

## 3. Disassembly and Reassembly

### 3.1 Precautions when replacing parts

#### 3.1.1 Precautions when assembling and disassembling

- \* Use only approved Samsung spare parts. Ensure that part number, product name, any voltage, current or temperature rating are correct. Failure to do so could result in damage to the machine, circuit overload, fire or electric shock.
- \* Do not make any unauthorized changes or additions to the printer, these could cause the printer to malfunction and create electric shock or fire hazards.
- \* Take care when dismantling the unit to note where each screw goes. There are 19 different screws. Use of the wrong screw could lead to system failure, short circuit or electric shock.
- \* Do not disassemble the LSU unit. Once it is disassembled dust is admitted to the mirror chamber and will seriously degrade print quality. There are no serviceable parts inside.
- \* Regularly check the condition of the power cord, plug and socket. Bad contacts could lead to overheating and fire. Damaged cables could lead to electric shock or unit malfunction.

#### 3.1.2 Precautions when handling PBA

Static electricity can damage a PBA, always use approved anti-static precautions when handling or storing a PBA.

##### >> Precautions when moving and storing PBA

1. Please keep PBA in a conductive case, anti-static bag, or wrapped in aluminum foil.
2. Do not store a PBA where it is exposed to direct sunlight.

##### >> Precautions when replacing PBA

1. Disconnect power connectors first, before disconnecting other cables
2. Do not touch any soldered connections, connector terminals or other electronic parts when handling insulated parts.

##### >> Precautions when checking PBA

1. Before touching a PBA, please touch other grounded areas of the chassis to discharge any static electrical charge on the body.
2. Take care not to touch the PBA with your bare hands or metal objects as you could create a short circuit or get an electric shock. Take extra care when handling PBAs with moving parts fitted such as sensors, motors or lamps as they may get hot.
3. Take care when fitting, or removing, screws. Look out for hidden screws. Always ensure that the correct screw is used and always ensure that when toothed washers are removed they are refitted in their original positions.

#### 3.1.3 Releasing Plastic Latches

Many of the parts are held in place with plastic latches. The latches break easily; release them carefully.

To remove such parts, press the hook end of the latch away from the part to which it is latched.



## 3.2 Parts for Maintenance and Repair

### 3.2.1 Replacement interval for parts with a limited life

Some of the parts in this printer have a limited life, shorter than that of the whole machine. These parts must be replaced periodically.

The table below shows the interval at which these parts should be replaced.

The table shows the life of each part, and is measured when using A4 paper. When servicing a machine always check the status of these parts using the control panel and ensure that parts are replaced at the appropriate times otherwise a general degradation in print quality will occur.

Item	Pages Printed	Part number	Remark
Black Toner cartridge	Approx. Initial : 1,000 Pages* Sales : 1,500 Pages*	CLT-K409S(Black)	CRU
Color Toner cartridge	Approx. Initial : 700 Pages* Sales : 1,000 Pages*	CLT-C409S(Cyan) CLT-M409S(Magenta) CLT-Y409S(Yellow)	
Imagine unit	Approx. 24000 images**	CLT-R409	
Waste Toner	Approx. 10000 images	CLT-W409	
Pick-up roller	Approx. 50,000 pages	JC97-03028A	FRU
Fuser unit	Approx. 100,000 black pages or 25,000 color pages	JC96-04781A (110V)	
		JC96-04780A (220V)	
Transfer Unit	Approx. 100,000 pages	JC97-03046A	
ITB	Approx. 100,000 black pages or 25,000 color pages	JC96-04840A	
ADF Rubber Pad	Approx.20,000 Images	JC97-03188A	
ADF Pick up roller	Approx.20,000 Images	JC97-03186A	

\* Average A4-/letter-sized page count based on Std. ISO 19798 of individual colors on each page. Usage conditions and print patterns may cause results to vary.

\*\* Image counts based on one color on each page. If you print documents in full color (Cyan, Magenta, Yellow, Black), the life of this item will be reduced by 25%.

### 3.2.2 Printer Cleaning

A printer should be regularly cleaned, especially if it is used in a dusty environment. This will ensure that print quality remains high and failure due to contamination of printing services is less likely to occur.

- \* Clean the printer with a soft, lint free, cloth dipped in a "Recommended cleaner" "Recommended cleaner" can be purchased from our service center. (where available)
- \* Do not touch the transfer roller when cleaning the inside of the printer. Grease and oils from the skin will contaminate the surface and reduce print quality.
- \* Do not touch transfer roller when cleaning inside of machine. If transfer roller gets dirty, printing quality could be low.
- \* Please refer to the User Manual for cleaning instructions.

## 3.3 Information Related to Disassembly and Assembly.

### 3.3.1 Special service parts

Never disassemble or adjust the items mentioned, a stock of these items should be maintained.

#### 1) Disassembly of the LSU unit

There are no serviceable parts inside the LSU. Alignment of the mirrors is critical. Opening the LSU will allow dust into the laser and significantly reduce print quality. It is very dangerous to operate or service a machine with the LSU open or system interlocks disabled. Exposure to laser radiation can cause blindness.

#### 2) Disassembly of the ITB unit

Do not disassemble the ITB. The alignment of the home sensor is critical and is set up in the factory on a special jig. Incorrect re-assembly will cause print quality degradation.

#### 3) Care of the Toner cartridge

Toner cartridges contain an extremely fine powder. Please keep toner cartridges away from children. The toner powder contained in the toner cartridge may be harmful and if swallowed you should contact a doctor. Take care not to spill toner - spillages should be cleaned with a vacume cleaner and washed in cold water (hot water sets the toner). Do not touch the developer roller surface as contamination will reduce print quality. Take care not to damage the roller's surface when installing or removing a toner cartridge.

#### 4) Disassembly of DEVE drive ass'y and the main drive ass'y

The alignment of the drive mechanism is critical and it has been set up in factory using a jig and a driving gear. It is adjusted for the best gearing alignment. If the motor is disassembled alignment would not be maintained and this could cause operational noise and image problems: image alignment and toner distribution may be affected.

#### 5) Disassembly of terminal parts

Do not adjust the variable resistors on the PBA. They have been already adjusted in the factory.

