

End of Life Characterization Report

Model: imageFORMULA DR-M260

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2	DIRECTIVE 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on waste electrical and electronic equipment(WEEE) : Annex II	page 24

1. Overview

1. Objective

This report is prepared to provide necessary information to recyclers in accordance with following EPEAT and WEEE requirements.

•EPEAT

4.3.3.1 (Refer to page 23)

“Required—Notification regarding the identification of both materials and components that have hazardous characteristics or special handling needs”

4.3.4.1 (Refer to page 23)

“Required—Preparation of product end-of-life characterization report”

•WEEE (Refer to page 24)

“DIRECTIVE 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on waste electrical and electronic equipment (WEEE Directive) Annex II”

2. Scope

The contents of this report are applied only to the following products.

Model : imageFORMULA ScanFront 400

3. How to use this report

①To know the existence and locations of the substances defined by WEEE Directive Annex II;
(Except “toner cartridges, liquid and pasty, as well as color toner”)

		DIRECTIVE 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on waste electrical and electronic equipment (WEEE); Annex II						
		1	2	3	4	5	6	...
		PCB containing capacitors	Mercury containing components	Battery	Printed circuit board	Plastic containing brominated flame	Asbestos containing components	...
I	II	III						
Fig. No.	Part Name							
910	Main controller PCB ASSY	—	—	● (page 4/24)	● (page 4~6/24)	● (page 7/24)	—	...

I : This number indicates the number assigned to each unit in the figure of unit placement.

II : This name indicates the name of each unit in the figure of unit placement.

III : This clause indicates the 15 clause written in the WEEE Directive Annex II.

“● (page No.)” : Used. See page No.

“—” : Not used

②About “Toner cartridges, liquid and pasty, as well as color toner”.

See “Removing” instructions.

2. Identifies the existence and location of all materials and components described in Annex II of Directive 2002/96/EC of the European Parliament and of the Council on Waste Electrical and Electronic Equipment

		DIRECTIVE 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on waste electrical and electronic equipment (WEEE) Annex II														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Fig. No.	Part Name	PCB containing capacitors	Mercury containing components	Battery	Printed circuit board (>10cm2)	Plastic containing brominated flame retardants	Asbestos containing components	Cathode ray tubes	CFC,HCFC,HFC,H C	Gas discharge lamps	Liquid crystal displays (>100cm2) and back-lighted with gas discharge lamps	External electric cables	Refractory ceramic fibers containing components	Radioactive substances	Capacitors containing substances of concern (height > 25mm, diameter > 25mm)	Toner (liquid & pasty toner, color toner)
1	Control PCB	—	—	—	● (page 4/24)	—	—	—	—	—	—	—	—	—	—	—
2	Feed Error Sensor (Receiver)	—	—	—	● (page 5/24)	—	—	—	—	—	—	—	—	—	—	—
3	Sub PCB	—	—	—	● (page 4/24)	—	—	—	—	—	—	—	—	—	—	—
4	Operation PCB	—	—	—	● (page 4/24)	—	—	—	—	—	—	—	—	—	—	—
5	Feed Error Sensor (Transmitter)	—	—	—	● (page 6/24)	—	—	—	—	—	—	—	—	—	—	—
6	US-Drive PCB	—	—	—	● (page 6/24)	—	—	—	—	—	—	—	—	—	—	—
7	QIS Sensor(UPPER)	—	—	—	● (page 7/24)	—	—	—	—	—	—	—	—	—	—	—
8	QIS Sensor(LOWER)	—	—	—	● (page 7/24)	—	—	—	—	—	—	—	—	—	—	—
9	Power Cord(100-120V)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	AC Adaptor	—	—	—	—	—	—	—	—	—	—	● (page 4/24)	—	—	—	—
11	USB Cable	—	—	—	—	—	—	—	—	—	—	● (page 4/24)	—	—	● (page 4/24)	—
12	Lock Lever Shaft	—	—	—	—	● (page 5/24)	—	—	—	—	—	● (page 4/24)	—	—	—	—
13	Retard Roller Shaft	—	—	—	—	● (page 5/24)	—	—	—	—	—	—	—	—	—	—

