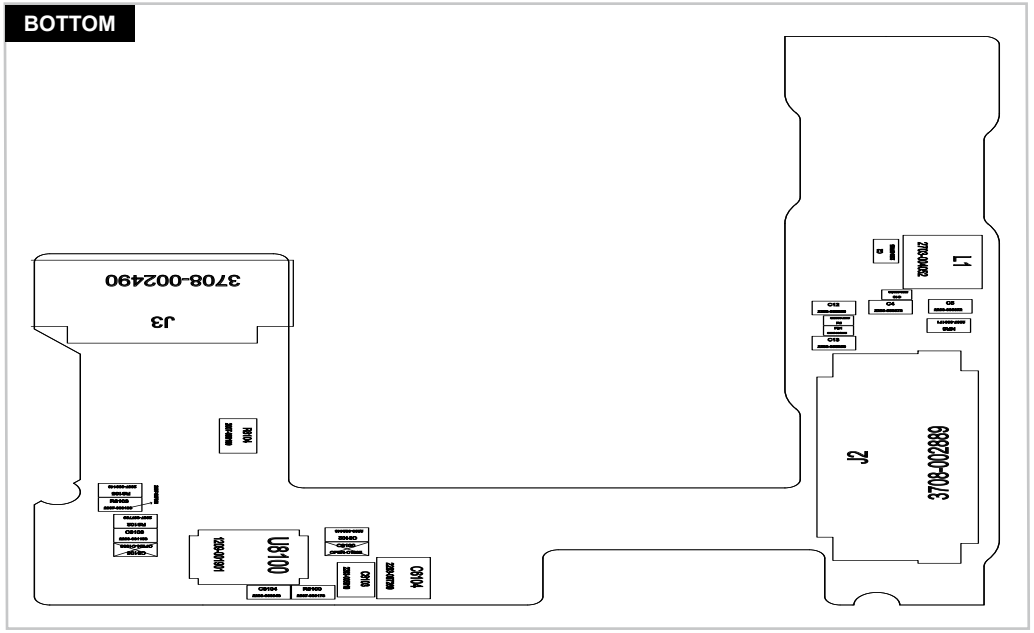
4-2 STROBE PCB

TOP

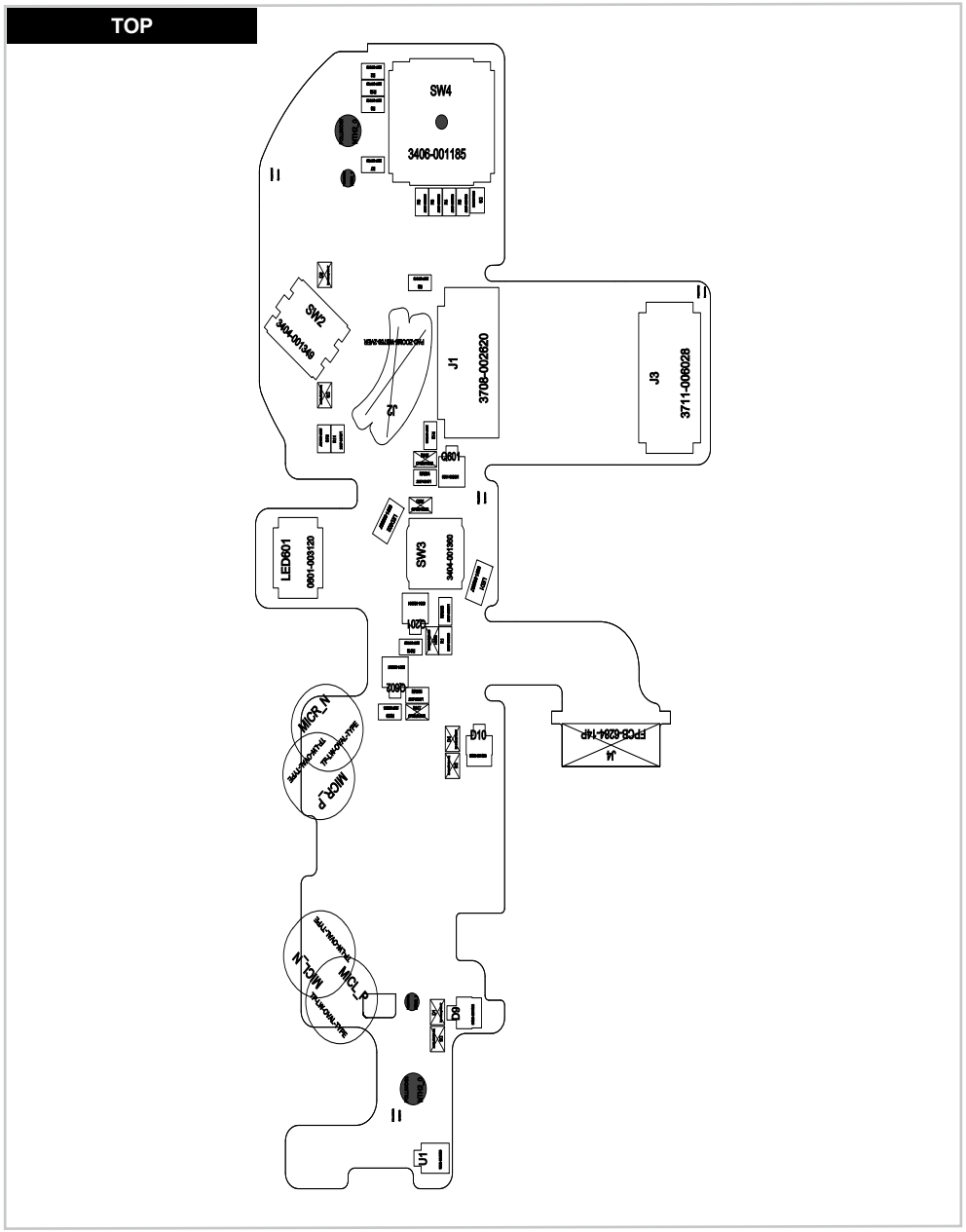


BOTTOM



4-3 TOP FPCB

TOP



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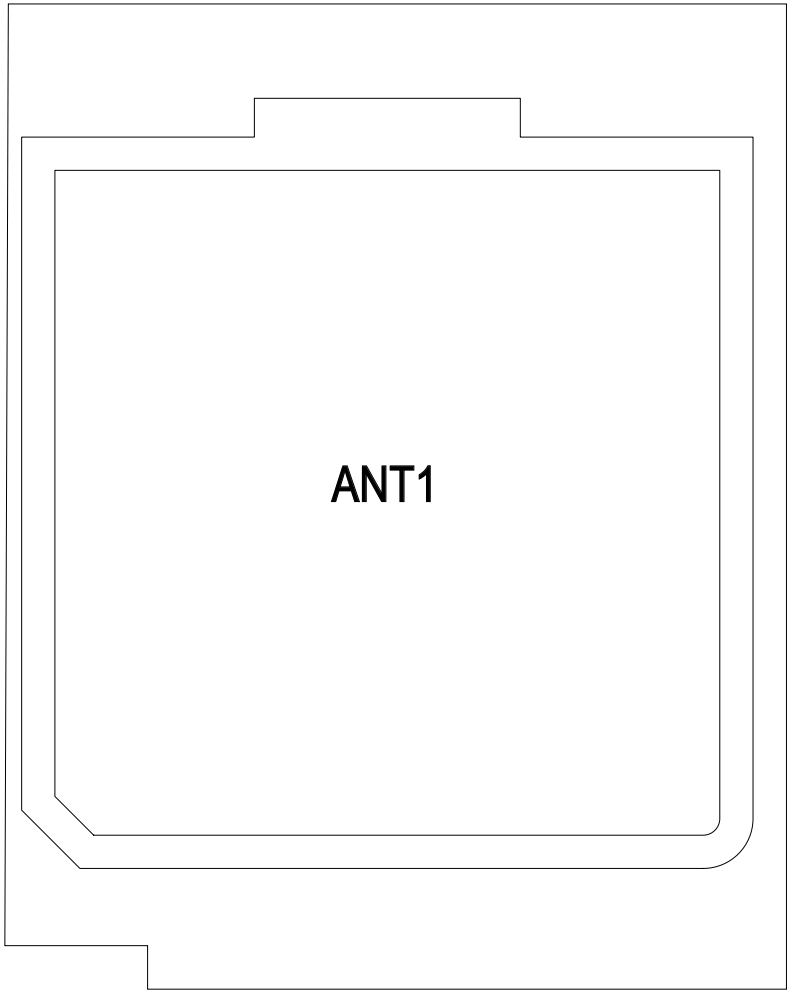
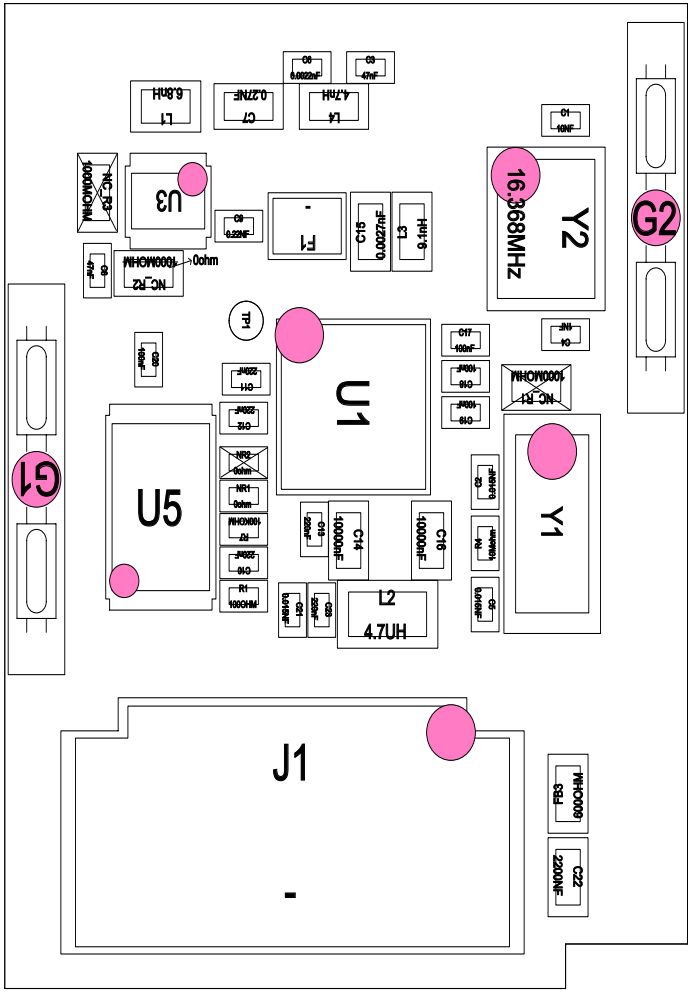
4-4 GPS PCB