#### 6) Disassembly of the fuser unit

- The fuser melts toner onto the paper at a high temperature: therefore, you need to take special care not to get burned by a hot fuser. When removing the fuser from a set that has recently been operating you need to take extra care.
- Do not touch an AC line (Copper contact) on a main frame even after removing the fuser.



### 3.3.2 Screws used in the printer

The screws listed in the table below are used in this printer. Please ensure that, when you disassemble the printer, you keep a note of which screw is used for which part and that, when reassembling the printer, the correct screws are used in the appropriate places.

Sec_Code	Location	Description	Qty
6001-000130	MAIN DRIVE	SCREW-MACHINE;BH,+,M3,L6,ZPC(WHT),SWRCH18A,-,-	1
6002-000440		SCREW-TAPPING;PWH,+,-,2,M3,L8,ZPC(BLK),SWRCH18A,-	21
6003-000301		SCREW-TAPTITE;BH,+,S,M4,L6,ZPC(WHT),SWRCH18A,-	1
6003-000196	FUSER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	7
6003-000282		SCREW-TAPTITE;BH,+,B,M3,L8,ZPC(BLK),SWRCH18A,-	2
6003-000282	LSU	SCREW-TAPTITE;BH,+,B,M3,L8,ZPC(BLK),SWRCH18A,-	10
6003-000282	LSU LD UNIT	SCREW-TAPTITE;BH,+,B,M3,L8,ZPC(BLK),SWRCH18A,-	2
6003-000282	IMAGING UNIT	SCREW-TAPTITE;BH,+,B,M3,L8,ZPC(BLK),SWRCH18A,-	10
6003-000282	CARTRIDGE-TRANSFER	SCREW-TAPTITE;BH,+,B,M3,L8,ZPC(BLK),SWRCH18A,-	12
6003-000196	COVER PLATEN ASSY + COVER-UPPER F/R	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	STANDARD ADF + COVER PLATEN ASSY	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	COVER UPPER + GUIDE PATH LOWER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4
6003-000196	GUIDE PATH LOWER + FRAME GUIDE PATH	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4
6003-000196	MOTOR ASSY + GUIDE PATH LOWER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000269	ELA HOU-ADF MOTOR	SCREW-TAPTITE;BH,+,S,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000196	FRAME-GUIDE PATH + BRACKET-PATH LOWER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	COVER-PLATEN + HINGE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4
6003-000196	COVER-SCAN UPPER TOP	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	ELA UNIT-SCAN LOWER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	8
6003-000196	ELA UNIT-STANDARD SCAN	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	3
6003-000269	ELA UNIT-SCAN DRIVE	SCREW-TAPTITE;BH,+,S,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000196	ELA UNIT-OPE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4
6003-000196	ADF BOARD	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	COVER-HARNESS	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4
6003-000196	COVER-HARNESS(LSU)	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	3
6003-000196	COVER-MIDDLE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4
6003-000196	COVER-RIGHT	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1
6003-000196	DRIVE	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	7
6003-000196	FUSER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4
6003-000196	HOUSING-HARNESS	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	1
6003-000196	HVPS	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	5
6003-000196	LSU	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	3
6003-000196	SHIELD-MAIN LOWER	SCREW-TAPTITE;PWH,+,B,M3,L10,NI PLT,SWRCH18A	4

Sec_Code	Location	Description	Qty
6003-000269	MAIN BOARD	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	3
6003-000269	SMPS	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	4
6003-000301	ELA UNIT-MAIN LINE	SCREW-TAPTITE;BH,+,-,S,M4,L6,ZPC(WHT),SWRCH18A,-	1
6003-000196	COVER-DUMMY TOP	SCREW-TAPTITE;PWH,+B,M3,L10,NI PLT,SWRCH18A	5
6003-000196	LINK-LOWER	SCREW-TAPTITE;PWH,+B,M3,L10,NI PLT,SWRCH18A	2
6003-000196	USB BOARD	SCREW-TAPTITE;PWH,+B,M3,L10,NI PLT,SWRCH18A	3
6003-000196	MEA UNIT-COVER LEFT	SCREW-TAPTITE;PWH,+B,M3,L10,NI PLT,SWRCH18A	1
6002-000440	MEA UNIT-COVER REAR	SCREW-TAPPING;PWH,+,-,2,M3,L8,ZPC(BLK),SWRCH18A,-	2
6003-000196	COVER-FRONT INNER	SCREW-TAPTITE;PWH,+B,M3,L10,NI PLT,SWRCH18A	4
6003-000269	COVER-HANDLE + SHAFT-LOCK BAR	SCREW-TAPTITE;BH,+,-,S,M3,L6,ZPC(WHT),SWRCH18A,-	2
6003-000264	MEA HOU-STACKER	SCREW-TAPTITE;PWH,+,-,B,M3,L6,ZPC(WHT),SWRCH18A,-	1
6003-000152	MEA UNIT-FRAME	SCREW-TAPTITE;PH,+,-,B,M2,L10,ZPC(WHT),SWRCH18A,-	2
6003-000196		SCREW-TAPTITE;PWH,+B,M3,L10,NI PLT,SWRCH18A	26
6006-001078		SCREW-TAPTITE;PH,+WSP,B,M3,L10,ZPC(WHT),SWRCH18A,-	1