3. Figure of unit placement

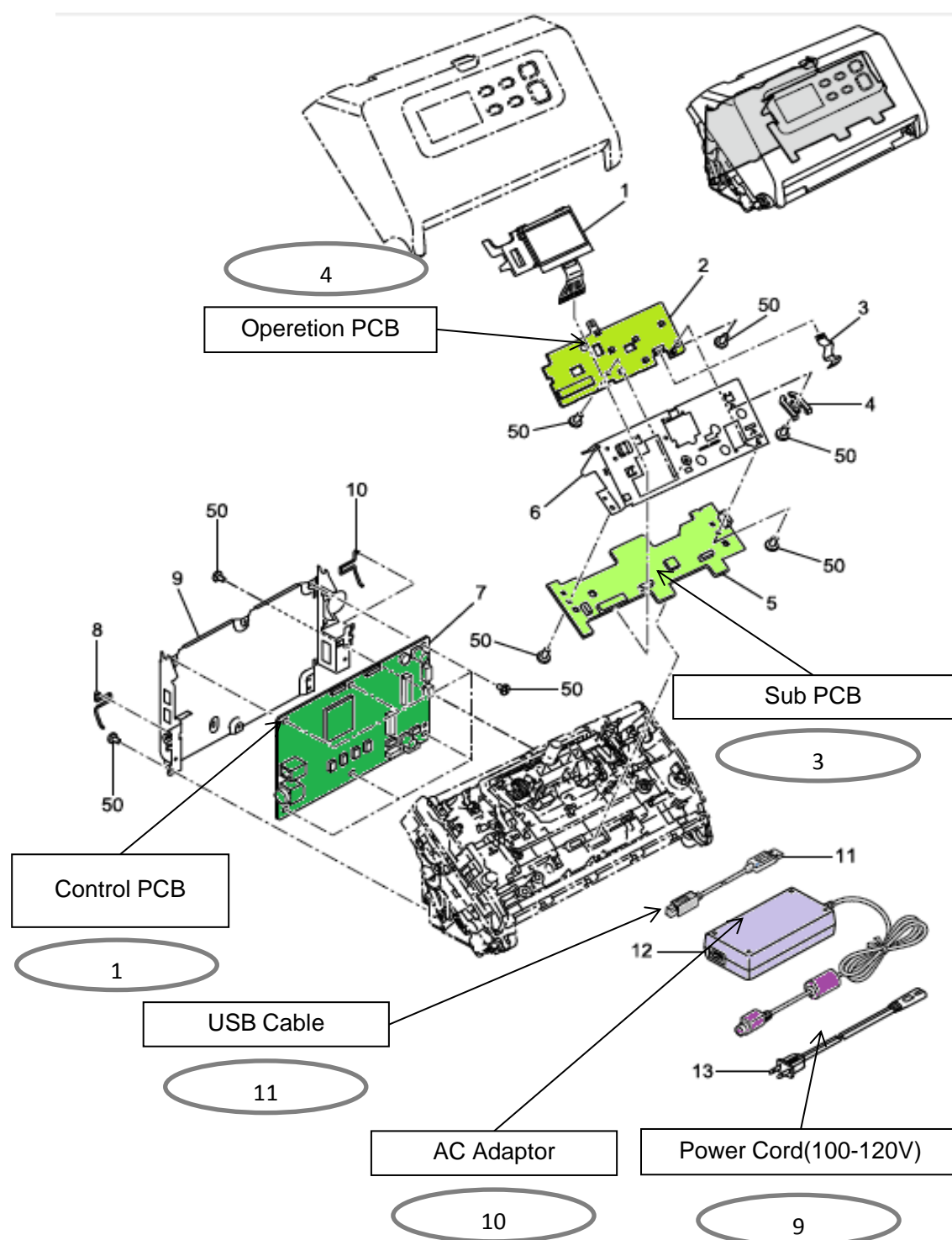


Figure 3-1

3. Figure of unit placement

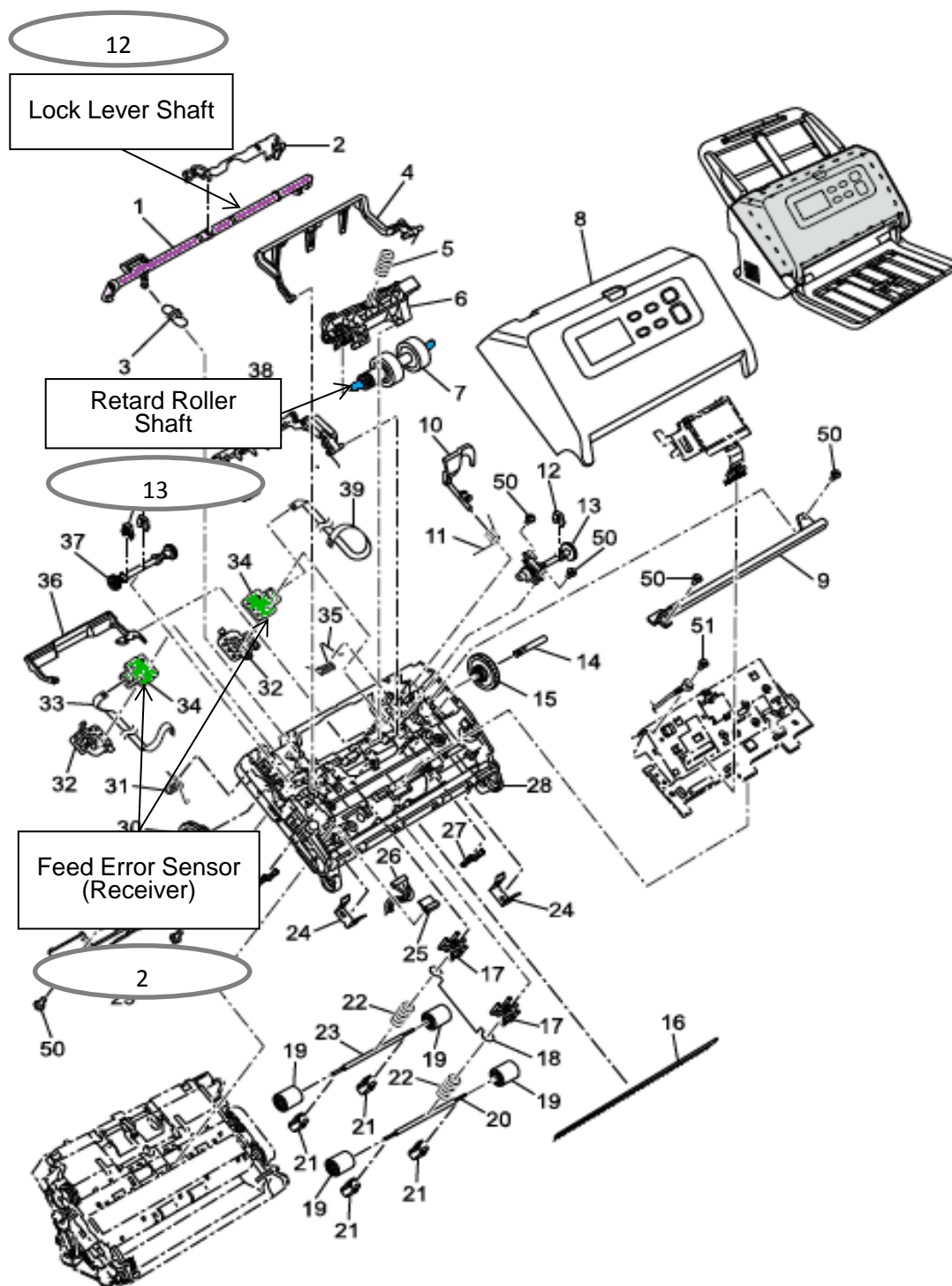


Figure 3-2

3. Figure of unit placement

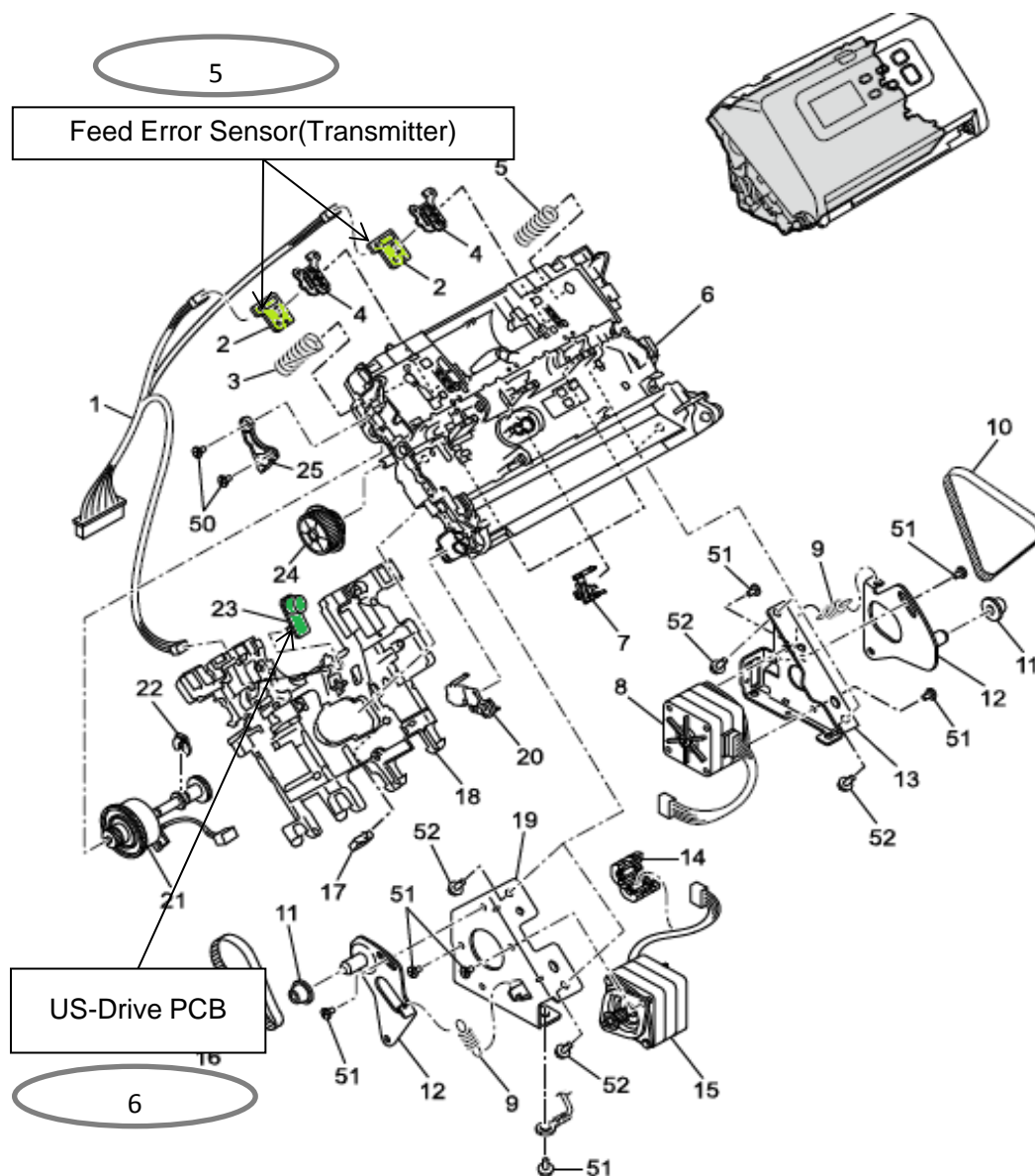


Figure 3-3

3. Figure of unit placement

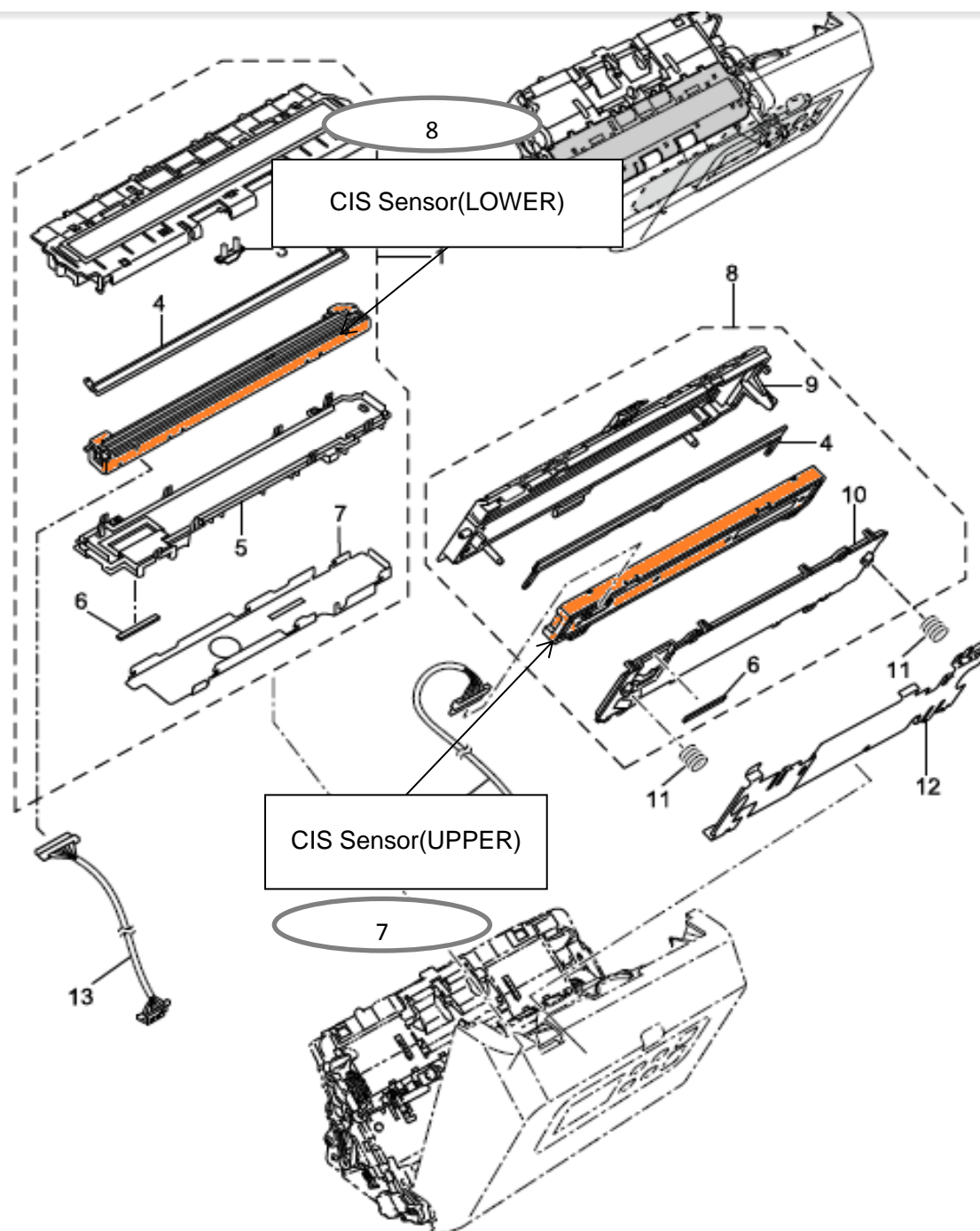


Figure 3-4

4. Disassembly Operation Sheet

<Removing the EXTERNAL PARTS>

● Removing the Pickup Tray

1) Pull up the pickup tray ①, and unhook the fitting parts ② on the right and left side then remove the pickup tray.

Note: When you disassemble this machine, it is better to remove this pickup tray at first.



Figure 4-1

3. Disassembly Operation Sheet

● Removing the Eject Tray