TOP



BOTTOM



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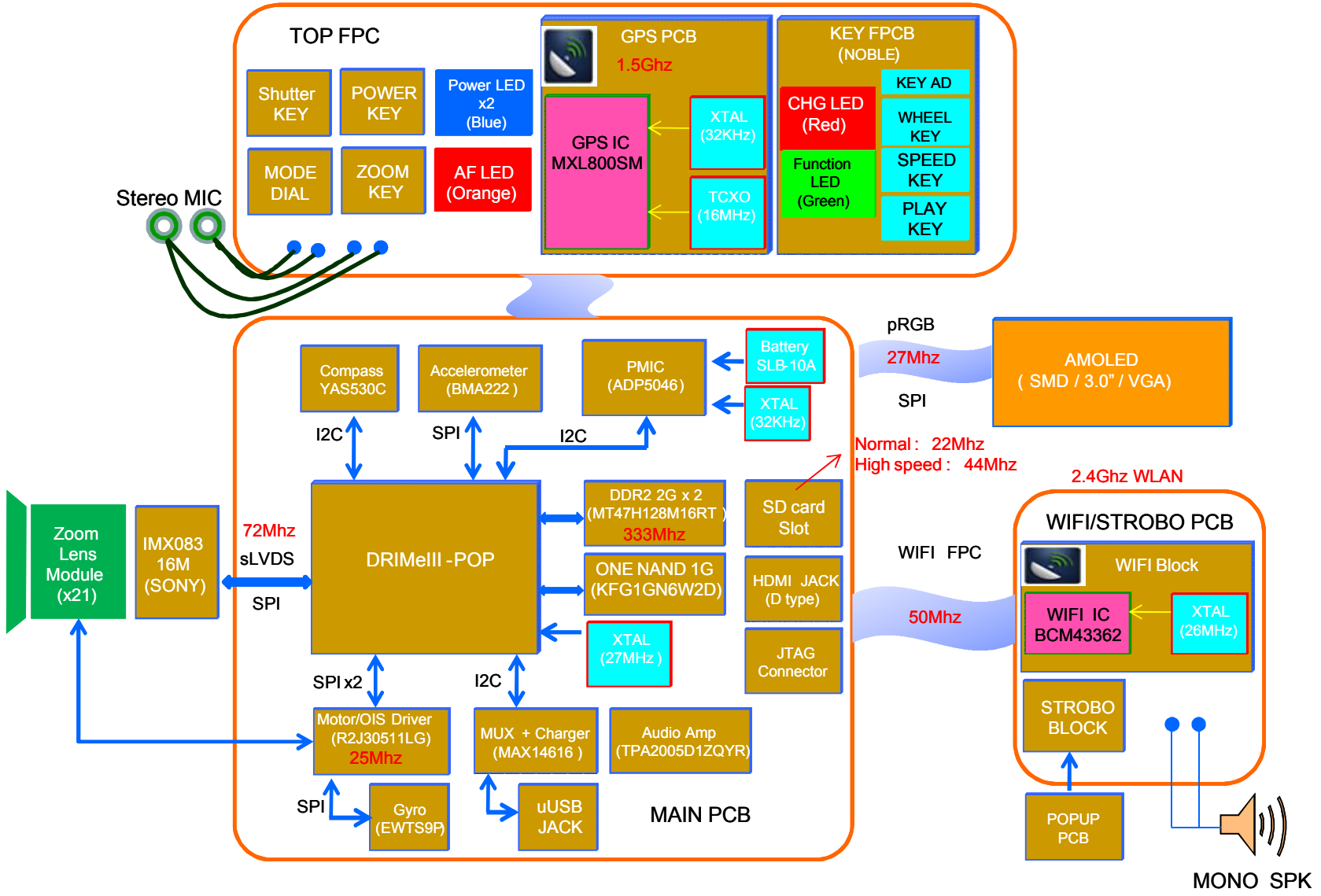
5. Block diagram

5-1 Block diagram



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6. Firmware update

6-1 Product reset

▪ This section describes how to reset the camera.

1. Press the power button to turn on the camera.

Fig. 6-1

2. First half-press and hold the **shutter button** and **up button**, and then press the **power button**.

Fig. 6-2

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3. Turn the camera on to view the reset setting.

Fig. 6-3

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6-2 Version check

▪ This section describes how to view the current firmware version.

1. Before upgrading your camera's firmware, make sure the battery is fully charged.

2. Turn off the power of the camera.

3. First press and hold the **shutter button** and **down button**, and then press the **power button.**

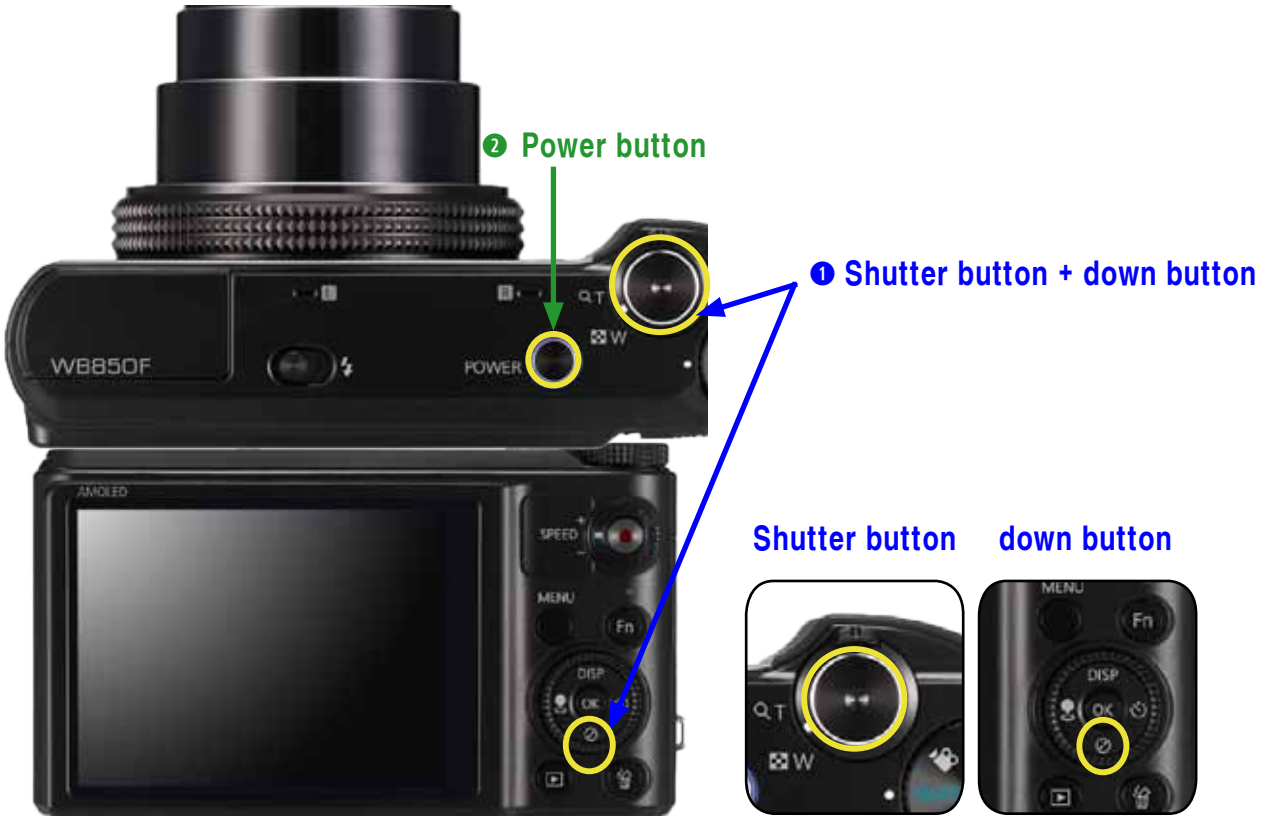

Fig. 6-4

4. The current firmware version is displayed on the LCD screen. Then, turn the camera off.

Fig. 6-5

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6-3 Upgrade

▪ This section describes how to upgrade the firmware.

♦ **Firmware execution information**

The below table provides the information of firmware structure.
Code section contains the execution code to operate the camera. The partition 1 to 3 sections contain the all the resources to operate the camera. Partition 3 section contains the defective pixel adjustment data and lens shading adjustment data.
User Area contains the setting value when user sets up the setting by the menu button. Also, User Area section contains the adjustment data through the adjustment process.

Code	partition1	partition2	partition3	User Area

<Table 6-1>

► **Reference for general version:**
- It updates data contained in the Code and partition 1 section while partition 3 and User Area section data remain.

1. Format the memory card and copy the two files such as FWUP and WB850-FW-PV-202083.bin into the memory card. Then insert the memory card into the camera.
   * When the firmware is upgraded, all the camera settings are set to their default values. Since all the files stored in the internal memory will be deleted, ensure that files are copied to other storage devices before upgrading firmware.

FWUP

WB850-FW-PV-202083.bin

2. It is recommended that you use an AC adaptor or the fully charged batteries.
   * Before upgrading your camera's firmware, make sure the battery is fully charged.

3. Press the power button to turn on the camera.

Fig. 6-6

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4. The firmware version will display on the LCD screen. Press and hold the **shutter button** to start the firmware upgrade process.

Fig. 6-7

5. The display will show “Firmware is updating...”

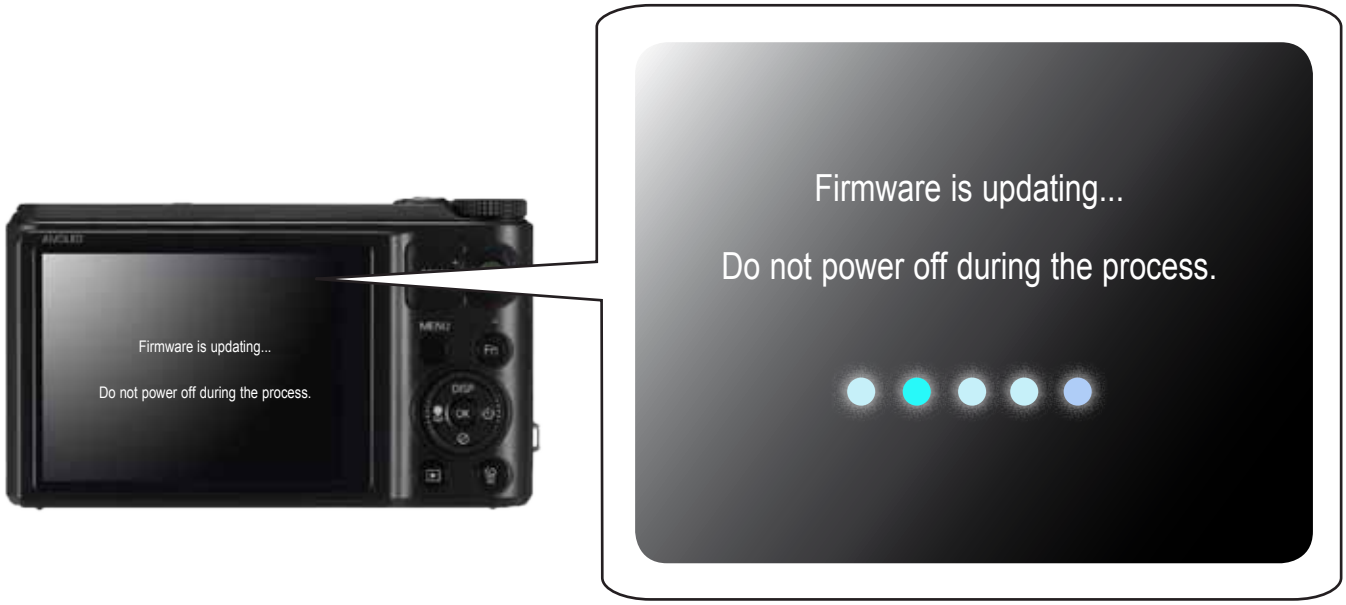

Fig. 6-8

6. Once the firmware upgrade is complete, the camera will automatically power off.

Fig. 6-9

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6-4 How to update the fimware when forced to quit

▪ This section describes how to update the firmware when the power is not turned on.

CAUTION

All of the adjustment data will be deleted when forced to quit.
Therefore you have to go over the adjustment process all over again.

1. Solder the Boot option TP on Main PCB to short out the circuit.

2. Download the firmware file.
   (WB850_DSP_G_SR_SXXXXXX.zip)

3. Unzip the firmware file downloaded and copy the three firmware files below to the SD card.
   (dnloader.bin, up_wb850.bin, WB850-FW-XX-XXXXXX.bin)

4. Insert the SD card containing the three firmware files into the SD card slot.
   Press the power button to turn on the camera.