## ■ Harness Connection table

No	CONNECTION		PIN	SEC Code
1	Main B'd	LSU	16-(10+5)	JC39-00867A
2	Main	HVPS	26-26	JC39-00866A
3	Main	OPE PANEL	8-8	JC39-00929A
4	SMPS	INLET S/W	2-2	JC39-00908A
5	Main B'd	SMPS	16-16	JC39-00894A
6	Main B'd	Sensor(Deve Home)	3-3	JC39-00895A
7	Main B'd	Sensor(Empty)	3-3	JC39-00896A
8	Main B'd	BLDC	10-10	JC39-00899A
9	Main B'd	Cover S/W	2-2	JC39-00900A
10	Main B'd	Eraser Lamp	4-(2+2)	JC39-00901A
		OPC KEY		
11	Main B'd	ITB Home Sen I/F	7-5	JC39-00902A
12	ITB Home Sen I/F	ITB Home Sensor	5-(3+2)	JC39-00903A
		TEMP(Inner)		
13	SMPS	FUSER	2	JC39-00907A
14	FUSER	FUSER	1-1	JC39-00500A
15	Main B'd Bracket	Fuser Ass'y GND	1-1	JC39-00956A
16	HVPS	GND WIRE	1-2	JC39-00904A
17	Main	CRUM-JOINT	5-5	JC39-00906A
18	HVPS	EXIT	3-3	JC39-00916A
19	HVPS	Sensor(Regi)	3-3	JC39-00897A
20	HVPS	Waste Toner Sensor	4-4	JC39-00898A
21	Bin Full Sensor	Main B'd	3	JC39-00912A
22	ADF IF B'd	Main B'd	20	JC39-00924A
23	CIS Module	Main B'd	12	JC39-00925A
24	ADF Joint B'd	ADF IF B'd	12	JC39-00926A
25	ADF Motor	ADF Joint B'd	12	JC39-00927A
26	Scan home sensor	OPE B'd	3	JC39-00928A
27	LIU B'd	Main B'd	12	JC39-00930A
28	USB HOST B'd	Main B'd	5	JC39-00964A

## 3.4 Disassembly Procedure

The description of disassembly and reassembly in this manual is listed according to the disassembly procedures. If you find the certain unit or Ass<sup>o</sup>Øy, please consult the name of unit under the picture.

### 3.4.1 Cover

Before disassembling,  
Remove the CMYK toner, Toner waste tank, and Drum unit.

1. Remove the one screw from the rear of SET.



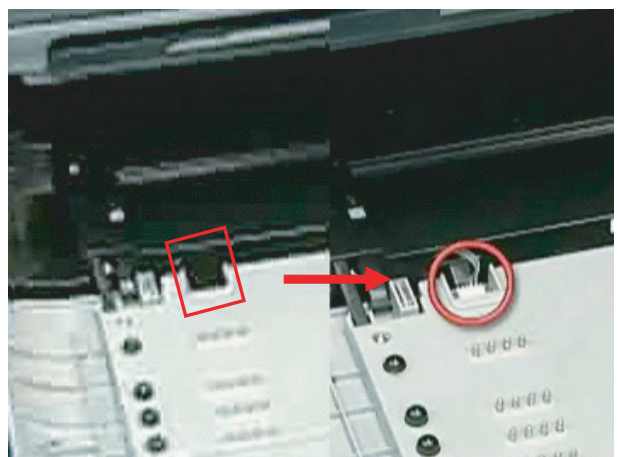
3. Remove the left side cover. And open and remove the rear cover.



2. Remove the right side cover by unhooking after open the front cover.



4. Open the front cover. Unplug the connector after remove the connector cover. And then remove



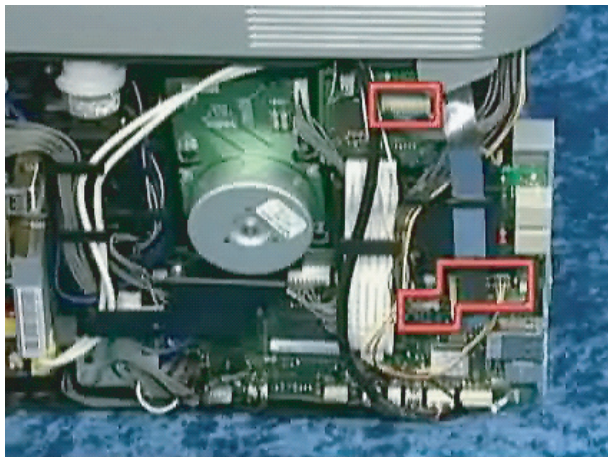
the front cover.



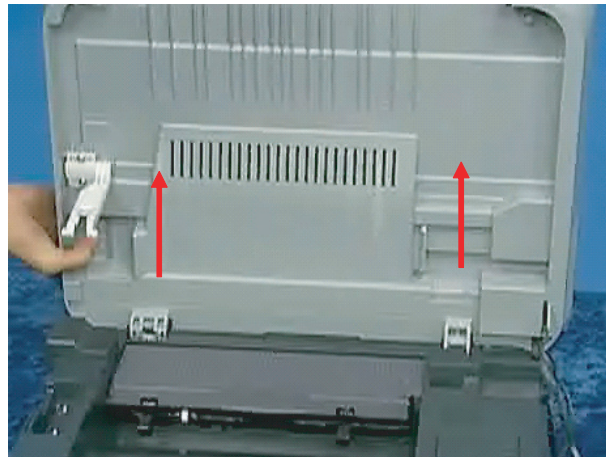
### 3.4.2 Scan Assy

**Before disassembling,  
Remove the Cover Assy. (Refer to 3.4.1)**

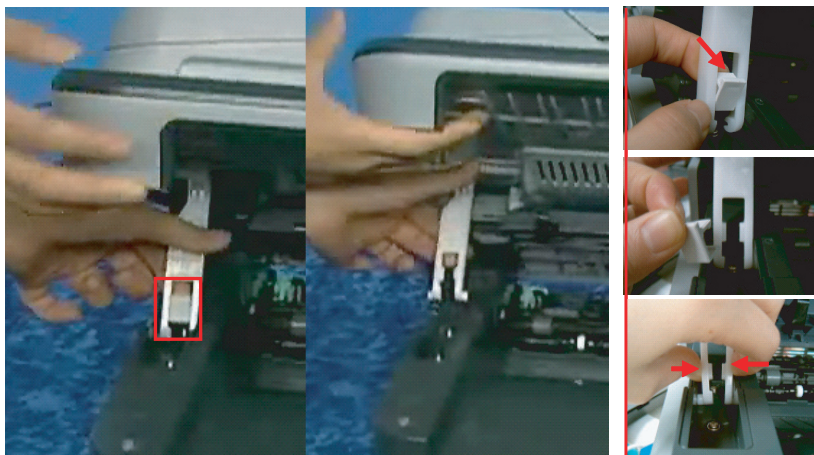
1. Unplug the harness as shown below.



