

Disassembly of Waste Electrical and Electronic Equipment (WEEE) Manual

EU Waste Electronic and Electrical Equipment Directive require producers to provide information of the different electronic and electrical materials and components found in their products at its end-of-life, and disassembly references to treatment and recycling facilities.

1. Product information
2. Materials and components list for selective treatment
3. Disassembly tools
4. Disassembly references

The following information is intended only for the use of recognized treatment and recycling facilities.

Section 1: Product information

Model name(s)— The product models are group together in series and are mechanically equivalent

Lexmark MX931
MX931dse

Section 2: Materials and components list for selective treatment

Table 2: Materials and components list for selective treatment

Description	Count	Notes
Polychlorinated biphenyls (PCB) containing capacitors	0	N/A
Mercury containing components, such as switches or backlighting lamps	0	N/A
Batteries	1	***** <u>Total Count = 1</u> ***** Lithium Manganese Oxide coin cell located on the Controller card
Printed circuit boards greater than 10 cm ²	multiple	***** <u>Minimum Count = 12</u> ***** For details, see Annex B *****
Toner cartridges, liquid and pasty, as well as colour toner	2	1 – Toner cartridge 1 – Imaging unit
<u>Plastic component(s)</u> that may contain BFR (brominated [§] flame retardants)	multiple	***** <u>Minimum Count = 27</u> ***** For details, See Annex A *****
Note (§) - This product may contain plastic parts with brominated flame retardants. Recycler should treat these parts separately. See section 4.3 Disclaimer.		
Asbestos waste and components which contain asbestos	0	N/A
Cathode ray tubes	0	N/A
Chlorofluorocarbons (CFC), Hydrochlorofluorocarbons (HCFC) or Hydrofluorocarbons (HFC), Hydrocarbons (HC)	0	N/A
Gas discharge lamps	0	N/A
Liquid Crystal Display (LCD) greater than 100 cm ² and those back-lighted with Gas discharge lamps	0	N/A
External electrical cables	1	Power cord located on the back lower left quadrant
Components containing refractory fibres	0	N/A
Components containing radioactive substances	0	N/A
Electrolyte capacitors containing substances of concern (<i>capacitors with height > 25 mm, diameter > 25 mm or proportionately similar volume</i>)	1	Capacitor located on Power Supply

Section 3: Common Tools for Disassembly

Table 3.1 - Disassembly tools

Item	Description
1	#2 Phillips screwdriver, magnetic
2	Wire cutter
3	E-clip puller or small flat-head screwdriver
4	Standard slotted head screwdriver





Section 4: Disassembly references

4.1 Removal procedure(s)

WEEE materials and components removal procedures are available upon request.

Please Contact: recycling@lexmark.com

4.2 Graphical illustration of material's and component's location

-  LCD > 100 cm²
-  PCBs > 10 cm²
-  Printer components containing Brominated flame retardants
-  Battery

Please note: Graphic illustrations contained in this document may differ slightly from actual components

4.3 Disclaimer

Statement on WEEE Bromine Levels

Manufacturer is compliant with the European Directive 2012/19/EU and European Commission's mandated technical specification CLC/TS 50625-3-1:2015 stating that plastic containing brominated flame retardants (BFR) must be removed from any separately collected WEEE (Article 8, Annex VII) if total bromine concentration in the fraction is known to be >2000 ppm, or expected to be >2000 ppm, or if it is not declared. Concentrations of bromine <2000 ppm are acceptable for reuse and do not require separation, so that the re-use and recycling of components or whole appliances is not hindered per Annex II, Section 3 of the WEEE Directive (2002/96/EU), and Annex VII, Section 3 of the WEEE Directive (2012/19/EU).