5. LED will blink while the firmware update is processing.
   LED will stop blinking when the firmware update is completed.

6. Remove the solder the Boot option TP on Main PCB.
   Then press the power button to turn on the camera.

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7. Adjustment

7-1 Basic guide for adjustment

■ After replacing the parts, you need to adjust the following items.
■ The table below provides information about the necessary adjustment process.

1. Please refer to the table information before beginning the adjustment process.

	MAIN PCB	WIFI-STROBO PCB	TOP FPCB	POP UP PCB	CIS PCB	BARREL ASSY
FIRMWARE UPGRADE	O	X	X	X	X	X
LENS SHADING ADJ	O	X	X	X	O	O
SHUTTER CLOSE TIME ADJ	O	X	X	X	O	O
IRIS ADJ	O	X	X	X	O	O
CMOS GAIN ADJ	O	X	X	X	O	O
FLASH & AWB ADJ	O	O	X	O	O	O
PUNT ADJ	O	X	X	X	O	O
CMOS DEFECT PIXEL ADJ	O	X	X	X	O	O
OIS CENTERING	O	X	X	X	O	O
SERIAL NUMBER WRITING ADJ	O	X	X	X	X	X

<Table 7-1>

2. Necessary equipment
   1) AE TESTER: AE TESTER is used to adjust the luminance level and the color temperature of the Light box.
      It helps adjust the luminance level to **12 LV** and color temperature of the Light box to **3300K**.
   2) Infinity Collimator for PUNT adjustment
   3) 18% Reflectance gray chart for FLASH & AWB adjustment and Dark Box.
   4) POWER SUPPLY: 4.2V/2A

3. Adjustment file
   It is necessary to copy the adjustment file such as **"WB850_ADJ.TXT"** into the memory card to proceed the process.

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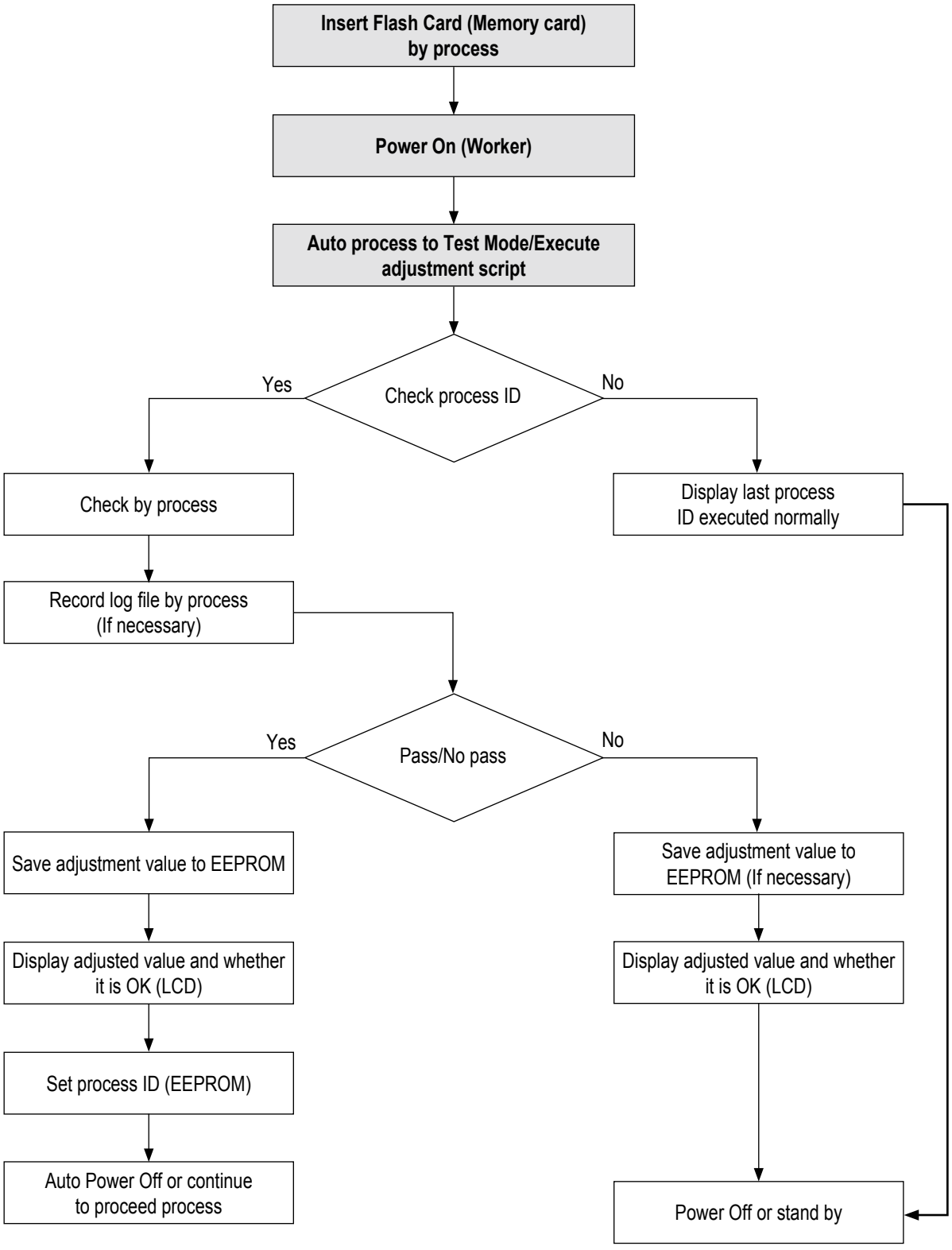
4. Stages of the adjustment process is described below.



<Table 7-2>

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7-2 Lens shading

■ This section describes how to adjust the Lens shading.

< Adjustment method >

NOTE: AE TESTER is used to adjust the luminance level and the color temperature of the Light box.
AE TESTER helps adjust the luminance level of the Light box to **12 LV** and color temperature of the Light box to **3300K**.

Please follow the instruction to begin the process.

1. Copy the **"WB850_ADJ.TXT"** file into the memory card and insert it into the camera.
2. Mount the camera on AE TESTER. Press the power button to open the lens tube.
   Set the distance between the rear of the lens tube and the light box to 10mm ± 1mm.
3. Set the luminance level of the AE TESTER to 12 LV.

Back view of light source box

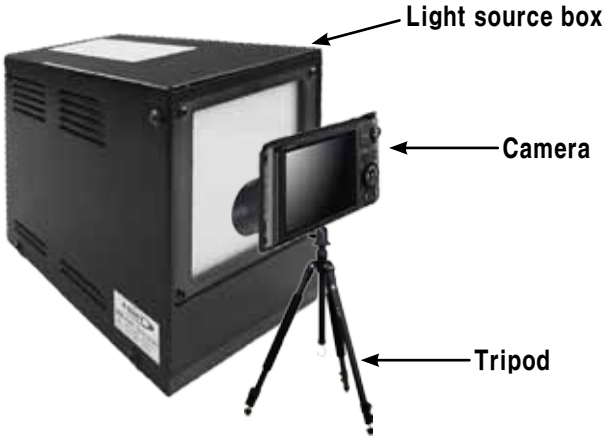

Fig. 7-1

4. Once the camera is turned on by pressing the power button, the process will begin automatically.
   1) The iris and zoom is set to zero.
   2) Refer to the EEPROM WRITE information and write the adjustment value to EEPROM.
   3) Refer to the CARD WRITE information and write the adjustment value to the data file.
   4) Set the USL(Upper Specification Limit) and LSL(Lower Specification Limit).

5. Once the process is completed, the camera will automatically turn off.

< Adjustment result >
Double-click the memory card folder to view the result. You will find the generated CSV file in the folder. Click the file to check the generated content.

< Restriction >
If the CSV file size is more than 30KB, delete all of the previous data and repeat the step 4.

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7-3 Shutter close time ADJ

■ This section describes how to adjust Shutter close time.
■ It generates the relative tolerance. This adjustment process help reduce the tolerances for better performance.
■ It proceeds CCD Gain adjustment process simultaneously.

< Adjustment method >

NOTE: AE TESTER is used to adjust the luminance level and the color temperature of the Light box.
AE TESTER helps adjust the luminance level of the Light box to **12 LV** and color temperature of the Light box to **3300K**.

Please follow the instruction to begin the process.

1. Copy the **"WB850_ADJ.TXT"** file into the memory card and insert it into the camera.
2. Mount the camera on AE TESTER. Press the power button to open the lens.
   Set the distance between the rear of the lens and the light box to 10mm ± 1mm.
3. Set the luminance level of the AE TESTER to 12 LV.

Back view of light source box

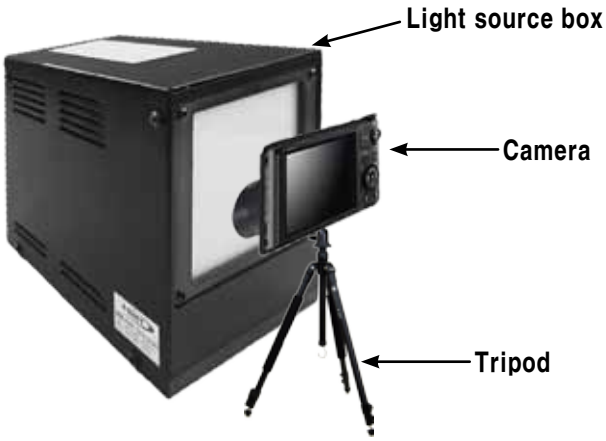

Fig. 7-2

4. Once the camera is turned on by pressing the power button, the process will begin automatically.
   1) The Line delay and SUb delay are adjusted to the luminance level range of 12 LV.
   2) If the value of the Line delay is in the range of the minimum and maximum value, the result is OK. Otherwise, it is NG.
   3) Refer to the EEPROM WRITE information and write the adjustment value to EEPROM.
   4) Refer to the CARD WRITE information and write the adjustment value to the data file.

5. Once the process is completed, the camera will automatically turn off.

< Adjustment result >
Double-click the memory card folder to view the result. You will find the generated CSV file in the folder. Click the file to check the generated content.

< Restriction >
If the CSV file size is more than 30KB, delete all of the previous data and repeat the step 4.

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7-4 IRIS ADJ

■ This section describes how to adjust Iris.
■ It generates the relative aperture tolerance. This adjustment process help reduce the aperture tolerances for better performance.

< Adjustment method >

NOTE: AE TESTER is used to adjust the luminance level and the color temperature of the Light box.
AE TESTER helps adjust the luminance level of the Light box to **12 LV** and color temperature of the Light box to **3300K**.

Please follow the instruction to begin the process.

1. Copy the **"WB850_ADJ.TXT"** file into the memory card and insert it into the camera.
2. Mount the camera on AE TESTER. Press the power button to open the lens.
   Set the distance between the rear of the lens and the light box to 10mm ± 1mm.
3. Set the luminance level of the AE TESTER to 12 LV.