3. Remove the Scan Assy from SET by lifting up.



2. Open up the Scan Assy. Remove the Holder link.  
And remove the link scan from the rail.



### 3.4.3 ADF Assy

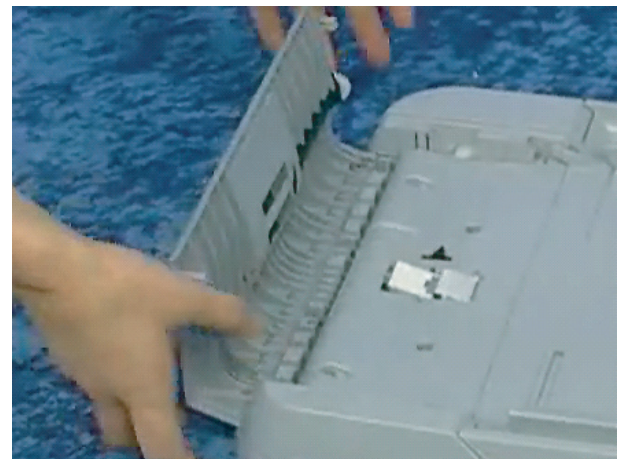
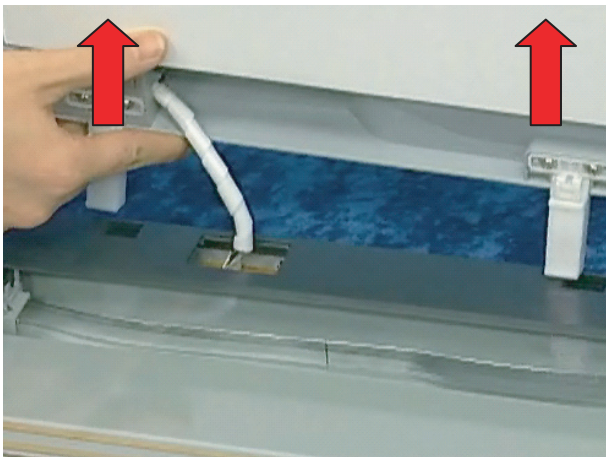
Before disassembling,  
Remove the Cover Assy and Scan Assy. (Refer to 3.4.1 ,3.4.2)

1. Remove the harness cover and then remove the harness.



3. Open and remove the ADF open unit.

2. Lift the ADF Assy up.



4. Remove the pick up roller cover.





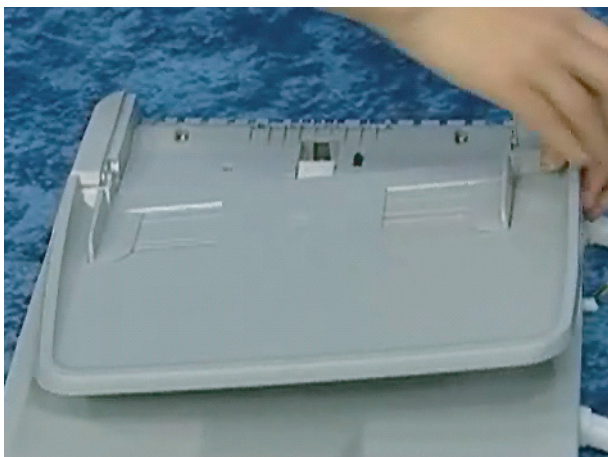
5. Remove the ADF pick up roller.



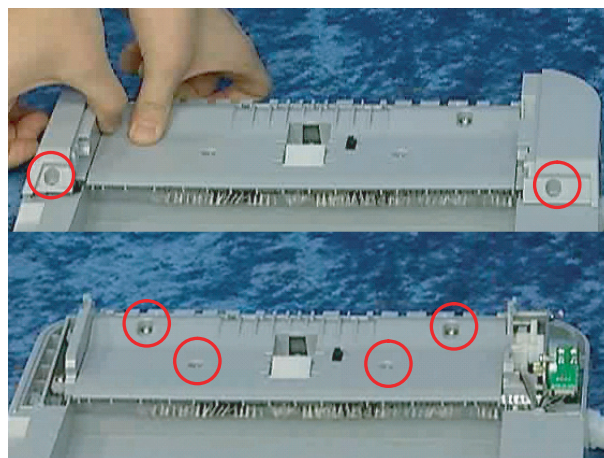
6. Remove the ADF pad unit.



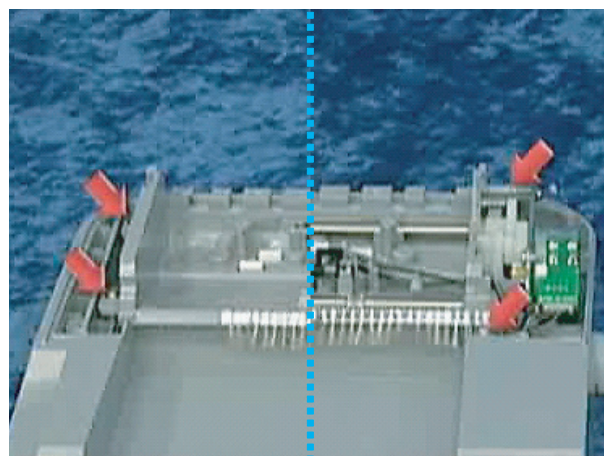
7. Remove the Stacker.