Section 5: Supplies

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

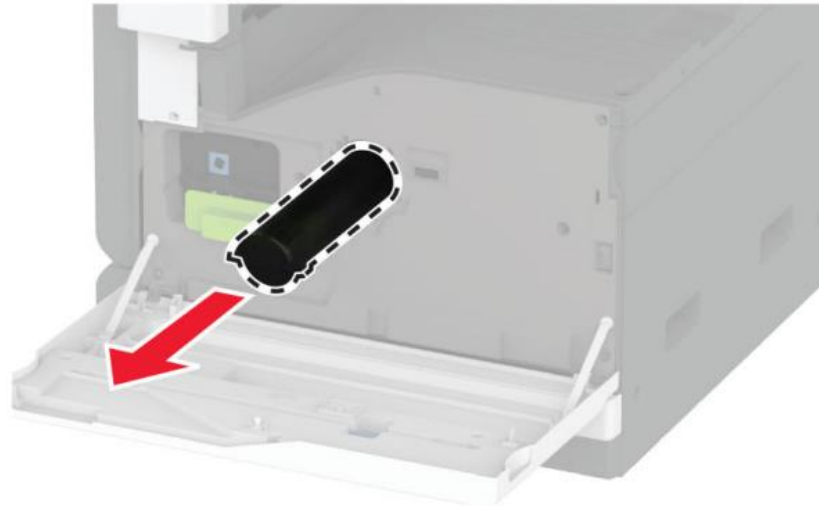


Figure 5.1: Toner Cartridge

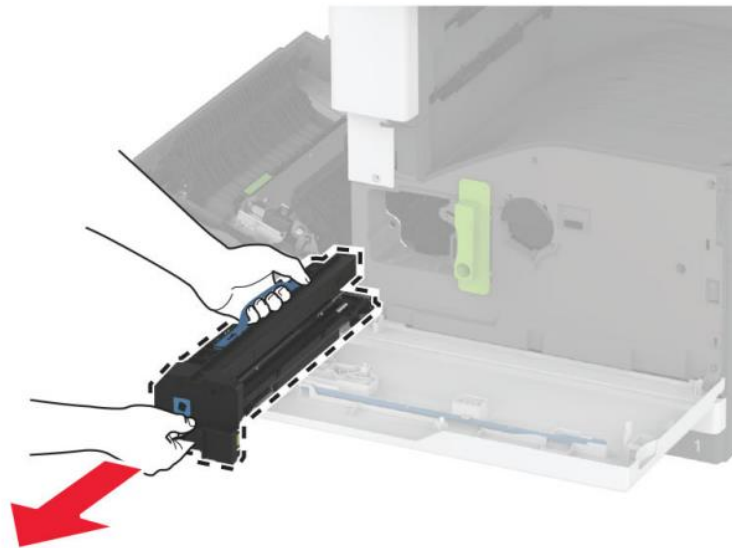


Figure 5.2: Imaging Unit

Table 5: Supplies – Printed Circuit Boards >10cm² and Plastic with Brominated flame retardants

Item	Description
Table Component Count (<i>without options</i>)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 0
Battery	= 0

Section 6: Control Panel

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

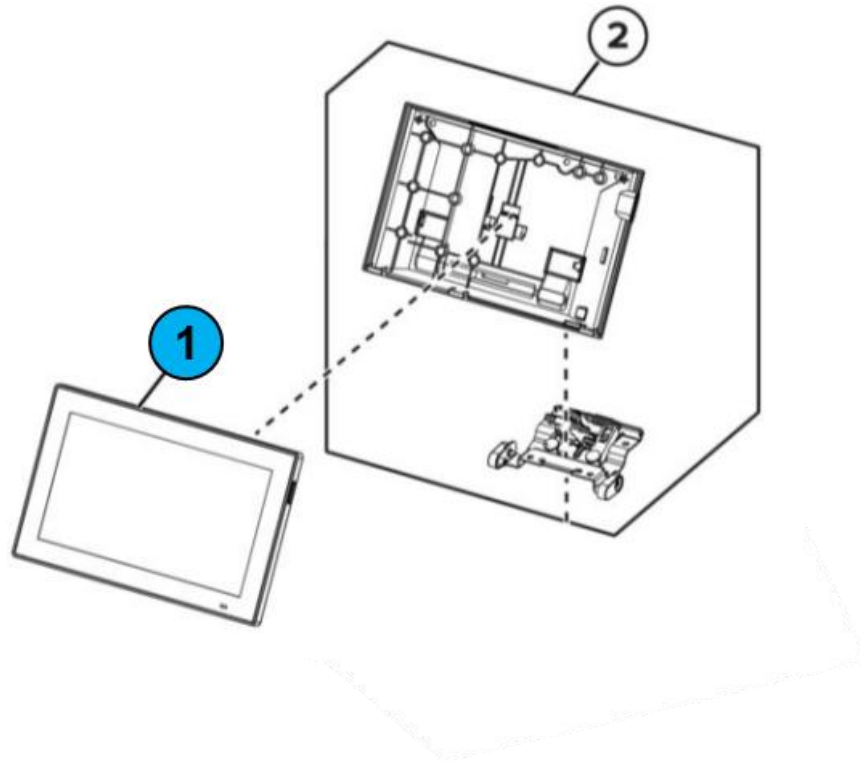


Figure 6.1: Control Panel

Table 6: Control Panel - Printed Circuit Boards >10cm ² and Plastic with Brominated flame retardants	
Item	Description
1	7" LCD Display
Table Component Count (without options)	
LCD>100cm ²	= 1
PCBs>10cm ²	= 1
BFR Plastics	= 0
Battery	= 0

Section 7: MPF 3

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

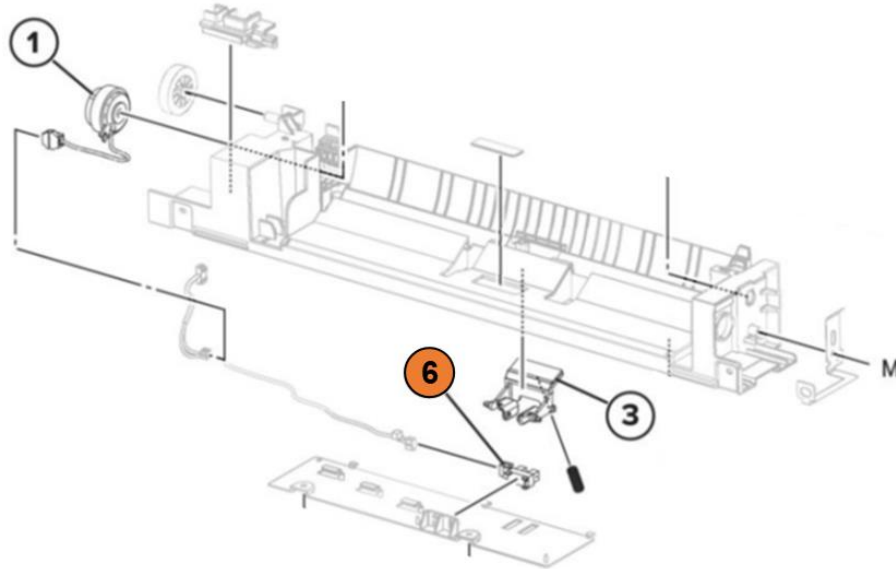


Figure 7.1: MPF 3

Table 7: MPF 3 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
6	Sensor (MPF paper present)
Table Component Count (<i>without options</i>)	
LCD>100cm ² = 0	
PCBs>10cm ² = 0	
BFR Plastics = 1	
Battery = 0	