Back view of light source box

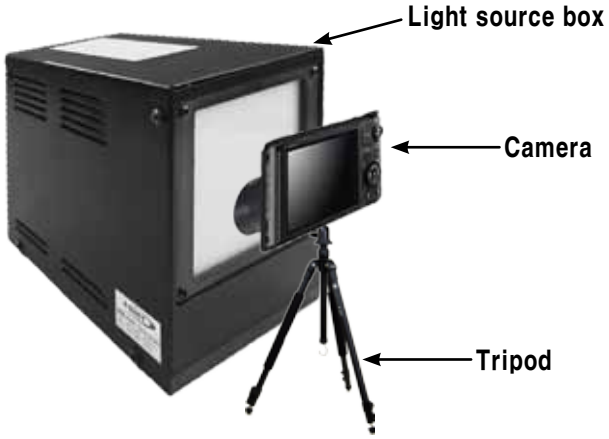

Fig. 7-3

4. Once the camera is turned on by pressing the power button, the process will begin automatically.
   1) Set the optical aperture value (AV).
   2) Set the Exposure Time and Gain Value to fixed values. Get the Preview G value by changing the aperture level.
   3) If the Preview G value in the higher aperture level is greater than the Preview G value in the lower aperture level, luminance level is 12 LV. Otherwise, luminance level is not 12 LV.
   4) Check the aperture value (AV) generated if it is in the range of the Iris adjustment.
      If the value is in the range, the color temperature of the Light box is 3300K. Otherwise, color temperature of the Light box is not 3300K.
   5) Set the final aperture value (AV) as the difference between the highest and the lowest aperture value if it generates the value fullfilled the step 3 to 4.
   6) Refer to the EEPROM WRITE information and write the adjustment value to EEPROM.
   7) Refer to the CARD WRITE information and write the adjustment value to the data file.

5. Once the process is completed, the camera will automatically turn off.

< Adjustment result >
Double-click the memory card folder to view the result. You will find the generated CSV file in the folder. Click the file to check the generated content.

< Restriction >
If the CSV file size is more than 30KB, delete all of the previous data and repeat the step 4.

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7-5 CMOS gain ADJ

■ This section describes how to adjust CMOS gain.
■ It generates the relative CMOS saturation tolerance.
This adjustment process help reduce the CMOS saturation tolerances for better performance.

< Adjustment method >

NOTE: AE TESTER is used to adjust the luminance level and the color temperature of the Light box.
AE TESTER helps adjust the luminance level of the Light box to **12 LV** and color temperature of the Light box to **3300K**.

Please follow the instruction to begin the process.

1. Copy the **"WB850_ADJ.TXT"** file into the memory card and insert it into the camera.
2. Mount the camera on AE TESTER. Press the power button to open the lens.
   Set the distance between the rear of the lens and the light box to 10mm ± 1mm.
3. Set the luminance level of the AE TESTER to 12 LV.

Back view of light source box

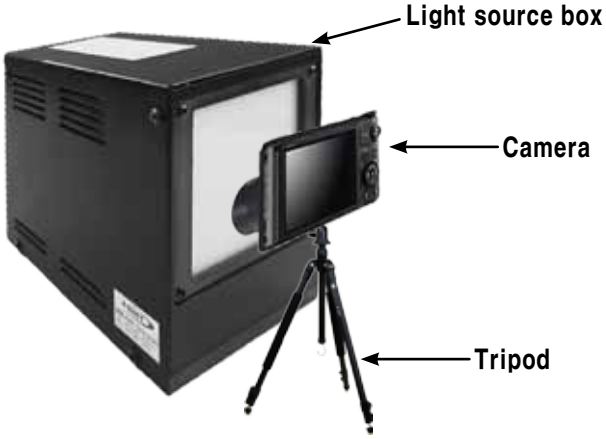

Fig. 7-4

4. Once the camera is turned on by pressing the power button, the process will begin automatically.
   1) Refer to the EEPROM WRITE information and write the adjustment value to EEPROM.
   2) Refer to the CARD WRITE information and write the adjustment value to the data file.
   3) Set the USL(Upper Specification Limit) and LSL(Lower Specification Limit).

5. Once the process is completed, the camera will automatically turn off.

< Adjustment result >
Double-click the memory card folder to view the result. You will find the generated CSV file in the folder. Click the file to check the generated content.

< Restriction >
If the CSV file size is more than 30KB, delete all of the previous data and repeat the step 4.

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7-6 Flash & AWB ADJ

■ This section describes how to adjust the Flash and AWB.
It test the brightness of Strobe within the certain limit of the luminance level to verify that a product works properly.
■ It proceeds the AWB HIGH adjustment process simultaneously.

<Adjustment method>

1. Set the 18% Reflectance gray card on the wall in the darkroom.

2. Copy the **"WB850_ADJ.TXT"** file into the memory card and insert it into the camera. Mount the camera on Dark Box.

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

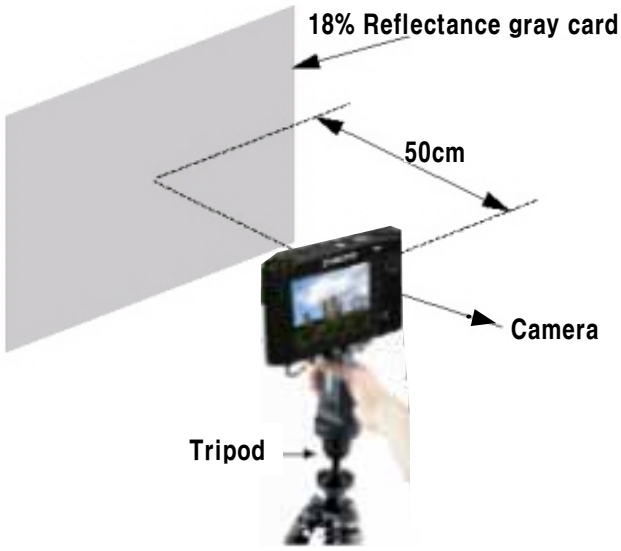

Fig. 7-5

4. Once the camera is turned on by pressing the power button, the process will begin automatically.
   1) Refer to the Table 7-2. It provides the information of the adjustment process.
   Proceed the process twice in a raw. If the value is the range of the standard luminance level, it assures overall hardware quality is good.
   2) Average out the two test values. Then check the R gain and B gain to verify the quality of hardware.
   3) Refer to the EEPROM WRITE information and write the adjustment value to EEPROM.
   4) Write the R. B gain to the EEPROM if the hadware quality test is passed sucessfully.

5. Once the process is completed, the camera will automatically turn off.

< Adjustment result >
Double-click the memory card folder to view the result. You will find the generated CSV file in the folder. Click the file to check the generated content.

< Restriction >
If the CSV file size is more than 30KB, delete all of the previous data and repeat the step 4.

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7-7 Punt ADJ

■ This section describes how to adjust the PUNT. After replacing the MAIN PCB and BARREL, you must decide the AF search range, allowing focus to be properly adjusted for the best picture quality.

■ **Necessary equipment:** Infinity Collimator/ Infinity Subject
(Proceed through the adjustment process with Infinity Collimator or Infinity Subject as illustrated below.)

< With Infinity Collimator >

1. Copy the **"WB850_ADJ.TXT"** file into the memory card and insert it into the camera.

2. Please follow the instruction below to begin the punt adjustment process.
   1) Infinity Collimator Specifications
      - Set the luminance level to 6 LV.
      - Set the distance as less than 1cm between the end of camcorder lens and lens surface of the infinity Collimator.
      - Do not remove the camcorder from tripod during the process.

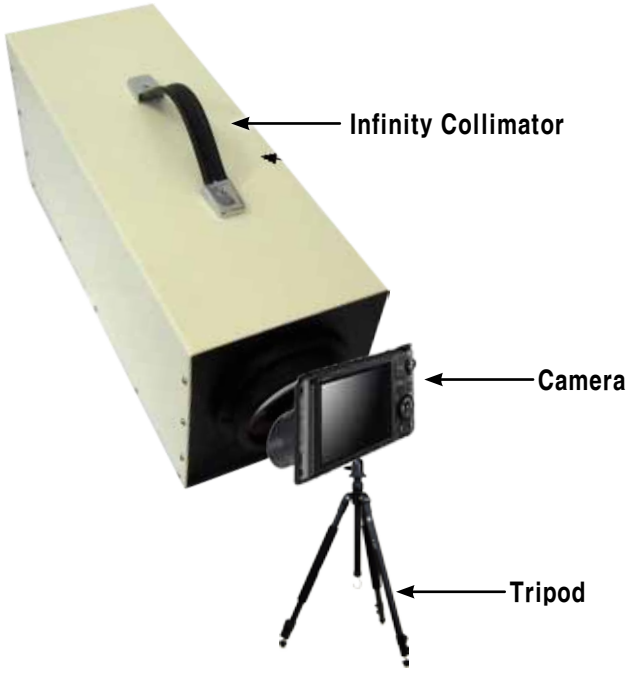

Fig. 7-6

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< With Subject Specifications >

2) Infinity Subject Specifications

- Secure the camcorder on the tripod and adjust the height.
- Focus on a subject at infinity which is more than 500m away.
- Choose a subject where it is essentially infinitely far away such as apartment or church as illustrated below.

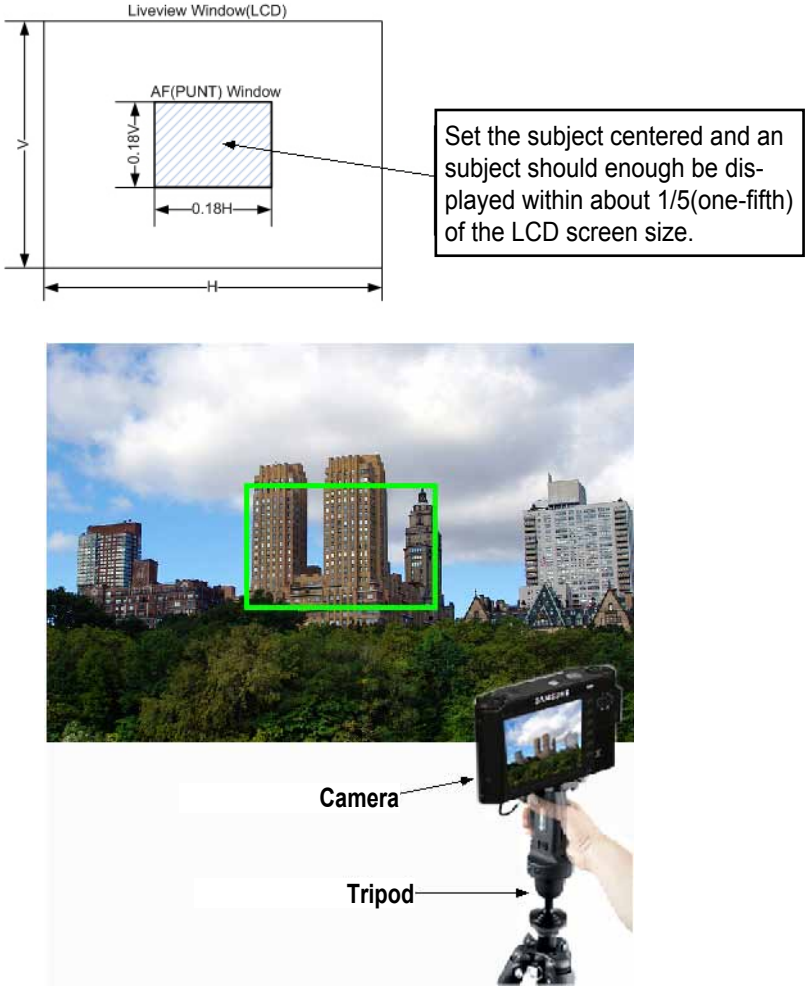

Fig. 7-7

CAUTION

Try not to attempt the adjustment process during the night. It may generate the inaccurate test result due to the difficulty of auto focus. If you want to proceed the process, choose a subject such as glass building making the contrast level low.

3. Press the power button to turn on the camera.

4. The adjustment process will automatically begin.

<Adjustment result>

Double-click the memory card folder to view the result. You will find the generated CSV file in the folder. Click the file to check the generated content.