8. Remove the Side covers after remove the 2 screws. And remove the 4 screws.



9. Remove the 4 screw. And remove the guide path unit.



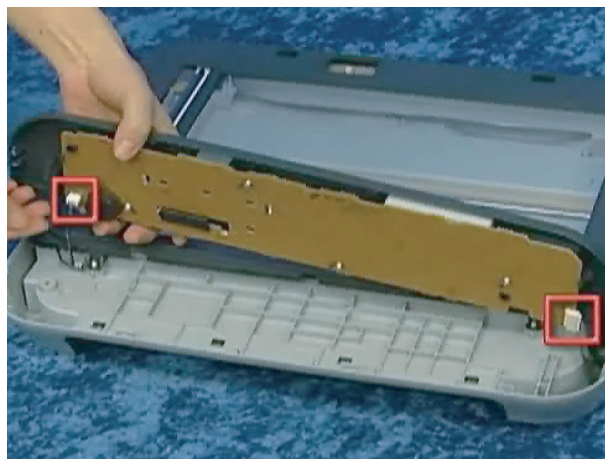
### 3.4.4 OPE unit

**Before disassembling,  
Remove the Scan Assy. (Refer to 3.4.2)**

1. Remove the 1 screw under the Scan-OPE unit.



3. Remove the 2 connector from the bottom of the OPE unit.



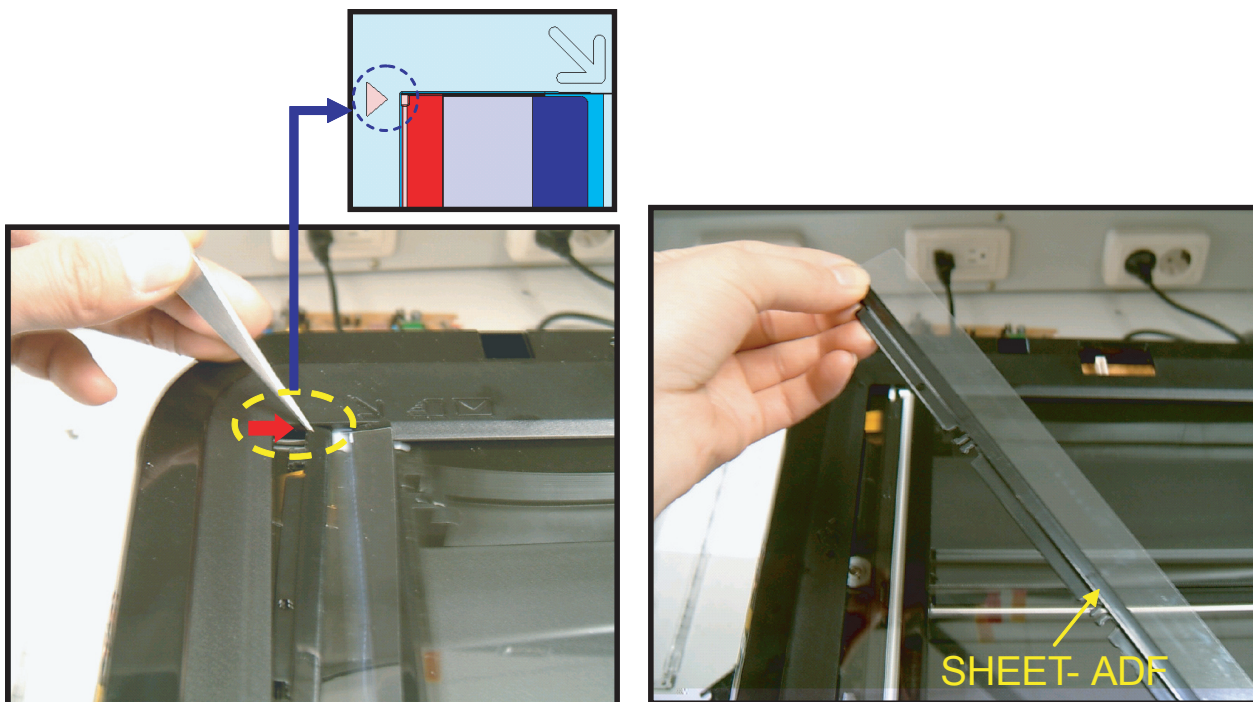
2. Remove the hook of the OPE unit.





### 3.4.5 Sheet ADF

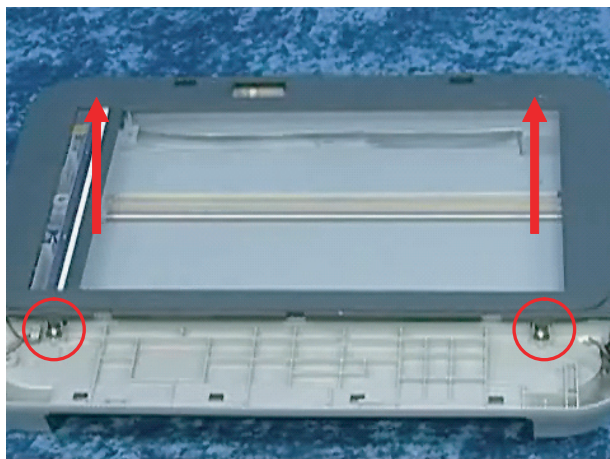
1. Open the ADF cover. And remove the ADF sheet by using a sharp tool like tweezers



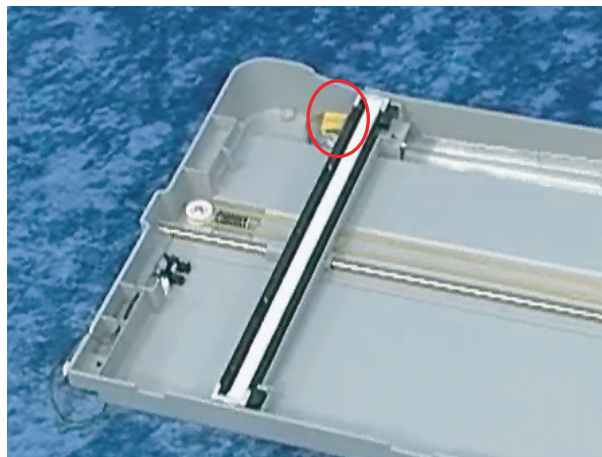
### 3.4.6 CIS unit

Before disassembling,  
Remove the scan assy, ADF assy, OPE unit. (Refer to 3.4.2 ~ 3.4.4)

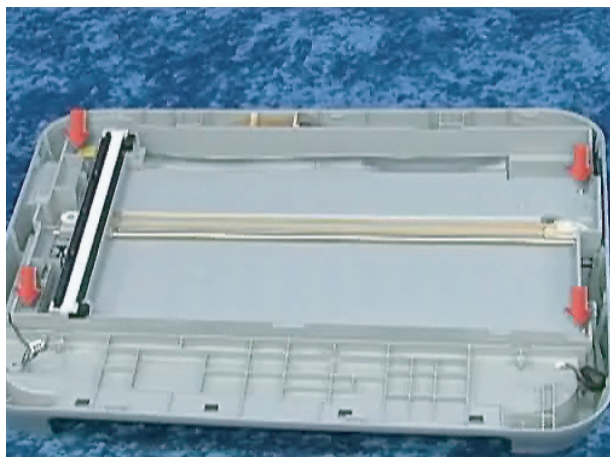
1. Remove the scan upper after remove the 2 screws.