Section 8: Fuser exhaust

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

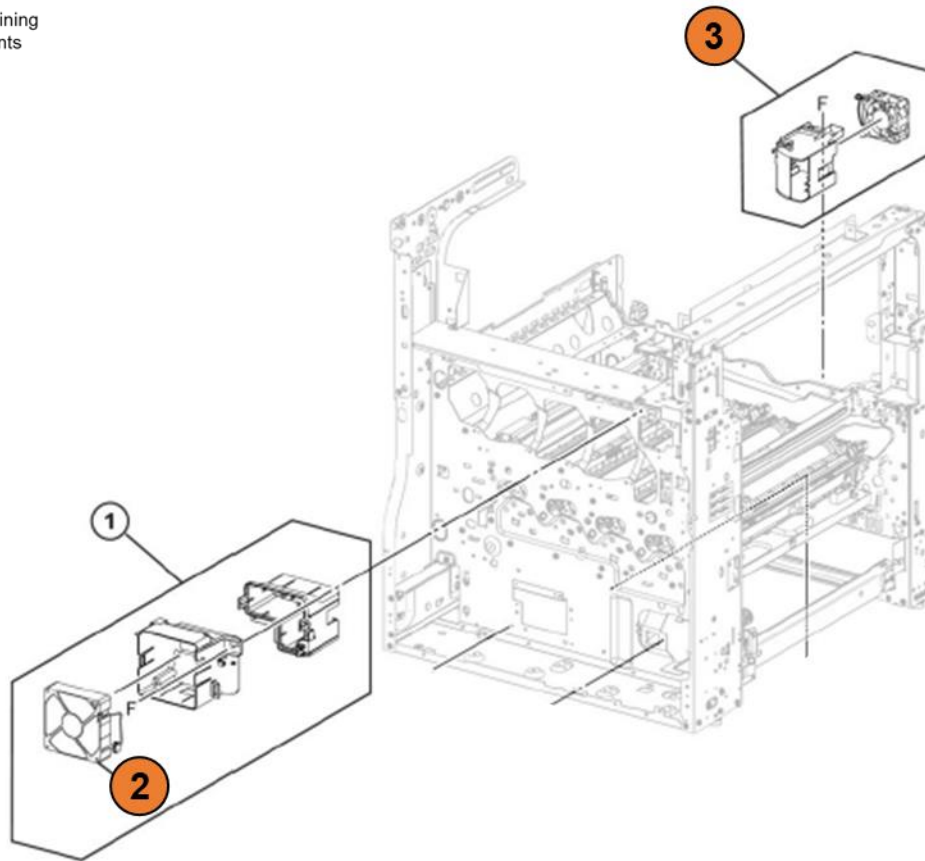


Figure 8.1: Fuser exhaust

Table 8: Fuser exhaust - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
2	Fuser exhaust fan
3	Cartridge fan

Table Component Count (without options)

LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 2
Battery	= 0

Section 9: Electronics 2

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

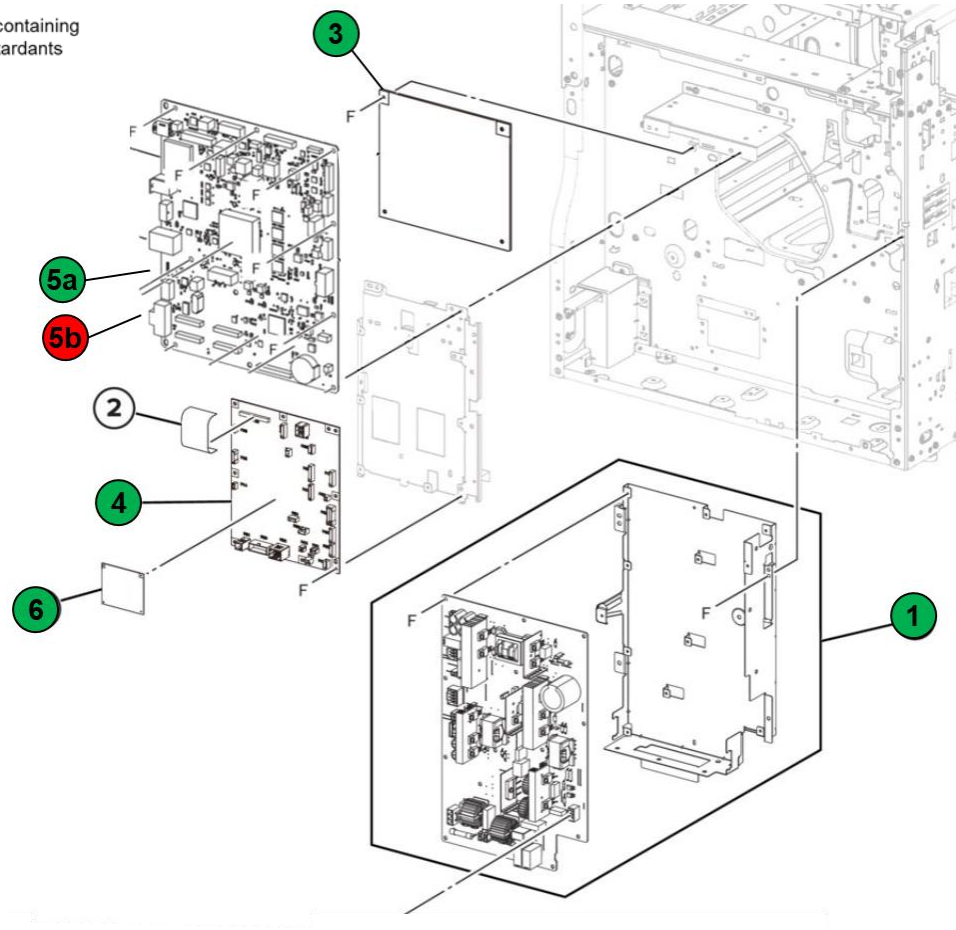


Figure 9.1: Electronics 2

Table 9: Electronics 2 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
1	LVPS
3	HVPS
4	Engine controller board
5	RIP Controller board
5a	Coin cell battery within the assembly
6	MCU board