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7-8 CMOS defect ADJ

■ This section describes how to adjust the defective pixel detection for CMOS image sensor.

<Adjustment method>

1. Copy the **"WB850_ADJ.TXT"** file into the memory card and insert it into the camera.

2. Once the camera is turned on by pressing the power button, the process will begin automatically.
   1) Check the data such as reference level, exposure time and loop before beginning the defective pixel detection adjustment.
   2) Refer to the specifications about the maximum number of defective cells. Then proceed the process.
   3) Refer to the CARD WRITE information and write the number of defective cells to the data file.

3. Once the adjustment process is completed, the camera will automatically turn off.

<Adjustment result>
Double-click the memory card folder to view the result. You will find the generated CSV file in the folder. Click the file to check the generated content.

7-9 OIS centering ADJ

■ This section describes how to test the OIS centering performance.

<Adjustment method>

1. Copy the **"WB850_ADJ.TXT"** file into the memory card and insert it into the camera.

2. Once the camera is turned on by pressing the power button, the process will begin automatically.
   OIS module is actively moved up, down, left and right .

3. Once the adjustment process is completed, the camera will automatically turn off.

<Adjustment result>
Double-click the memory card folder to view the result. You will find the generated CSV file in the folder. Click the file to check the generated content.

CAUTION

Set the camera face up on a stable surface such as a table, desk or floor.
Otherwise, it will significantly degrade the performance, generating the noise on Gyro Sensor and Hall Sensor.

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7-10 Serial number writing process

■ Serial number is provided in the cameras non-volatile memory.
A serial number is a 15-digit alphanumeric code indicated on the sticker at the bottom of a camera.
■ It helps to verity the authenticity of Samsung digital camera by checking the 15-digit serial number.

CAUTION

It is necessary to proceed the serial number writing process after replacing the parts due to the Main PCB failure.

<Process method>

1. Generate WB850_ADJ.txt file and copy it into the memory card.
   • Find the 15-digit alphanumericserial number written on the Main board.

```
sys_serial set A0013CBH700369C
sys_serial get
poweroff zoom_close
```

Fig. 7-8

2. Replace the Main board and insert the memory card that contains WB850_ADJ.txt file into the camera.

3. Press the power button to turn on the camera.

Fig. 7-9

4. The new serial number will be applied automatically and it is provided in the cameras non-volatile memory.

5. Once the process is completed, the camera will automatically turn off.

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<Process result>

To view the result, first press and hold the **shutter button** and **down button**, and then press the **power button.**
Serial number will be displayed on the screen.

Fig. 7-10

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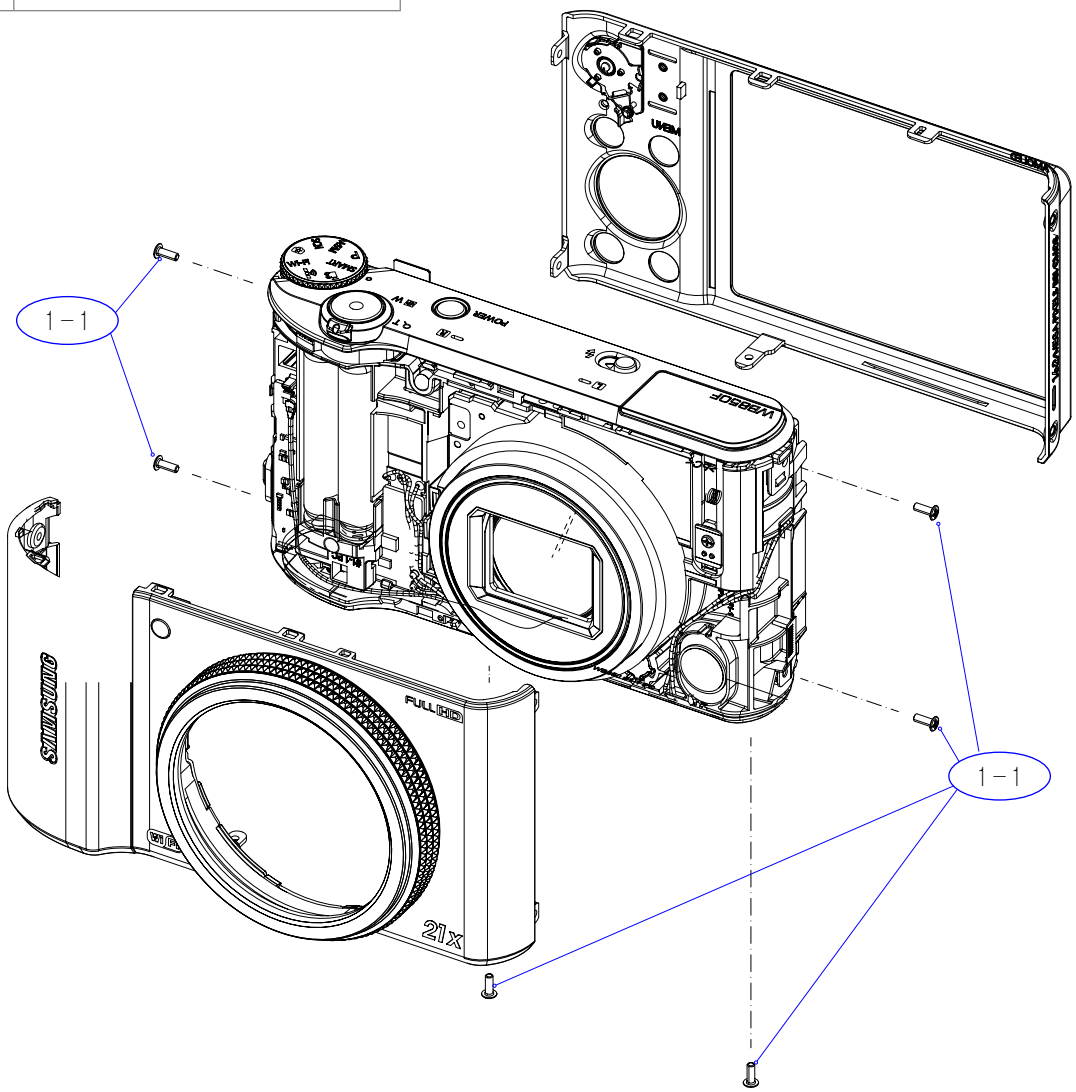
8. Exploded view and parts list

8-1 BODY ASSEMBLY

Item	Service Info.
	Service is available. (SA)
	Service is not available. (SNA)



Loc. No.	Parts No.	Description	Qty	Available	Remark
1-1	6001-002152	SCREW(MACHINE)	6	X	

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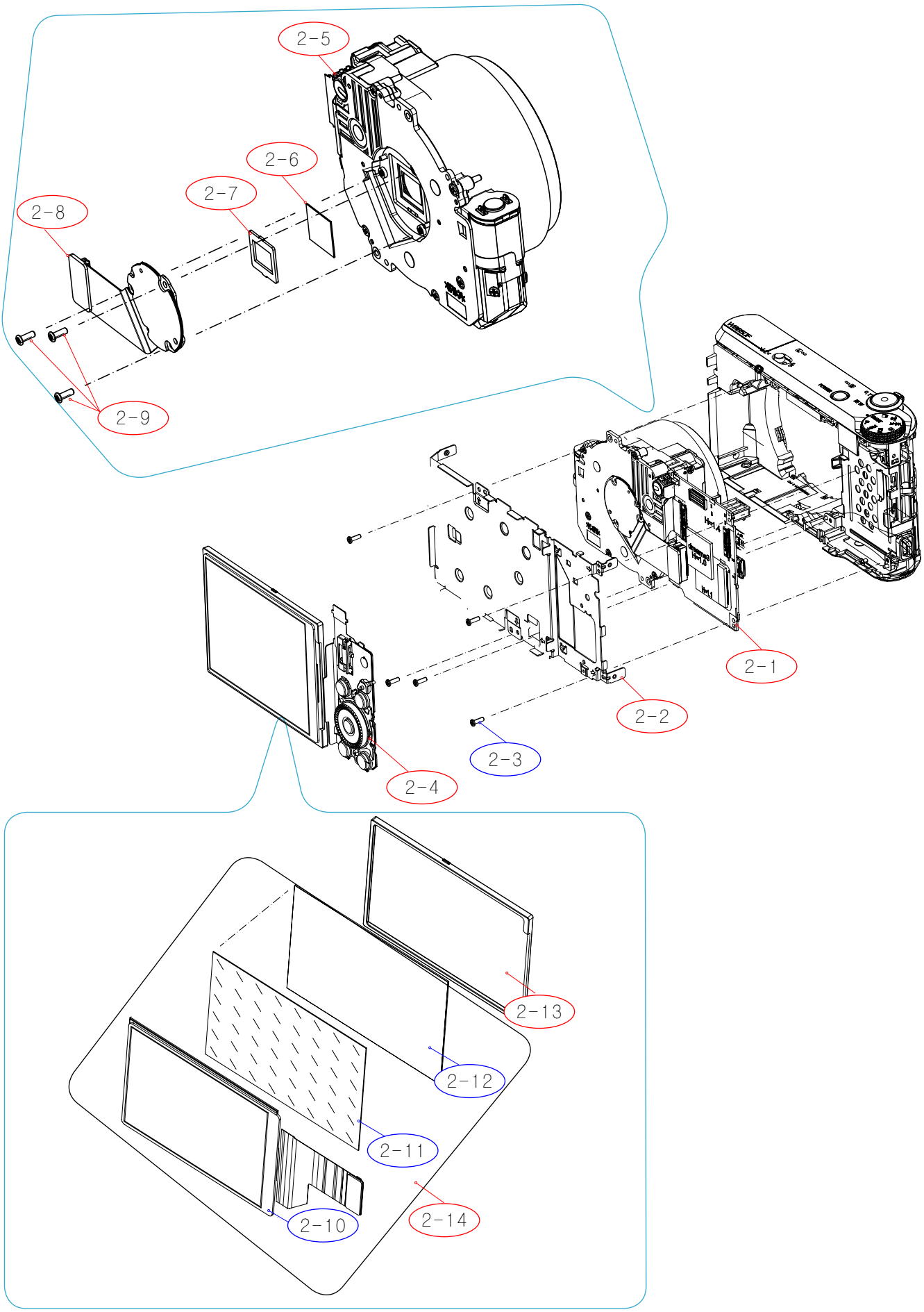
8-2 MAIN ASSEMBLY



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Loc. No.	Parts No.	Description	Qty	Available	Remark
2-1	AD92-01807A	ASSY-PCB MAIN	1	O	
2-2	AD97-22137A	ASSY-FRAME MAIN	1	O	
2-3	6003-001717	SCREW(TAPTITE)	5	X	
2-4	AD92-01867A	ASSY-PCB KEY	1	O	
2-5	AD97-21773A	ASSY BARREL-WB850	1	O	
2-6	AD63-06992A	CUSHION GLASS-IR CUT FILTER	1	O	
2-7	AD63-06759A	SHEET-FILTER-WB850	1	O	
2-8	AD92-01802A	ASSY PCB FPC-CIS;DSC	1	O	
2-9	6003-001633	SCREW-TAPTYPE	3	O	
2-10	AD97-22506A	OELD AM	1	X	
2-11	AD63-06840A	CUSHION-AMOLED	1	X	
2-12	AD61-05677A	PLATE-AMOLED	1	X	
2-13	AD67-02470A	RUBBER-AMOLED	1	O	
2-14	AD97-22506A	LCD SUB ASSY	1	O	