1) Open the eject tray①, then unhook it by bending the fitting part② on the left side. Next, unhook the fitting part③ on the right side, then remove the eject tray.

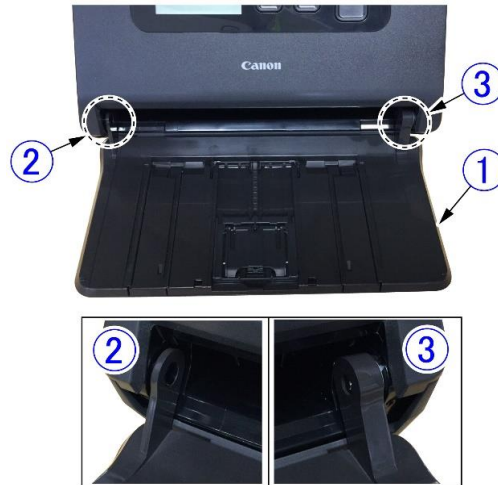


Figure 4-2

3. Disassembly Operation Sheet

● Removing the Upper Cover

1) Open the front unit, unhook the 4 fitting part① on the bottom side while pushing towards the far side. Next, unhook the 2 fitting part② on the upper side by pushing up and remove the upper cover③.

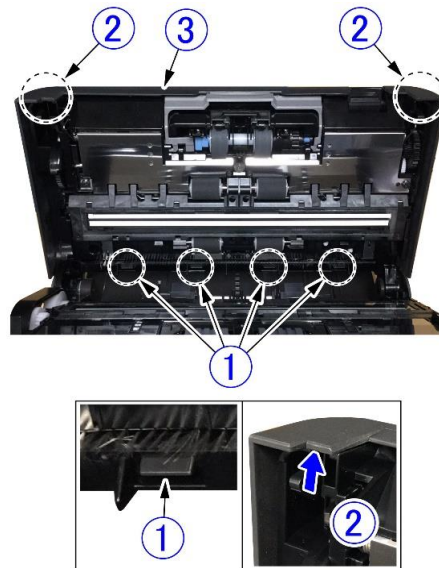


Figure 4-3

3. Disassembly Operation Sheet

● Removing the Lower Cover

1) Unhook the 3 pairs on the left side① and 2 pairs of right side② of fitting part, and remove the lower cover③ while opening the gap between the lower cover and base unit.