3. Remove the CIS after remove the harness.



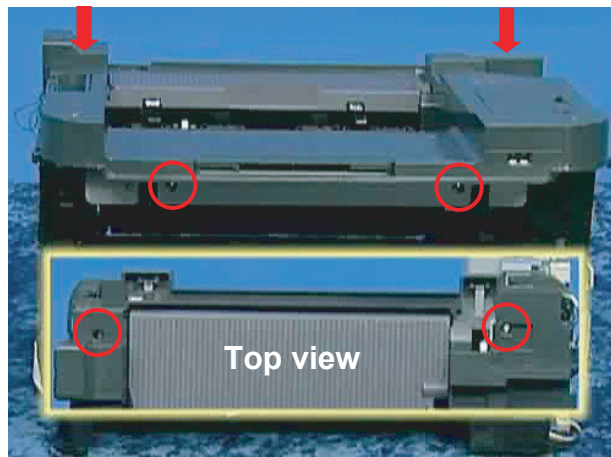
2. Remove the scan standard unit after remove the 4 screws.



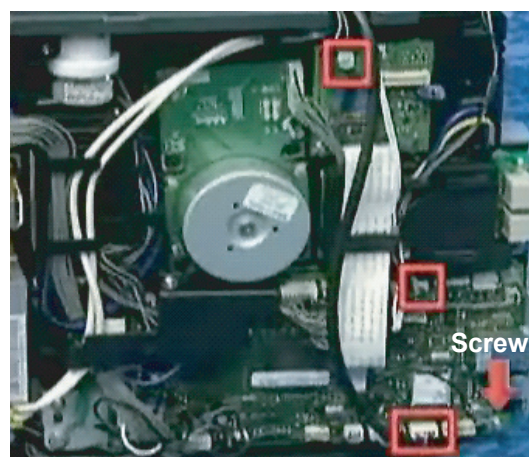
### 3.4.7 Middle Cover

Before disassembling,  
Remove the Cover Assy and Scan Assy. (Refer to 3.4.1,3.4.2)

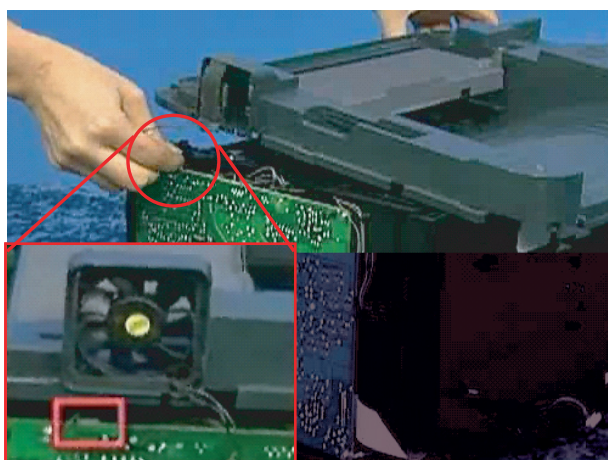
1. Remove the 4 screws (Front : 2 EA, Top : 2 EA)



3. Remove the one screw and all harness from left side. And remove the Middle cover assy.



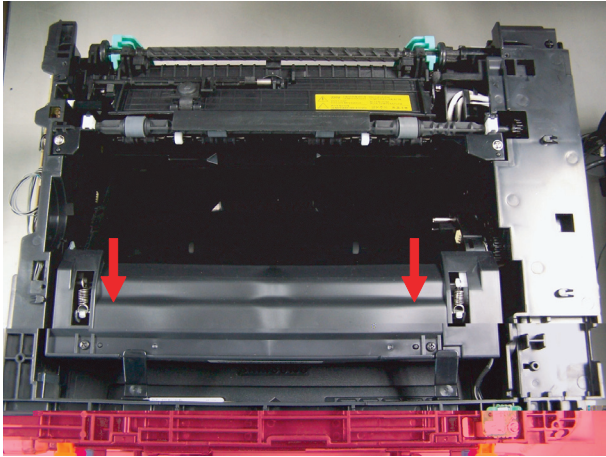
2. Remove the 1 connector that is connected the FAN.