Table Component Count (without options)

LCD>100cm² = 0
 PCBs>10cm² = 5
 BFR Plastics = 0
 Battery = 1

Section 10: Registration

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

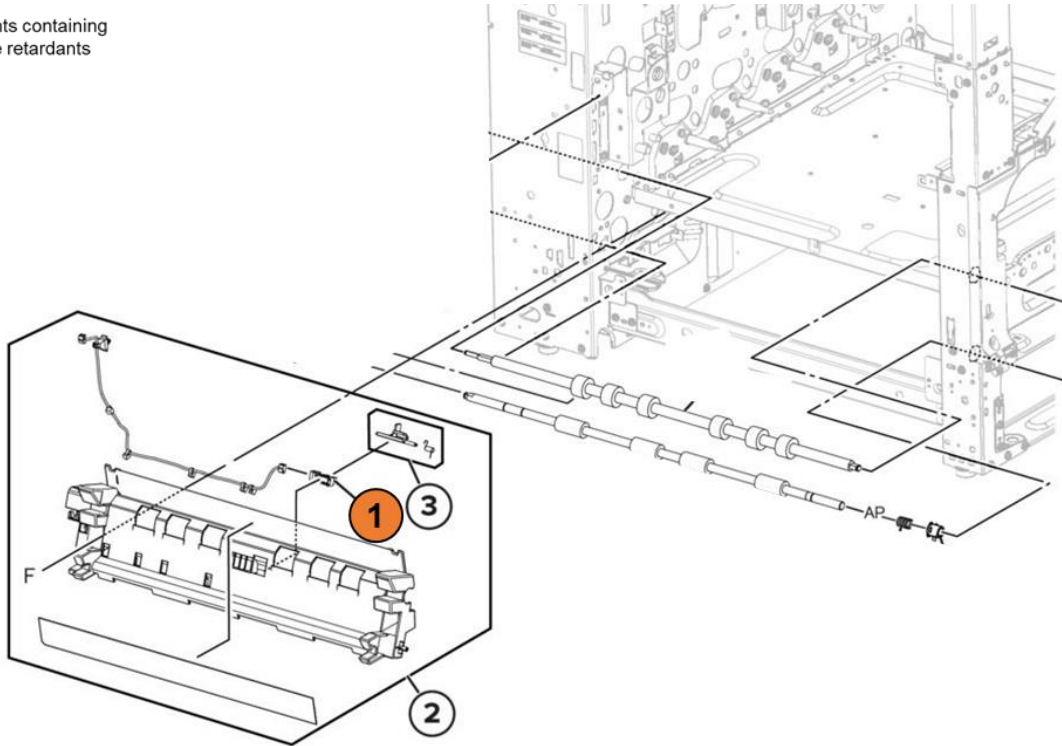


Figure 10.1: Registration

Table 10 Registraton - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
1	Sensor (registration transport)
Table Component Count (without options)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 1
Battery	= 0

Section 11: Motors

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

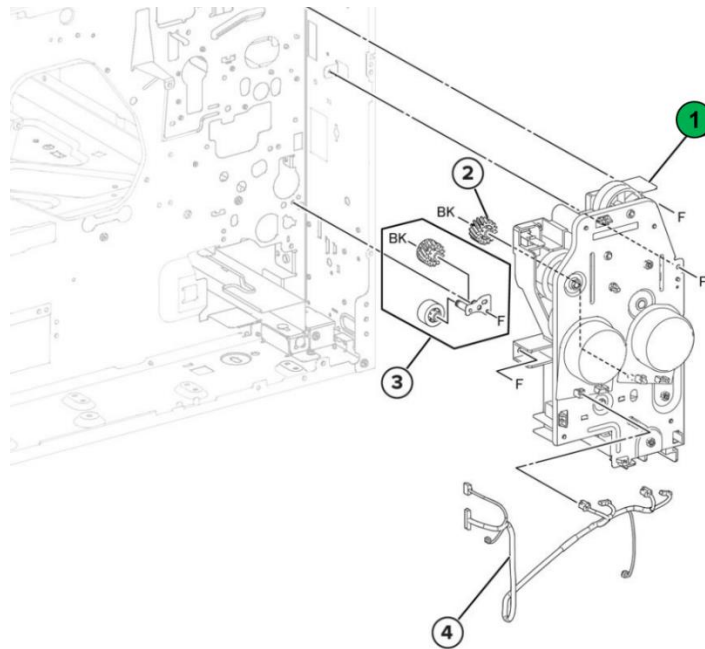


Figure 11.1: Motors

Table 11: Electronics 3 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
1	Drive gearbox card in the assembly
Table Component Count (without options)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 1
BFR Plastics	= 0
Battery	= 0