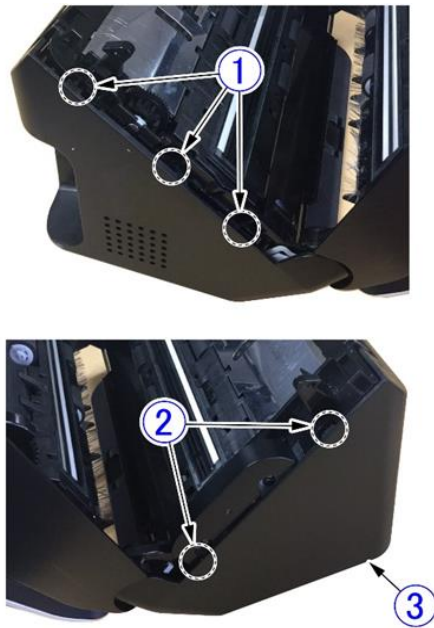


Figure 4-4

3. Disassembly Operation Sheet

● Removing the Lock Lever Shaft

1) Remove the upper cover. ([Page 10](#))

2) Pull down the roller cover① and move the feed arm unit② backward. Next, lift up the document detection lever③ of the lock lever shaft, unhook the lock lever shaft⑤ and the coil spring⑥ carefully not to touch to the document stopper④.

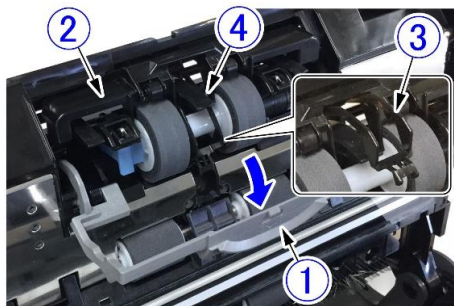


Figure 4-5

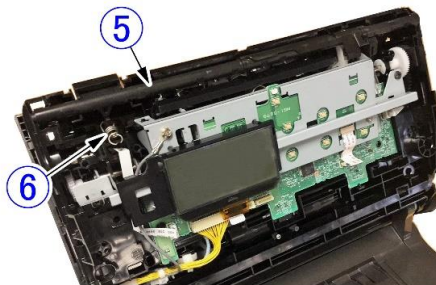


Figure 4-6

3. Disassembly Operation Sheet

● Removing the Sub PCB, Operation PCB

1) Remove the upper cover. ([Page 10](#))

2) Remove the LCD unit.