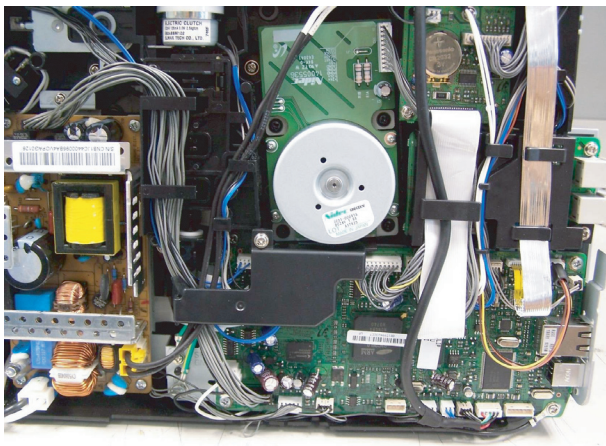
### 3.4.8 ITB

1. Press the top of ITB to down unit and take out it.

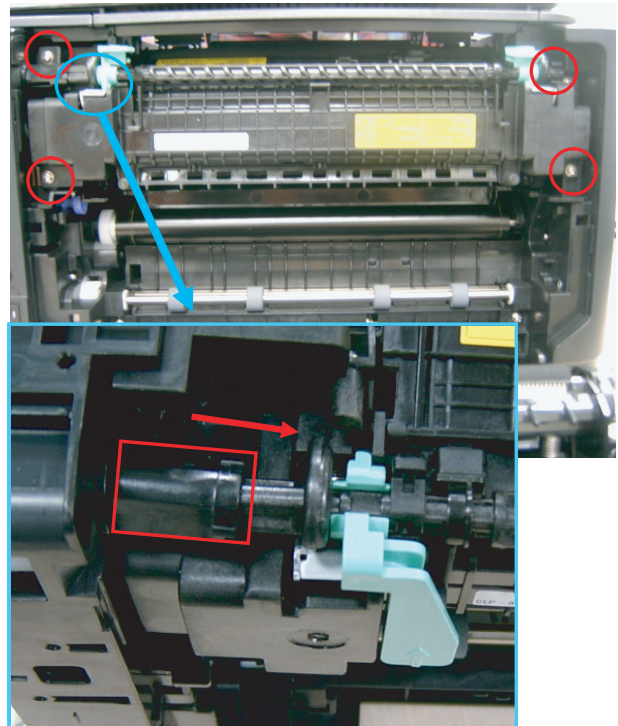


### 3.4.9 Fuser

1. Remove the Right cover. And remove the 2 connector as shown below.
2. Remove the 4 screw, and move the shaft as shown below. And remove the Fuser unit.

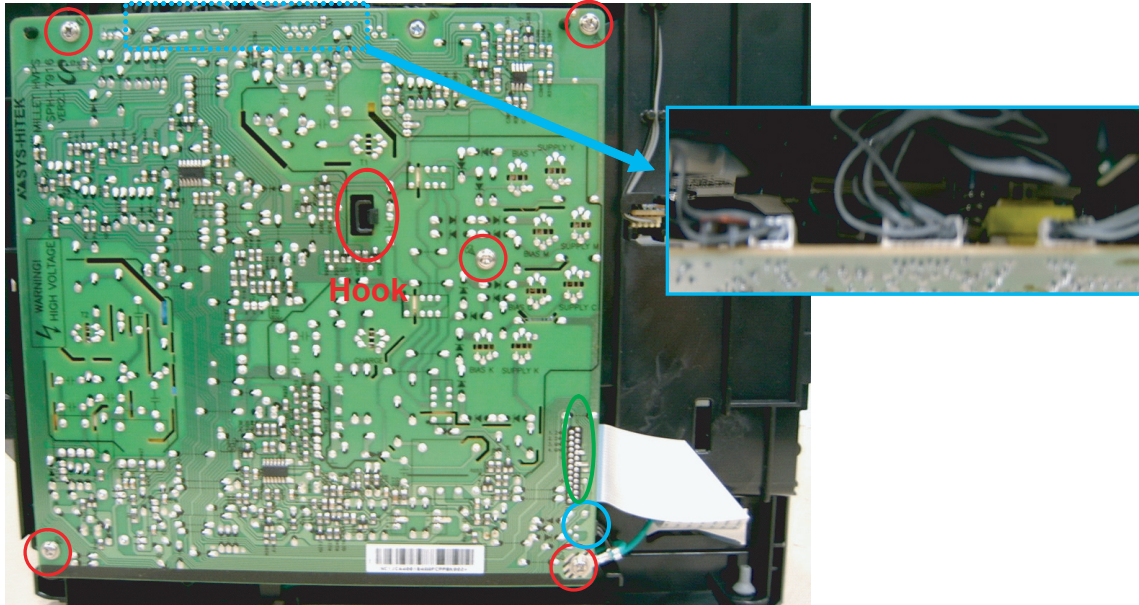


**Caution** - The fuser is very hot. So turn the printer off and wait until the printer to cool before replacing it.



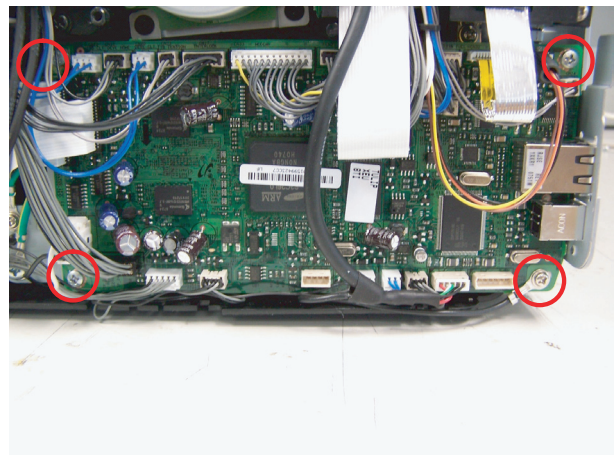
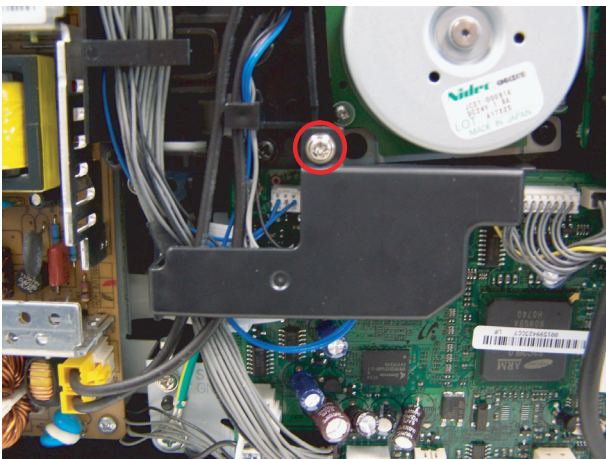
### 3.4.10 HVPS board

1. Remove the 5 screws and unplug the 4 connectors, 1 flat cable. And remove the one hook of the center.



### 3.4.11 Main PBA

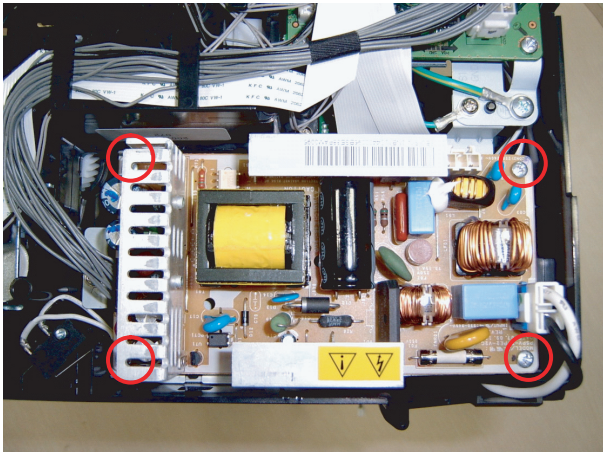
1. Remove the harness cover after remove the one screw.
2. Remove the all harness and 4 screws. And release the Main PBA.