Section 12: Laser Printhead

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

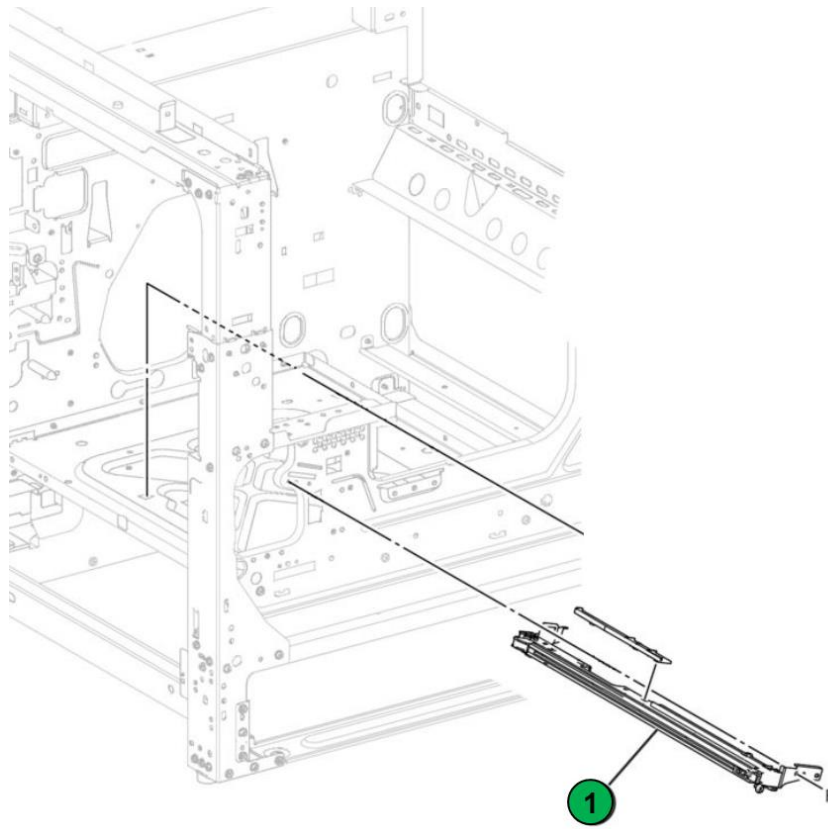


Figure 12.1: Laser Printhead

Table 12: Laser Printhead - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
1	Laser Printhead card in the assembly
Table Component Count (without options)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 1
BFR Plastics	= 0
Battery	= 0

Section 13: Exit 2

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

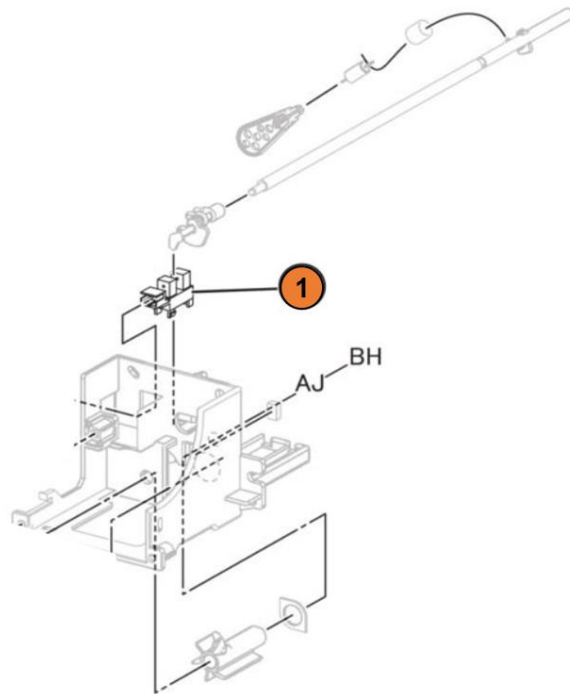


Figure 13.1: Exit 2

Table 13: Exit 2 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
1	Sensor (bin full)
Table Component Count (<i>without options</i>)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 1
Battery	= 0

Section 14: Exit 4

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

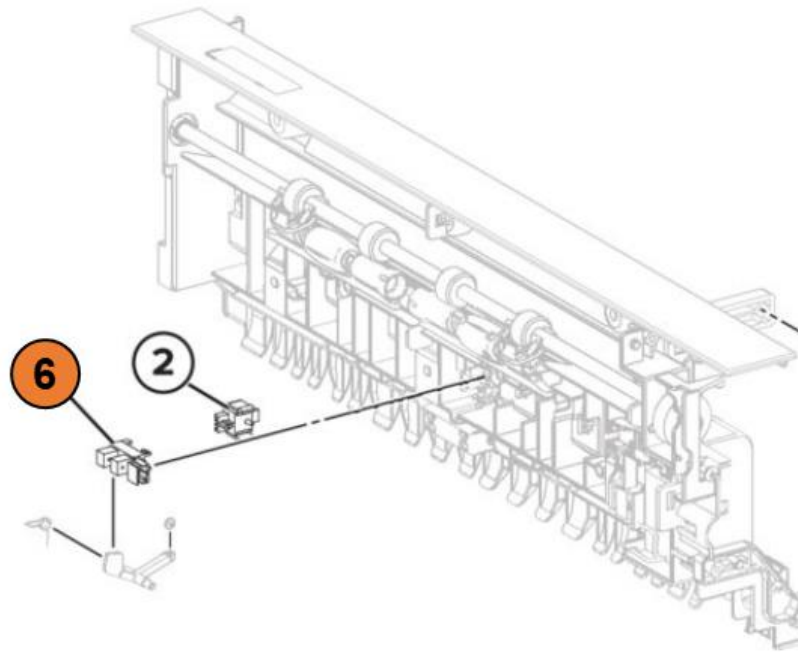


Figure 14.1: Exit 4

Table 14: Exit 4 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
1	Sensor (exit 2)
Table Component Count (without options)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 1
Battery	= 0