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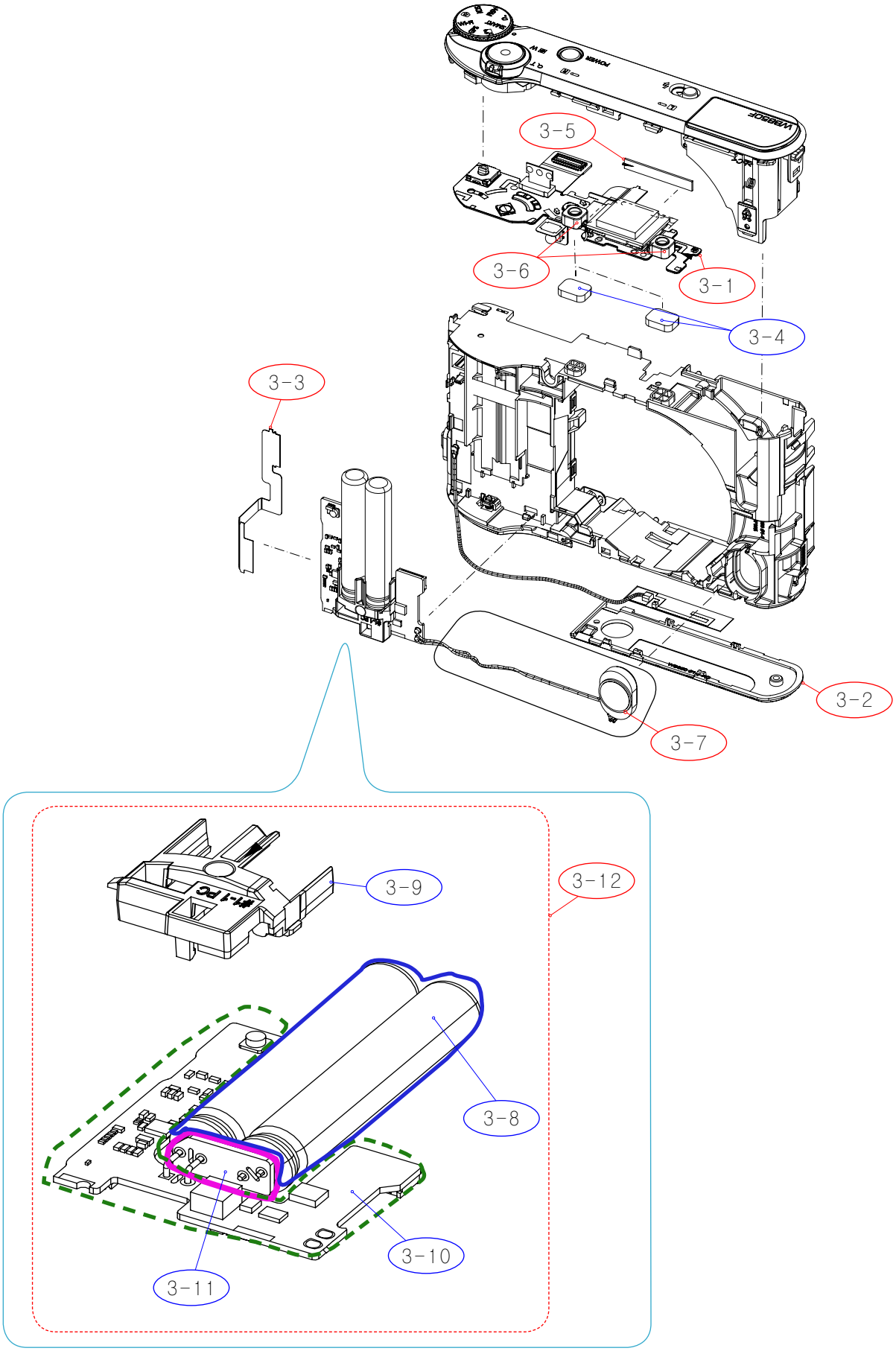
8-3 MAIN SUB ASSEMBLY



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Loc. No.	Parts No.	Description	Qty	Available	Remark
3-1	AD92-01803A	ASSY-FPC TOP	1	O	
3-2	AD63-06816A	COVER-BOTTOM	1	O	
3-3	AD41-01833A	WIFI-FPC	1	O	
3-4	AD63-06834A	SHEET-SPONGE MIC	2	X	
3-5	AD42-00016A	WIFI-ANTENA	1	O	
3-6	3003-001183	MIC-CONDENSOR	2	O	
3-7	3001-002712	SPEAKER	1	O	
3-8	2401-005139	C-AL	2	X	
3-9	AD61-05666A	HOLDER-CONDECSOR	1	X	
3-10	AD94-00273A	ASSY SMD INSERT-WIFI	1	X	
3-11	AD92-01871A	ASSY PCB-WB850_COIN_PCB	1	X	
3-12	AD92-01804A	ASSY PCB SUB-WIFI;DSC-B850,WB850,ASSY P	1	O	

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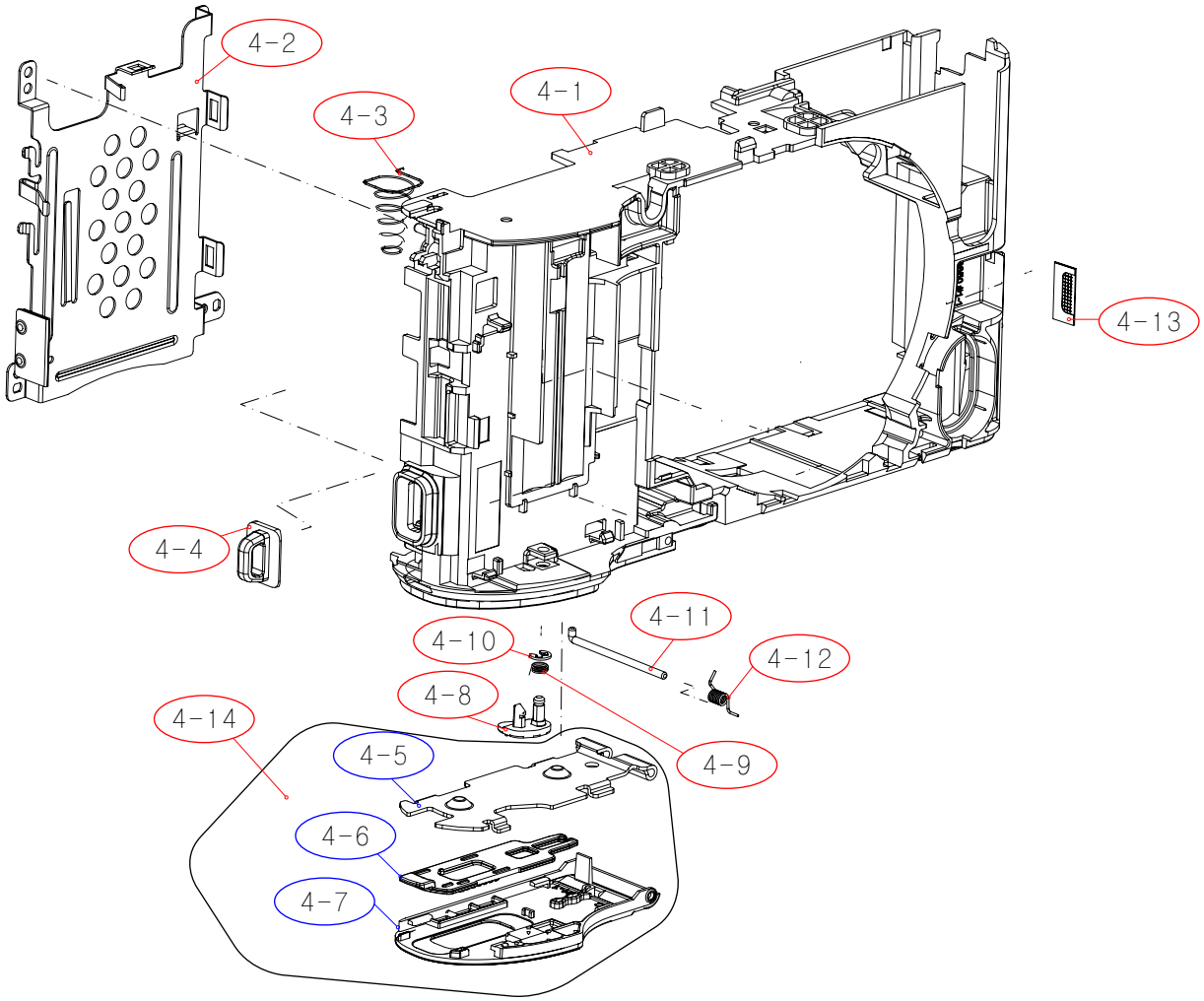
8-4 CHAMBER ASSEMBLY



Loc. No.	Parts No.	Description	Qty	Available	Remark
4-1	AD64-03108A	CHAMBER BODY	1	O	
4-2	AD61-05669A	PLATE CHAMBER	1	O	
4-3	AD61-05213A	SPRING-ETC BATTERY PUSH	1	O	
4-4	AD61-05511A	HOLDER-STRAP	1	O	
4-5	AD61-05514A	PLATE-BATTERY	1	X	
4-6	AD63-06580A	COVER-BATTERY-LOCK	1	X	
4-7	AD63-06818A	COVER-BATTERY	1	X	
4-8	AD66-01012A	LEVER-BATTERY LOCK	1	O	
4-9	6107-001538	SPRING-TS(LOCK LEVER)	1	O	
4-10	6044-001137	RING-E	1	O	
4-11	AD61-05245A	SPRING-ETC COVER BATTERY	1	O	
4-12	AD61-05517A	HINGE-COVER BATTERY	1	O	
4-13	AD64-03681A	GRILL SHEET SPEAKER	1	O	
4-14		BATTERY COVER ASSY_BK	1	O	

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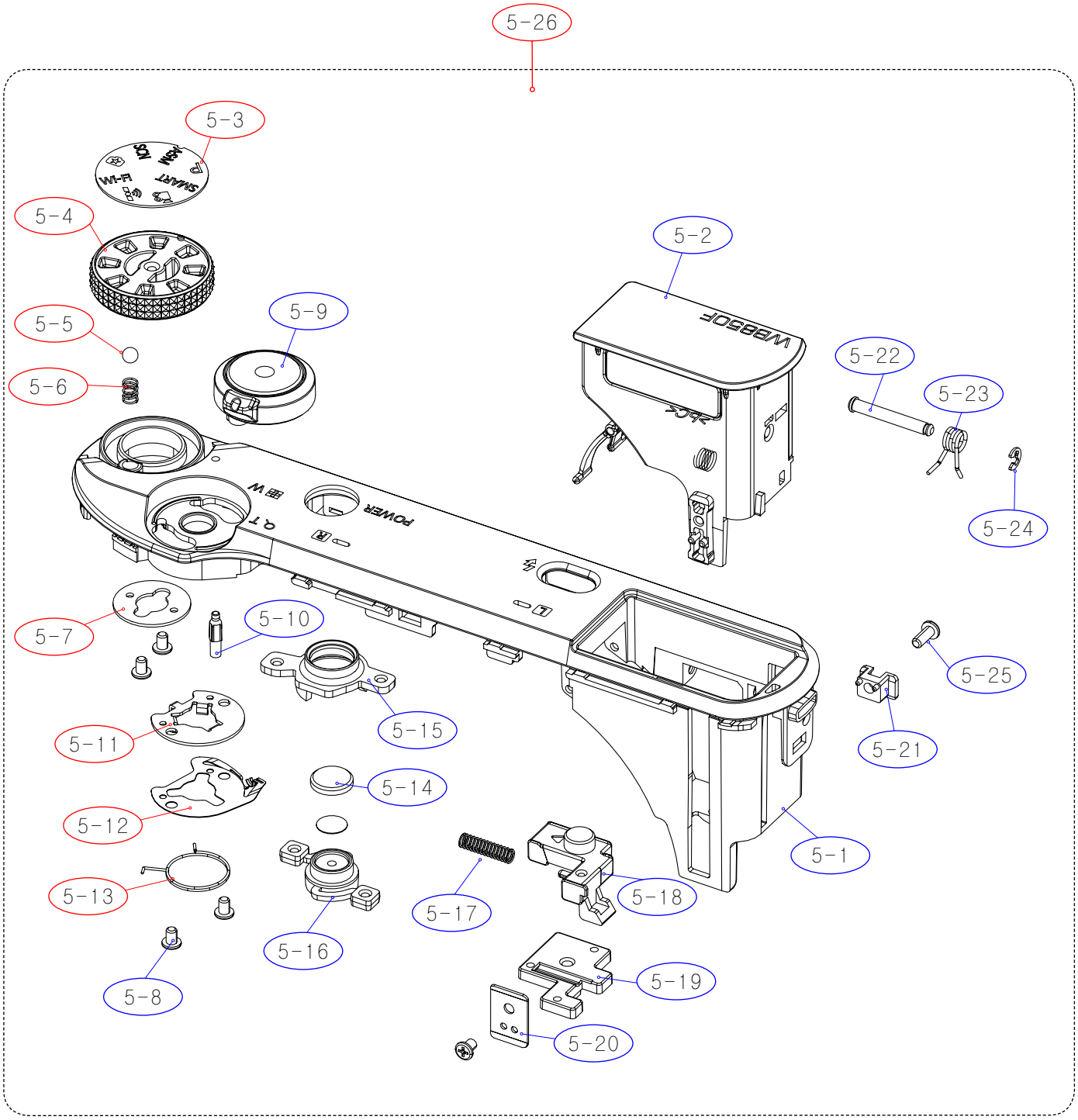
8-5 TOP COVER ASSSEMBLY