2-1) Insert the tool from upper side, and unhook the 2 pairs of the fitting part①. Next, tilt the LCD unit② towards you then unhook the 2 pairs of the lower fitting part③ and LCD unit.

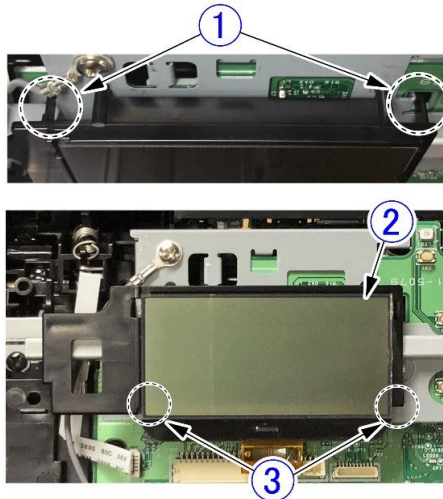


Figure 4-7

2-2) Hold the LCD unit and unlock the connector① then remove the cable② (FFC) and the LCD unit.

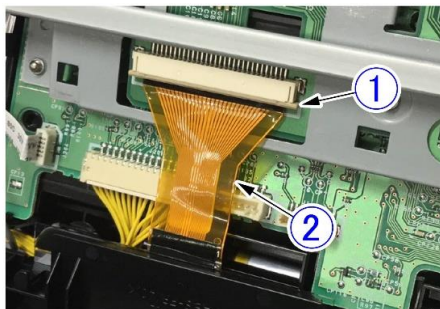


Figure 4-8

3) Remove the 2 screws① (M3x8, BH, self-tapping) and remove the upper reinforcing plate ②. Next, remove the screw③ (M3, BH, round head), grounding cord④, cable⑤, and 2 cable⑥ (FFC).

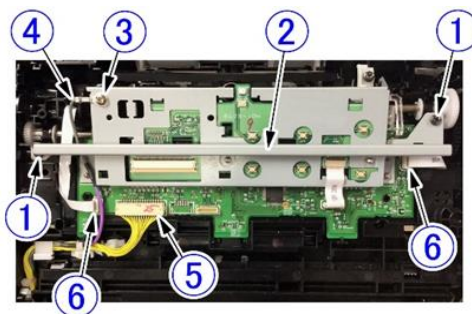


Figure 4-9

3. Disassembly Operation Sheet

● Removing the Sub PCB, Operation PCB

4) Unhook the 2 fitting part① (sheet metal), and 2 fitting part② .
Next, tilt the sub PCB③ towards you then unhook the 2 pairs of the lower fitting part ④ and the sub PCB unit.

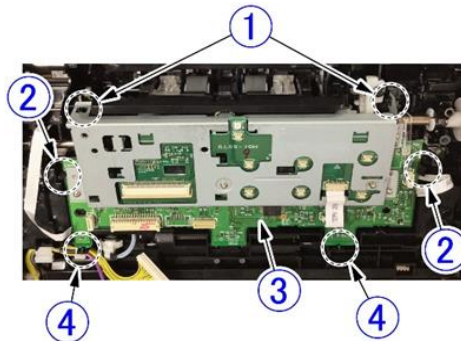


Figure 4-10

5) Remove the cable① (FFC) from the sub PCB and turn over the sub PCB.
Next, remove the 2 screw② (M3, BH, round head) and the sub PCB ③.

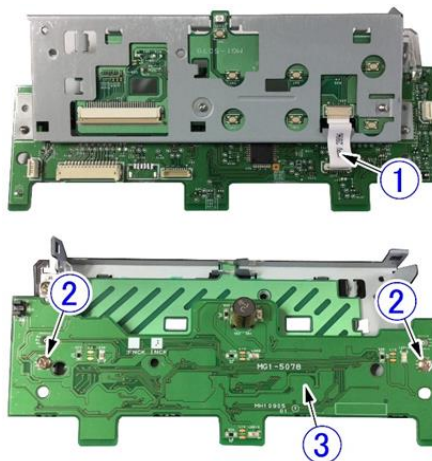


Figure 4-11

6) Remove the cable① (FFC).
Next, remove the 2 screw② (M3x8, BH, self-tapping) and the operation PCB③.

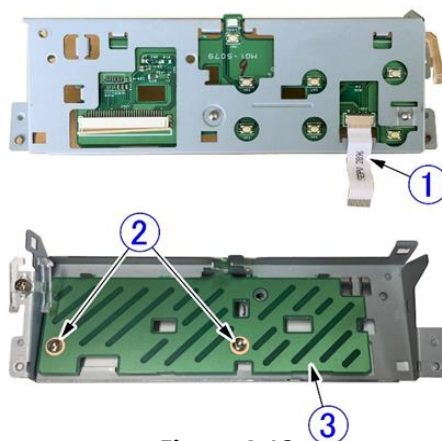


Figure 4-12

3. Disassembly Operation Sheet

● Removing the CIS Sensor(UPPER)

1)Remove the upper reading unit.

1-1)Insert a tool with thin and flat edge into the left and right gap① , and lift up the reading unit② a little bit using the tool while unhooking the inside fitting parts.

Next, remove the reading unit by pulling it straight up.

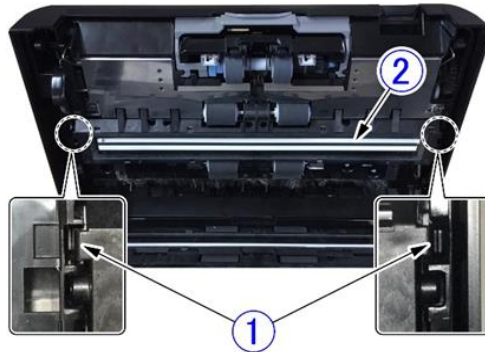


Figure 4-13

1-2)Disconnect the cable① from the cable holder②, disconnect the connector③ from the upper reading unit④ .

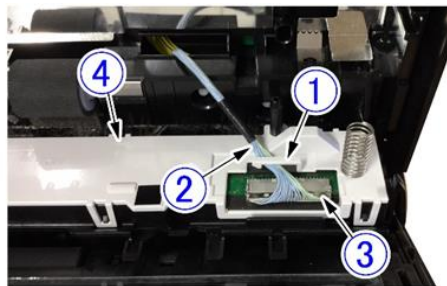


Figure 4-14

2)Remove the 2 coil spring①.