Section 15: ADF 2

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

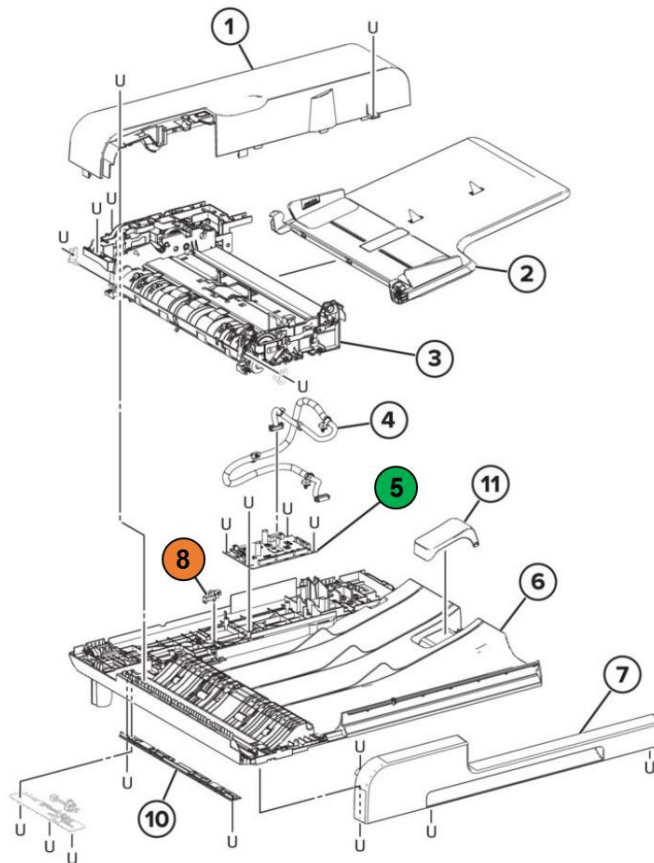


Figure 15.1: ADF 2

Table 15: ADF 2 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
5	ADF controller board
8	Sensor (ADF cover)
Table Component Count (without options)	
LCD>100cm ² = 0	
PCBs>10cm ² = 1	
BFR Plastics = 1	
Battery = 0	

Section 17: ADF feed 2

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

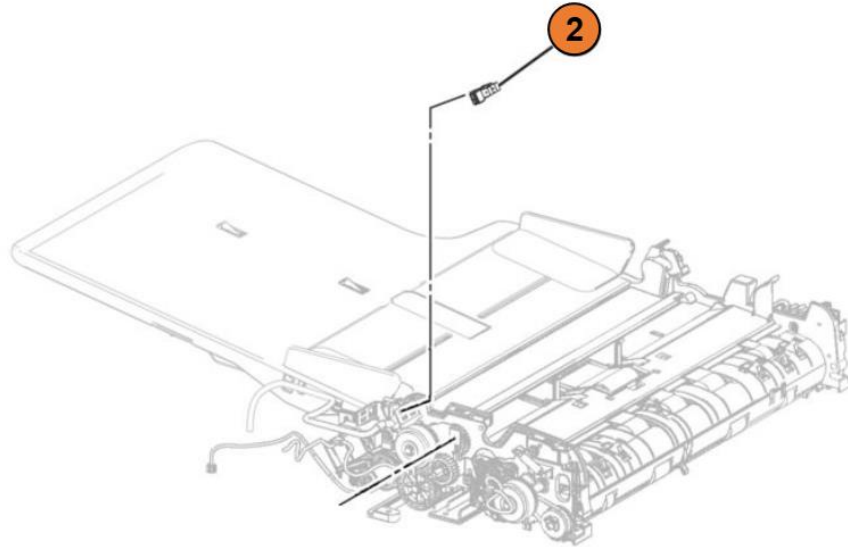


Figure 171: ADF feed 2

Table 17: ADF feed 2 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
2	Sensor (ADF paper present)
Table Component Count <i>(without options)</i>	
LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 1
Battery	= 0

Section 18: ADF feed 3

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

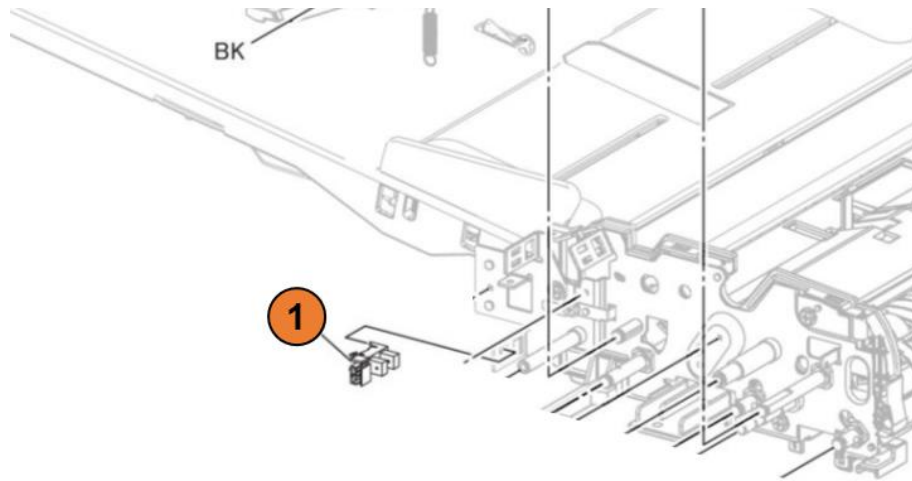


Figure 18.1: ADF feed 3

Table 18: ADF feed 3 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
1	Sensor (ADF exit roller nip)
Table Component Count (without options)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 1
Battery	= 0