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Exploded view and parts list

Loc. No.	Parts No.	Description	Qty	Available	Remark
5-1	AD63-06820A	COVER-TOP	1	X	
5-2	AD97-22138A	ASSY-POPUP FLASH	1	X	
5-3	AD64-03703A	DECO-COVER MODE_DIAL	1	O	
5-4	AD64-03668A	KNOB MODE DAIL	1	O	
5-5	AD64-01738A	CLICK BALL	1	O	
5-6	AD61-05497A	SPRING MODE DAIL	1	O	
5-7	AD61-05383A	PLATE MODE DAIL	1	O	
5-8	6003-001661	SCREW	5	X	
5-9	AD97-22139A	ASSY-BUTTON ZOOM	1	X	
5-10	AD64-03670A	INDICATOR MODE	1	X	
5-11	AD61-05673A	PLATE ZOOM BUTTON	1	O	
5-12	AD61-05674A	PLATE ZOOM CONTACT	1	O	
5-13	AD61-05707A	SPRING-ETC ZOOM LEVER	1	O	
5-14	AD67-02429A	CAP BUTTON POWER	1	X	
5-15	AD61-05667A	HODER BUTTON POWER	1	X	
5-16	AD64-03672A	BUTTON POWER	1	X	
5-17	6107-002668	SPRING FLASH (EX-1)	1	X	
5-18	AD64-03673A	BUTTON POP UP	1	X	
5-19	AD64-03675A	BUTTON POP UP INNER	1	X	
5-20	AD61-05675A	PLATE GUIDE POPUP	1	X	
5-21	AD61-05668A	GUIDE POPUP	1	X	
5-22	AD61-05678A	SHAFT HINGE_A	1	X	
5-23	AD61-05681A	SPRING-ETC_FLASH	1	X	
5-24	6044-001137	RING-E	1	X	
5-25	6003-001630	SCREW	1	X	
5-26	AD97-22133A	ASSY COVER-TOP_WB850F_RBK	1	O	

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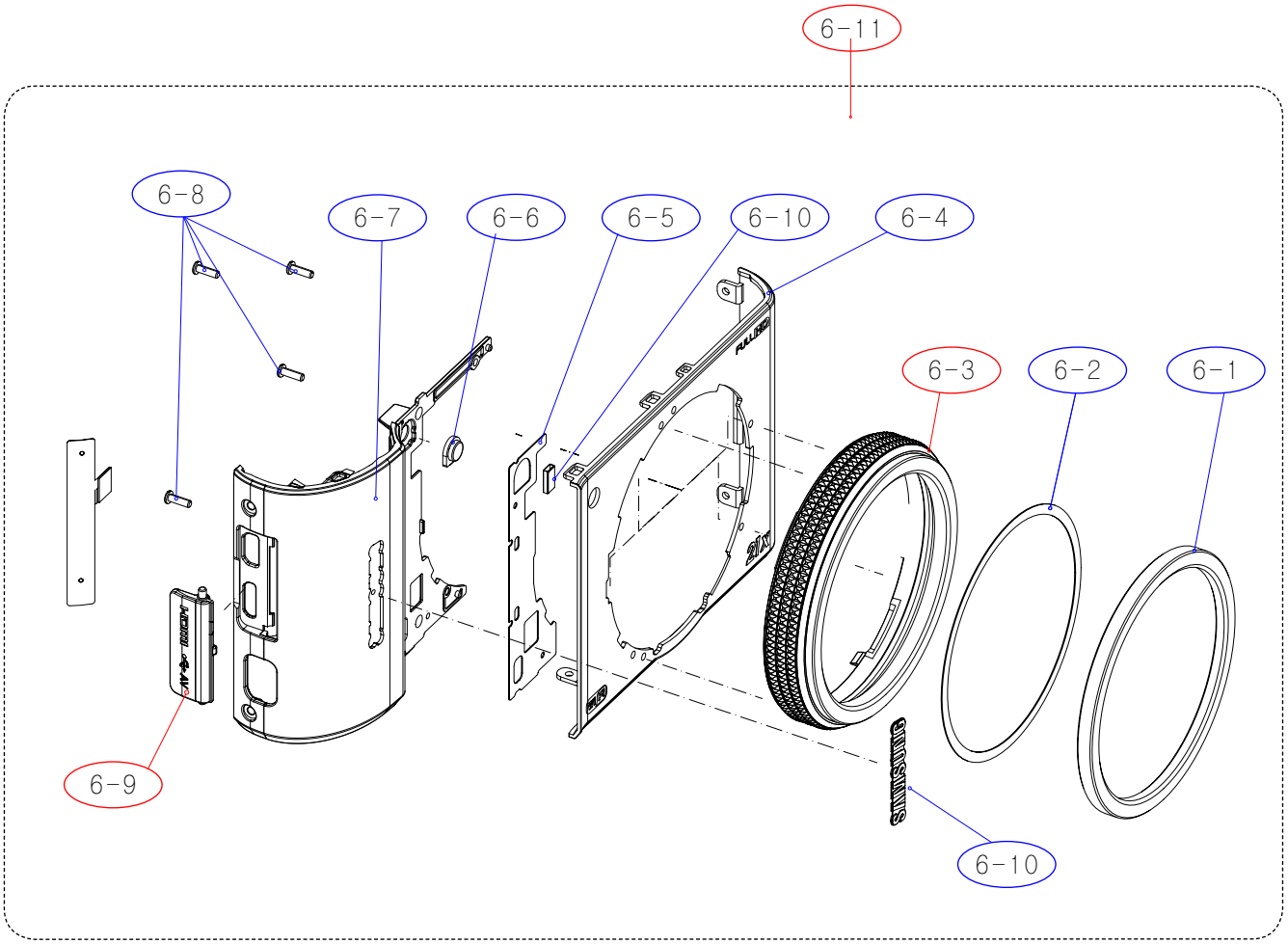
8-6 FRONT COVER ASSEMBLY



Loc. No.	Parts No.	Description	Qty	Available	Remark
6-1	AD64-03677A	DECORATION FRONT RING	1	X	
6-2	AD63-06911A	T-SHEET DECO RING	1	X	
6-3	AD64-03698A	DECORATION FRONT RING PC	1	O	
6-4	AD63-06573A	COVER FRONT	1	X	
6-5	AD63-06837A	T-SHEET FRONT	1	X	
6-6	AD64-03095A	WINDOW LED AF	1	X	
6-7	AD63-06827A	COVER FRONT GRIP	1	X	
6-8	6003-001717	SCREW	4	X	
6-9	AD63-06829A	COVER SOCKET	1	O	
6-10	AD64-03427A	BADGE SAMSUNG LOGO	1	X	
6-11	AD97-22135A	FRONT COVER ASSY_BK	1	O	

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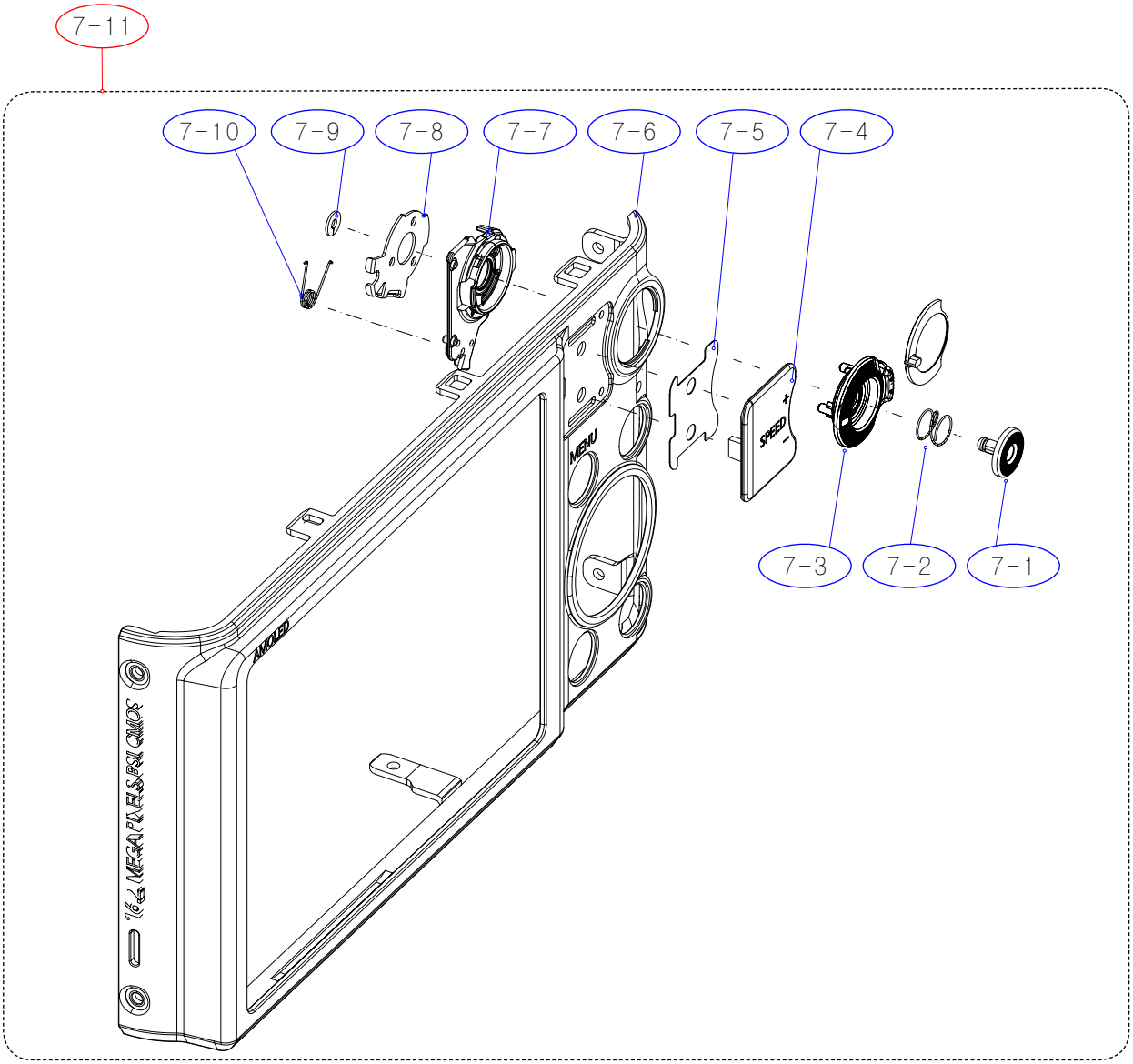
8-7 BACK COVER ASSEMBLY