Next, unhook the fitting part② (8 places) and remove the lid③.

Next, remove the CIS unit④.

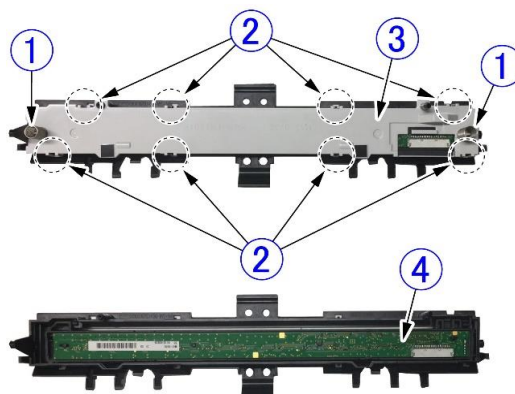


Figure 4-15

3. Disassembly Operation Sheet

● Removing the CIS Sensor(LOWER)

1) Remove the upper reading unit.

1-1) Insert a tool with thin and flat edge into the left and right holes① (4 places), and lift up the lower reading unit② a little bit using the tool while unhooking the inside fitting parts.

Next, remove the lower reading unit by pulling it straight up.

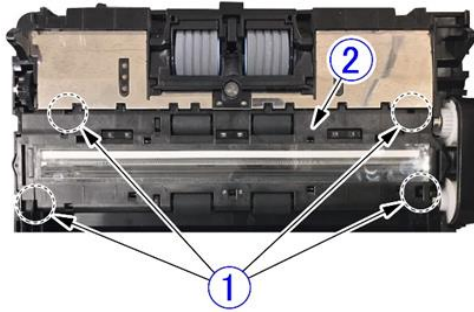


Figure 4-16

1-2) Remove the cable② from the cable holder①, disconnect the connector④ from the lower reading unit③.

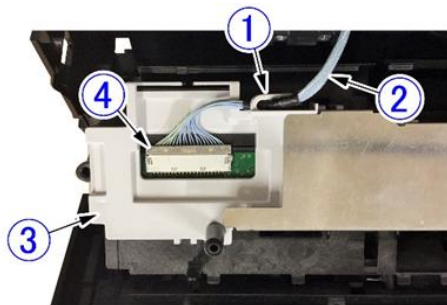


Figure 4-17

2) Using a tool with thin and flat edge, unhook the fitting part① (8 places), and remove the lid② (with shield plate). Next, remove the CIS unit ③.

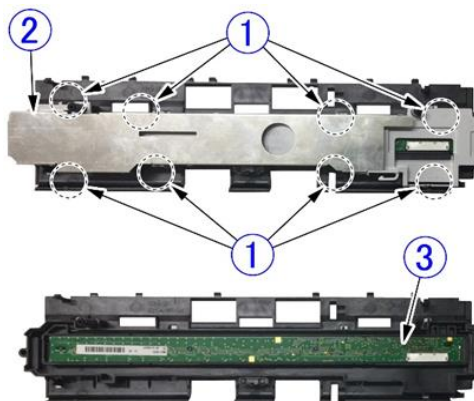


Figure 4-18

3. Disassembly Operation Sheet

● Removing the Feed Error Sensor (Receiver)

1) Remove the upper feed guide plate.

1-1) Remove the upper CIS sensor unit. ([Page 15](#))

1-2) Remove the 2 screws① (M3x8, BH, self-tapping). Unhook the center fitting part③ of the upper feed guide plate②, pull the lower side of the upper feed guide plate toward you, and unhook 4 fitting part④.

Note: To unhook the central fitting part③, bend the part upward by using the tool with thin and flat edge.

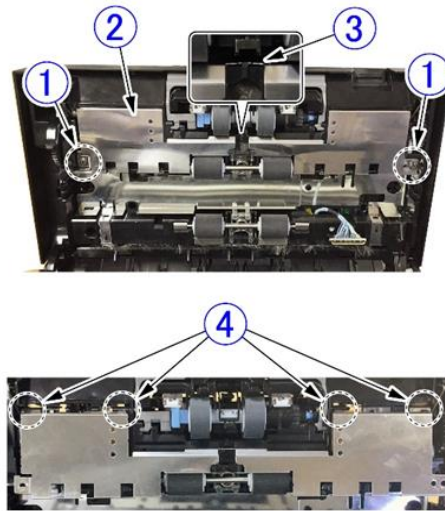


Figure 4-19

2) Unhook the fitting part① and the light guide②.

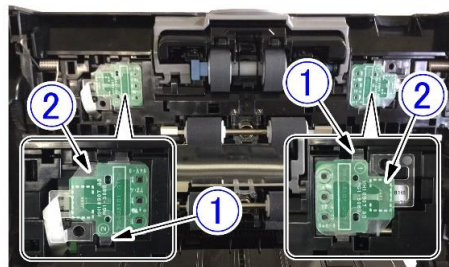


Figure 4-20

3) Remove the feed error sensor① and the cable② (FFC).

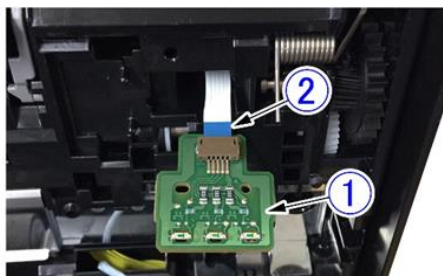


Figure 4-21

3. Disassembly Operation Sheet

● Removing the Control PCB

- 1) Remove the lower cover. ([Page 11](#))
- 2) Remove the cable① to ⑤ from the control PCB.

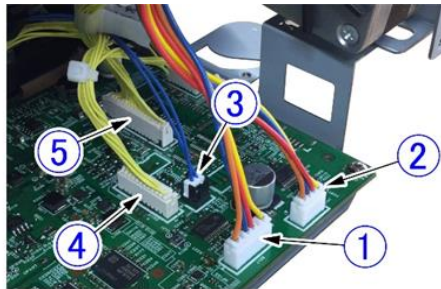


Figure 4-22

- 3) Remove the 2 screws② (BH, M3, round head) with the mounting plate①.