Section 19: ADF transport

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

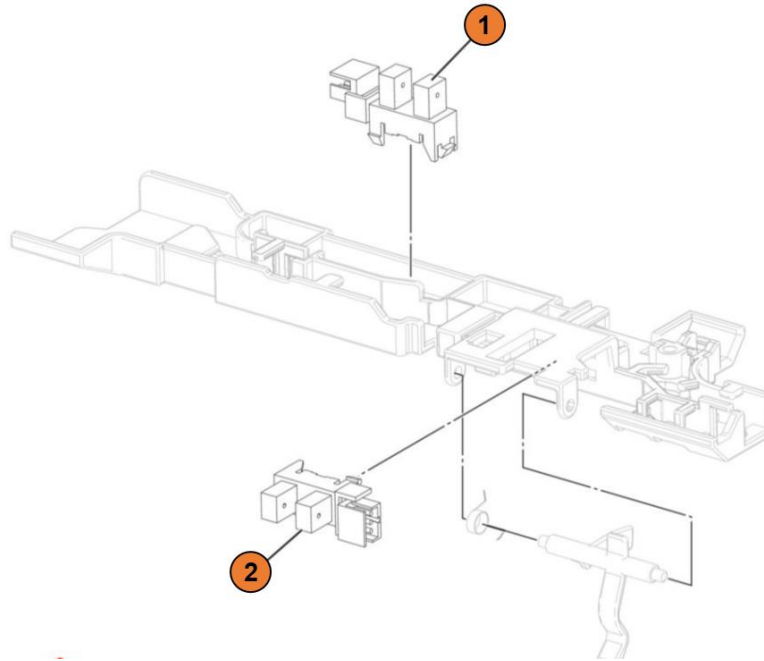


Figure 19.1: ADF transport

Table 19: ADF transport - Printed Circuit Boards >10cm² and Brominated§ Plastic Components

Item	Description
1	Sensor (ADF transport)
2	Sensor (ADF scan 1)
Table Component Count (without options)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 2
Battery	= 0

Section 20: ADF registration 1

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

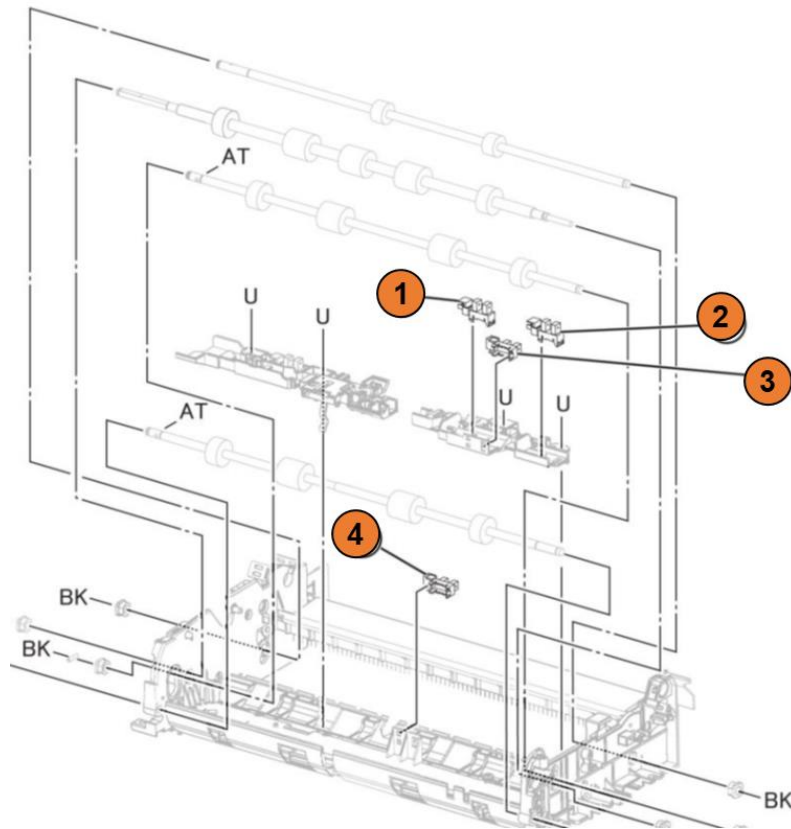


Figure 20.1: ADF registration 1

Table 20: ADF registration 1 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
1	Sensor (ADF mixed paper width 3)
2	Sensor (ADF mixed paper width 1)
3	Sensor (ADF mixed paper width 2)
4	Sensor (ADF scan 2)
Table Component Count (without options)	
LCD>100cm ² = 0	
PCBs>10cm ² = 0	
BFR Plastics = 4	
Battery = 0	

Section 21: ADF registration 2

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

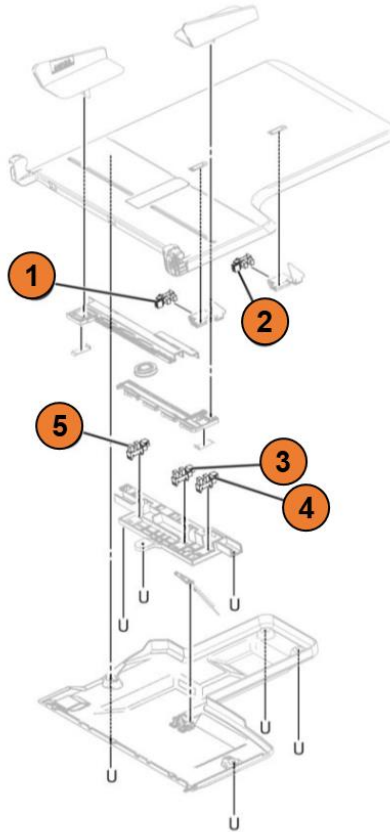


Figure 21.1: ADF registration 2

Table 21: ADF registration 2 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
1	Sensor (ADF paper length 1)
2	Sensor (ADF paper length 2)
3	Sensor (ADF tray paper width 2)
4	Sensor (ADF tray paper width 3)
5	Sensor (ADF tray paper width 1)
Table Component Count (without options)	
LCD>100cm ² = 0	
PCBs>10cm ² = 0	
BFR Plastics = 5	
Battery = 0	