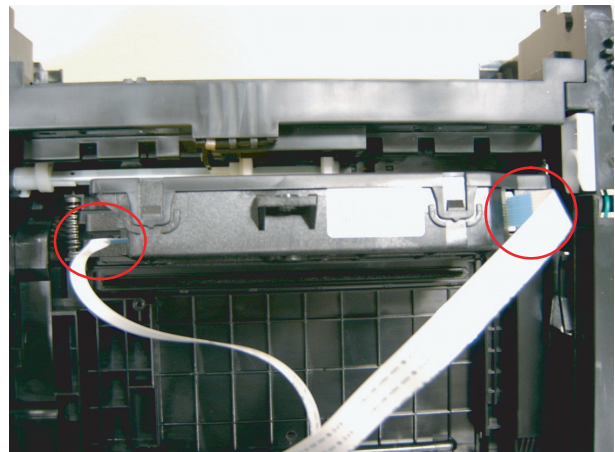
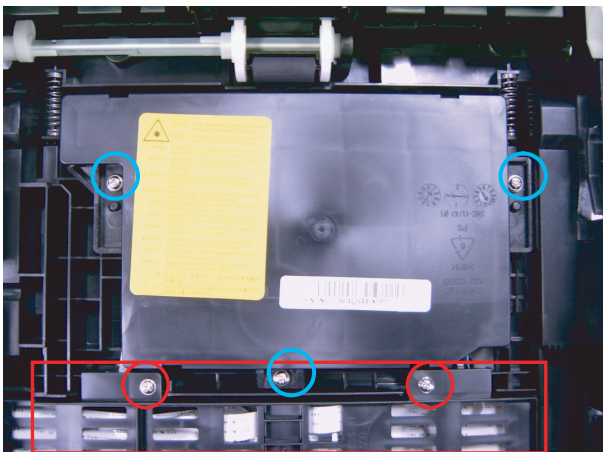
### 3.4.12 SMPS board

1. Remove the all harness and 4 screws. And remove the SMPS board.



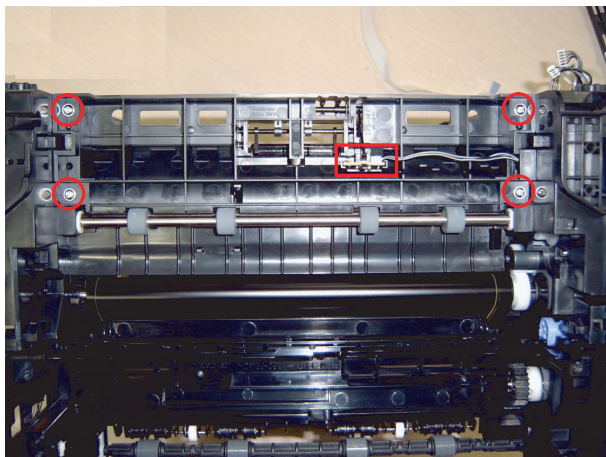
### 3.4.13 LSU Unit

1. To remove the LSU from the bottom of the SET, first remove the harness cover after remove the 2 screws. And remove the 3 screws.
2. Release the LSU unit after remove the 2 Flat cable.

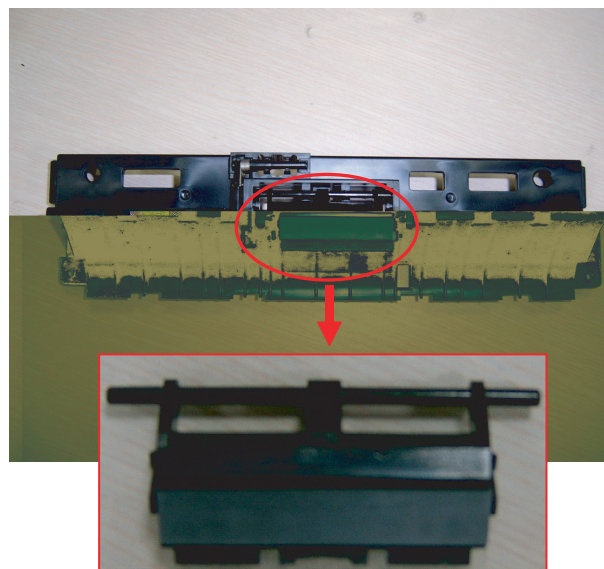


### 3.4.14 Holder Pad

1. Remove the sub PBA. And release the Guide  
Pick up unit after remove the 4 screws.

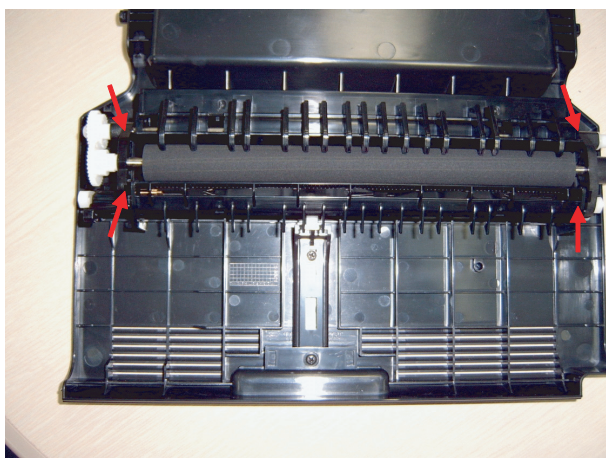


2. Release the holder pad after remove the hook  
of both side.



### 3.4.15 Transfer Unit

1. Remove the Transfer Unit by pushing the hook  
from the rear cover.



### 3.4.16 Pick up roller

Before disassembling, remove the Guide Pick up unit.( refer to 3.4.14)

1. Remove the hook from the position A and push to the left side.
2. Separate the Pick up roller Assy after release the position B.
3. Remove the hook of the part C,B in sequence.
4. Separate the Pick up rubber.