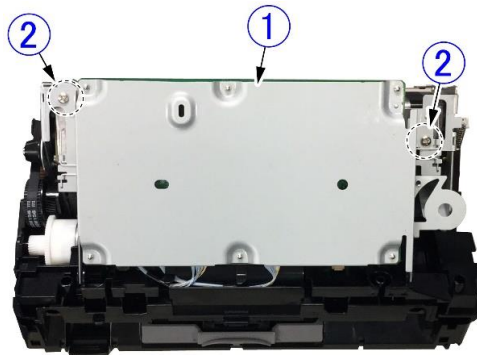


Figure 4-23

3. Disassembly Operation Sheet

● Removing the Control PCB

4) Pull the mounting plate② toward you using the fitting part① as an axis, disconnect the 2 connectors③ for the reading unit.

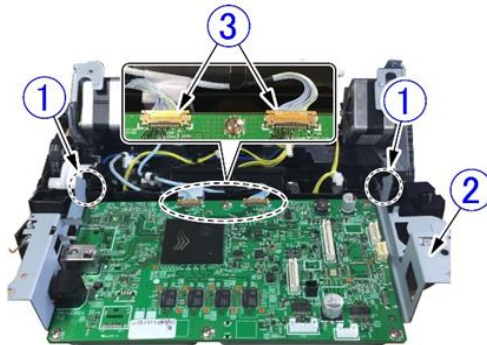


Figure 4-24

5) Remove the 6 screws① (BH, M3, round head) and the control PCB② from the mounting plate.

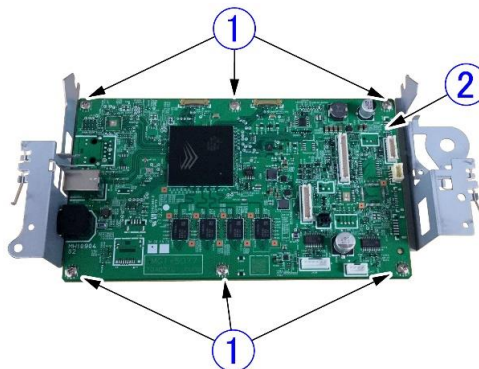


Figure 4-25

3. Disassembly Operation Sheet

● Removing the Feed Error Sensor (Transmitter), US-Drive PCB

1) Remove the lower cover. ([Page 11](#))

2) Remove the mounting plate (with control PCB). ([Page 18-19](#))

3) Remove the feed motor.

3-1) Remove the cable① of the feed motor mounted on the control PCB and release it from the cable guide②.

Next, remove the 2 screws③ (M3, BH, round head) to remove the feed motor④.

Note: The tapered roller⑤ is easy to be off, handle it with care.

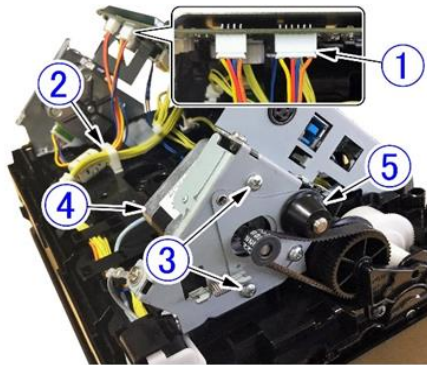


Figure 4-26

4) Remove the main motor.

4-1) Remove the cable of the main motor① mounted on the control PCB and release it from the cable guide②.

Next, remove the 2 screws③ (M3, BH, round head) and the main motor④.

Note: The tapered roller⑤ is easy to be off, handle it with care.

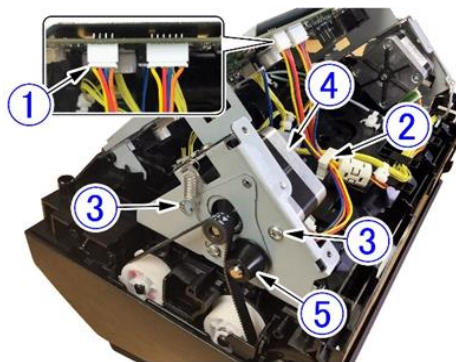


Figure 4-27

3. Disassembly Operation Sheet

● Removing the Feed Error Sensor (Transmitter), US-Drive PCB

5) Disconnect the 3 connectors①, release the 4 cable holders② (reusable type), and remove each cable from the cable guide.

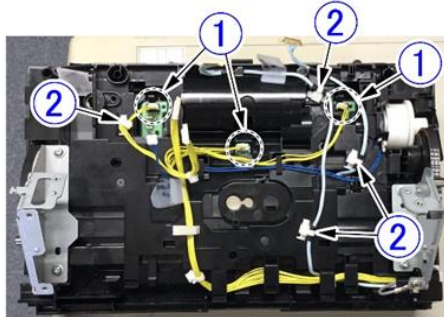


Figure 4-28

6) Use a tool with thin and flat edge to unhook the fitting parts① (6 places). Next, remove the dust cover② slowly, and then remove the cable③ of the lower reading unit.

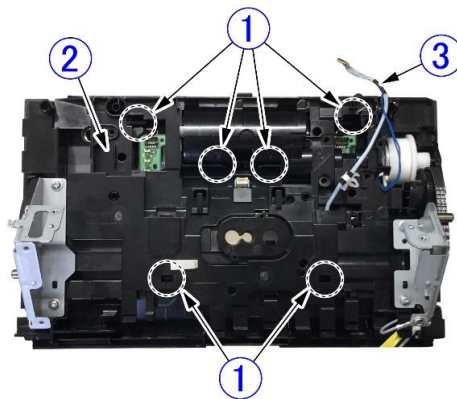


Figure 4-29

7) Unhook the fitting part① and remove the feed error sensor② and the US-Drive PCB③.

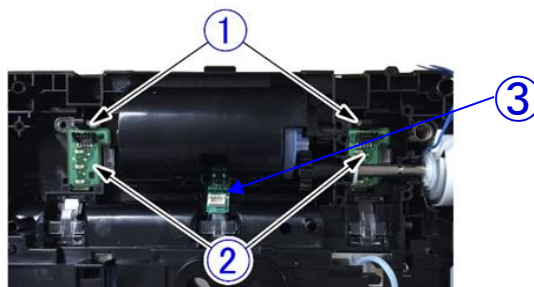


Figure 4-30

3. Disassembly Operation Sheet

● Removing the Retard Roller Shaft.