Loc. No.	Parts No.	Description	Qty	Available	Remark
7-1	AD64-03676A	BUTTON REC	1	X	
7-2	AD61-05683A	SPRING CS	1	X	
7-3	AD66-01017A	LEVER SPEED	1	X	
7-4	AD63-06825A	COVER BACK GRIP	1	X	
7-5	AD63-06836A	T/SHEET BACK GRIP	1	X	
7-6	AD63-06825A	COVER BACK	1	X	
7-7	AD66-01018A	LEVER SPEED INNER	1	X	
7-8	AD61-05670A	PLATE LEVER SPEED	1	X	
7-9	6031-001628	WASHER PLAIN	1	X	
7-10	AD61-05682A	SPRING TS	1	X	
7-11	AD97-22136A	BACK COVER ASSY_BK	1	O	

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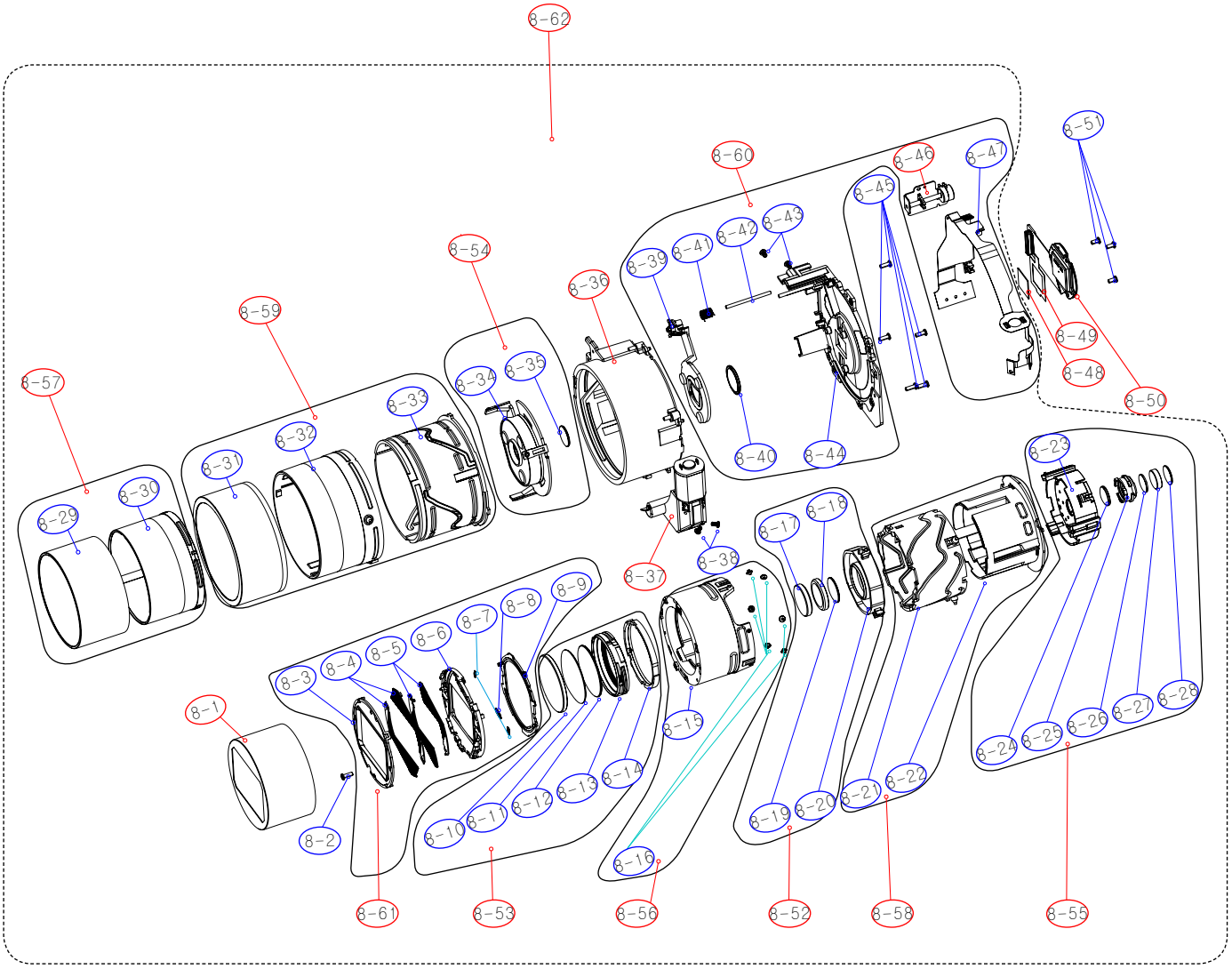
8-8 BARREL ASSEMBLY



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Exploded view and parts list

Loc. No.	Parts No.	Description	Qty	Available	Remark
8-1	AD64-03548A	DECORING ZOOMRING	1	O	Royal Black
8-2	6003-001659	SCREW TAPTYPE	1	X	
8-3	AD63-06546A	BARRIER PANEL	1	X	Royal Black
8-4	AD63-06547A	BARRIER BLADE A	2	X	Royal Black
8-5	AD63-06548A	BARRIER BLADE B	2	X	Royal Black
8-6	AD63-06544A	BARRIER BASE	1	X	
8-7	6107-003266	SPRING ES (CLOSE)	2	X	
8-8	6107-003265	SPIRNG EX (OPEN)	1	X	
8-9	AD63-06545A	BARRIER LEVER	1	X	
8-10	AD67-02346A	LENS G1	1	X	
8-11	AD67-02347A	LENS G2	1	X	
8-12	AD67-02348A	LENS G3	1	X	
8-13	AD67-02394A	BARREL 1ST	1	X	
8-14	AD67-02395A	BARREL SLIPRING	1	X	
8-15	AD67-02393A	BARREL ZOOMRING	1	X	
8-16	AD66-00990A	SHAFT ZOOMRING PIN	6	X	
8-17	AD67-02349A	LENS G4	1	X	
8-18	AD67-02350A	LENS G5	1	X	
8-19	AD67-02351A	LENS G6	1	X	
8-20	AD67-02396A	BARREL 2ND	1	X	
8-21	AD67-02390A	BARREL INNER CAM	1	X	
8-22	AD67-02392A	BARREL GUIDE	1	X	
8-23	AD97-21686A	ASSY SHUTTER OIS	1	X	
8-24	AD67-02352A	LENS G7	1	X	
8-25	AD67-02397A	BARREL 3RD	1	X	
8-26	AD67-02353A	LENS G8	1	X	
8-27	AD67-02354A	LENS G9	1	X	
8-28	AD67-02355A	LENS G10	1	X	
8-29	AD64-03549A	DECORING CAM	1	X	Royal Black
8-30	AD67-02391A	BARREL CAM	1	X	

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Loc. No.	Parts No.	Description	Qty	Available	Remark
8-31	AD64-03550A	DECORING OUTER CAM	1	X	Royal Black
8-32	AD67-02388A	BARREL OUTER CAM	1	X	
8-33	AD67-02389A	BARREL OUTER GUIDE	1	X	
8-34	AD67-02398A	BARREL 4TH	1	X	
8-35	AD67-02356A	LENS G11	1	X	
8-36	AD97-21783A	BARREL BASE	1	O	
8-37	AD97-21685A	ASSY MOTOR ZOOM	1	O	
8-38	6003-001629	SCREW TAPTYPE	2	X	
8-39	AD67-02399A	BARREL 5TH	1	X	
8-40	AD67-02357A	LENS G12	1	X	
8-41	6107-003264	SPRING CS (AF)	1	X	
8-42	AD66-00991A	SHAFT AF GUIDE	1	X	
8-43	6003-001629	SCREW TAPTYPE	2	X	
8-44	AD61-05502A	BASE LENS	1	X	
8-45	6003-001659	SCREW TAPTYPE	5	X	
8-46	AD97-21684A	ASSY MOTOR AF	1	O	
8-47	AD92-01774A	FPC BARREL MAIN	1	X	
8-48	AD63-03625A	IR CUT FILTER	1	O	
8-49	AD63-06759A	SHEET FILTER	1	O	
8-50	AD92-01802A	ASSY PCB FPC-CIS	1	O	
8-51	6003-001633	SCREW TAPTYPE	3	X	
8-52	AD97-21760A	ASSY SUB BARREL-2ND LENS		O	
8-53	AD97-21764A	ASSY SUB BARREL-SLIPRING		O	
8-54	AD97-21762A	ASSY SUB BARREL-4TH LENS		O	
8-55	AD97-21765A	ASSY SUB BARREL-OIS		O	
8-56	AD97-21766A	ASSY SUB BARREL-ZOOMRING		O	
8-57	AD97-21767A	ASSY SUB BARREL-CAM_BK		O	Royal Black
8-58	AD97-21768A	ASSY SUB BARREL-INNER CAM		O	
8-59	AD97-21769A	ASSY SUB BARREL-OUTER CAM_BK		O	Royal Black
8-60	AD97-21770A	ASSY LENS BASE		O	
8-61	AD97-21771A	ASSY BARRIER_BK		O	Royal Black
8-62	AD97-21773A	ASSY BARREL_BK		O	Royal Black

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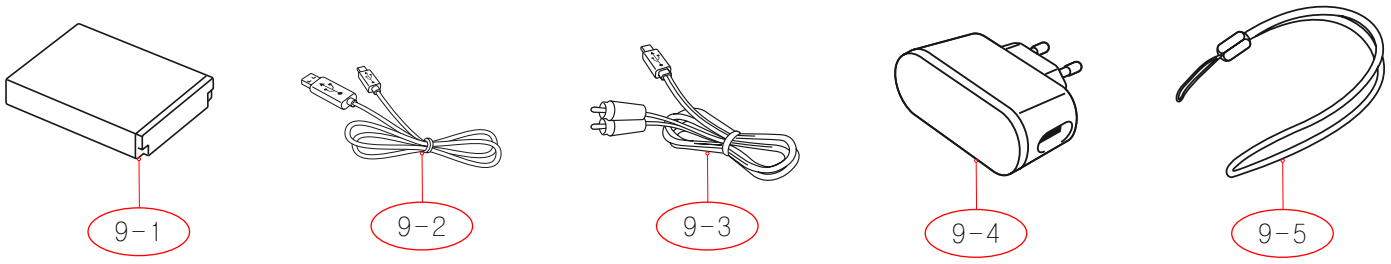
8-9 PACKING ITEMS



Loc. No.	Parts No.	Description	Qty	Available	Remark
9-1	4302-001221	LITHIUM-ION_SLB-10A	1	O	
9-2	AD39-00190A	CB5MU05E_USB CABLE	1	O	
9-3	AD39-00146A	CBF IF(20PIN_AV_CABLE_SCC-AV20)	1	O	
9-4	AD44-00178A	AC ADAPTOR_AD5055_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	
9-5	AD63-02604A	STRAP_KENOX_S860_BLACK	1	O	
	AD63-02596A	STRAP_KENOX_S730_SILVER	1	O	

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