- 1) Open the front unit and open the retard roller cover①.
- 2) Remove the retard roller unit②.

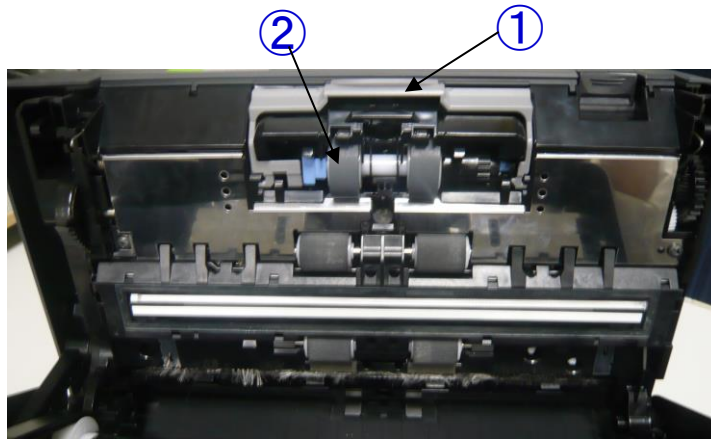


Figure 4-31

- 3) Unhook the fitting parts③, and remove the retard roller shaft④.

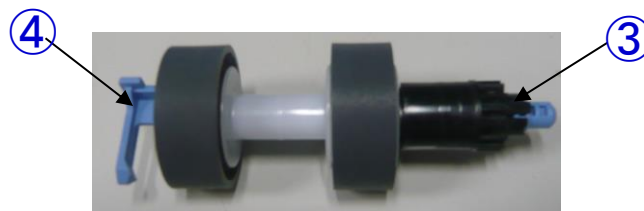


Figure 4-32

4.3.3 Materials with special handling needs

4.3.3.1 Required—Notification regarding the identification of both materials and components that have hazardous characteristics or special handling needs

Product Criterion: Manufacturer shall (a) within one year after the equipment is put on the market make available to reuse and recycling facilities information identifying the presence and location of all materials and components exhibiting hazardous characteristics or requiring special handling and (b) ensure that such materials and components are safely and easily identifiable. Manufacturers shall provide such information to a central information source that makes such information available to recyclers (if such central information source is referred to them by the PRE) or to a web site making information available to recyclers. If the manufacturer does not provide information to a central information source, but rather provides such information on another web site, the manufacturer shall declare the URL where the information regarding the declared product is located.

Applies to: All covered products.

Verification Requirements:

- a) Declaration from manufacturer
- b) Documentation as to how information is provided to reuse and recycling facilities, including, but not limited to, the URL of website and how reuse/recycling facilities gain access to the information
- c) Documentation that identifies the presence and location of all materials and components demonstrating hazardous characteristics or requiring special handling and confirming that the applicable components are safely and easily identifiable,

References and Details: Materials exhibiting hazardous characteristics or those requiring special handling are those materials defined under Annex II of the European WEEE Directive, Directive 2002/96/EC of the European Parliament and of the Council on waste electrical and electronic equipment (WEEE), and subsequent updates.

For further information see: Blue Angel; NIOSH Pocket Guide (A reference for lists of chemicals with hazards); US EPA IRIS Glossary

4.3.4 Product end-of-life analysis and planning

4.3.4.1 Required—Preparation of product end-of-life characterization report

Product Criterion: Manufacturer shall prepare and make available to reuse and recycling facilities, and upon request to other institutions and organizations, for each registered product, an end-of-life characterization report that provides guidance for the effective processing of the materials identified in Directive 2002/96/EC of the European Parliament and of the Council on Waste Electrical and Electronic Equipment Annex II within one year after the equipment is put on the market

Applies to: All covered products.

Verification Requirements:

- a) Declaration by manufacturer
- b) The end-of-life characterization report
- c) Documentation as to how information is provided to reuse and recycling facilities
- d) Identification of a point of contact for institutions and organizations to request the end-of-life report

References and Details: A WEEE Disassembly report, adapted to report on any additional elements from criteria from this standard that are declared to, shall meet the requirements of

Products whose designs are the same relative to the end-of-life processes may utilize a report in common, which shall list the applicable product names.

**DIRECTIVE 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27
January 2003 on waste electrical and electronic equipment(WEEE)**

Annex II

As a minimum the following substances, preparations and components have to be removed from
any separately collected WEEE:

- 1 – polychlorinated biphenyls (PCB) containing capacitors in accordance with Council Directive 96/59/EC of 16 September 1996 on the disposal of polychlorinated biphenyls and polychlorinated terphenyls (PCB/PCT) (1)
- 2 – mercury containing components, such as switches or backlighting lamps,
- 3 – batteries,
- 4 – printed circuit boards of mobile phones generally, and of other devices if the surface of the printed circuit board is greater than 10 square centimeters,
- 5 – plastic containing brominated flame retardants,
- 6 – asbestos waste and components which contain asbestos,
- 7 – cathode ray tubes,
- 8 – chlorofluorocarbons (CFC), hydrochlorofluorocarbons (HCFC) or hydrofluorocarbons (HFC), hydrocarbons (HC),
- 9 – gas discharge lamps,
- 10 – liquid crystal displays (together with their casing where appropriate) of a surface greater than 100 square centimeters and all those back-lighted with gas discharge lamps,
- 11 – external electric cables,
- 12 – components containing refractory ceramic fibers as described in Commission Directive 97/69/EC of 5 December 1997 adapting to technical progress Council Directive 67/548/EEC relating to the classification, packaging and labeling of dangerous substances (2),
- 13 – components containing radioactive substances with the exception of components that are below the exemption thresholds set in Article 3 of and Annex I to Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation (3),
- 14 – electrolyte capacitors containing substances of concern (height > 25 mm, diameter > 25 mm or proportionately similar volume)
These substances, preparations and components shall be disposed of or recovered in compliance with Article 4 of Council Directive 75/442/EEC.
- 15 – toner cartridges, liquid and pasty, as well as color toner,