Section 22: Scanner CCD assembly

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

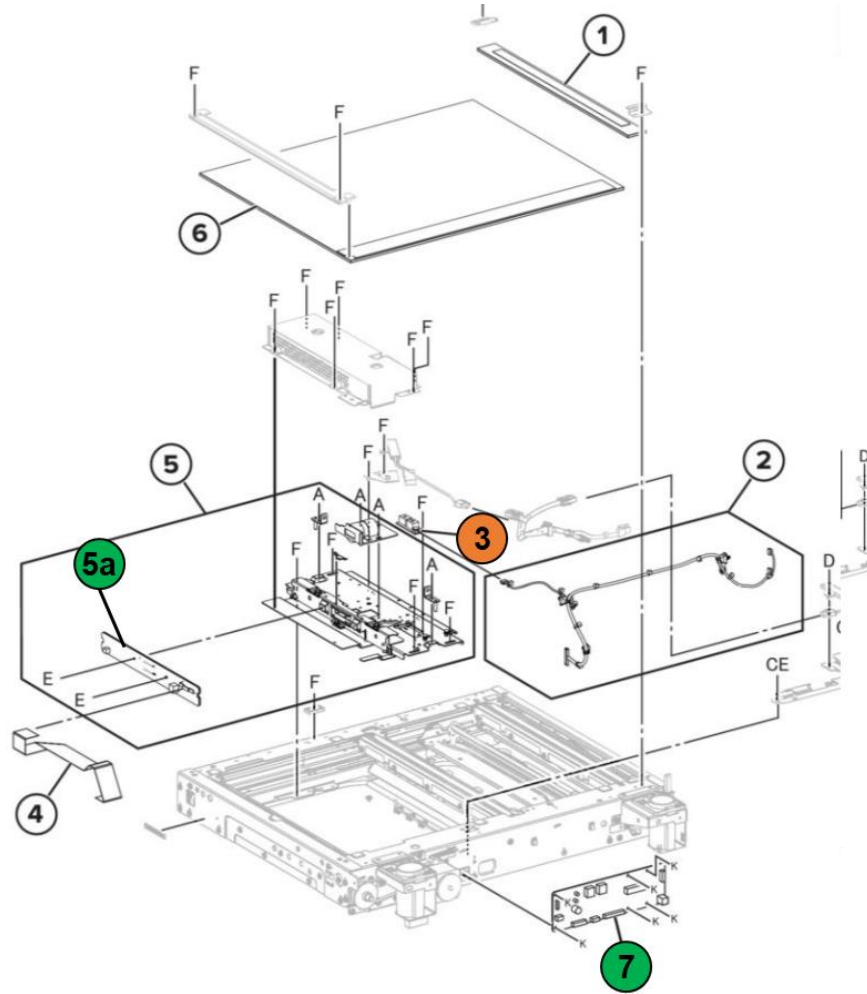


Figure 22.1: Scanner CCD assembly

Table 22: Scanner CCD assembly - Printed Circuit Boards >10cm² and Brominated§ Plastic Components

Item	Description
3	Sensor (scanner paper size)
5a	Scanner CCD module board
7	Scanner controller board
Table Component Count (without options)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 2
BFR Plastics	= 1
Battery	= 0

Section 23: Scanner lamp assembly 1

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

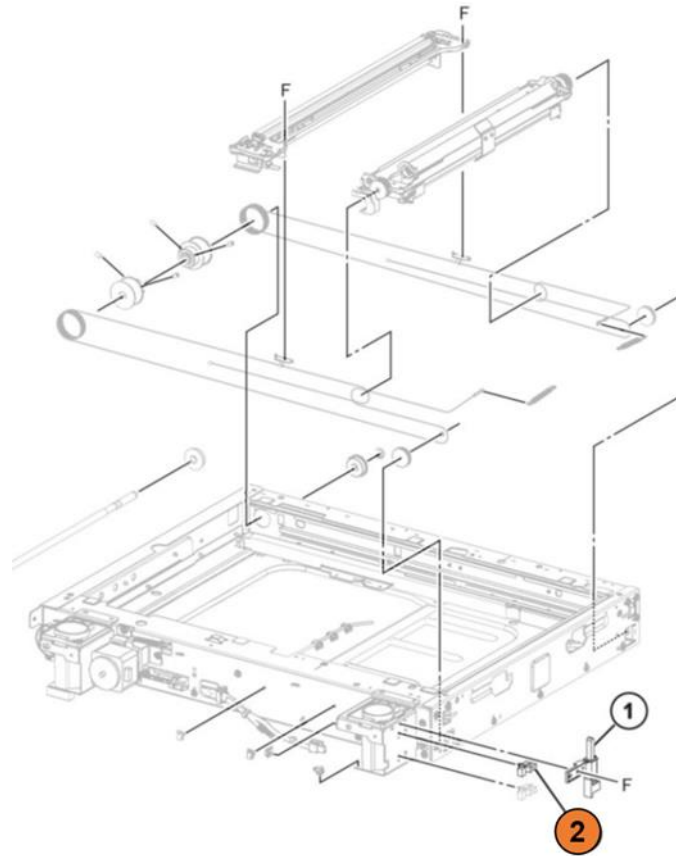


Figure 23.1: Scanner lamp assembly 1

Table 23: Scanner lamp assembly 1 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
2	Sensor (scanner cover angled)
Table Component Count (without options)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 1
Battery	= 0

Section 24: Scanner lamp assembly 2

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

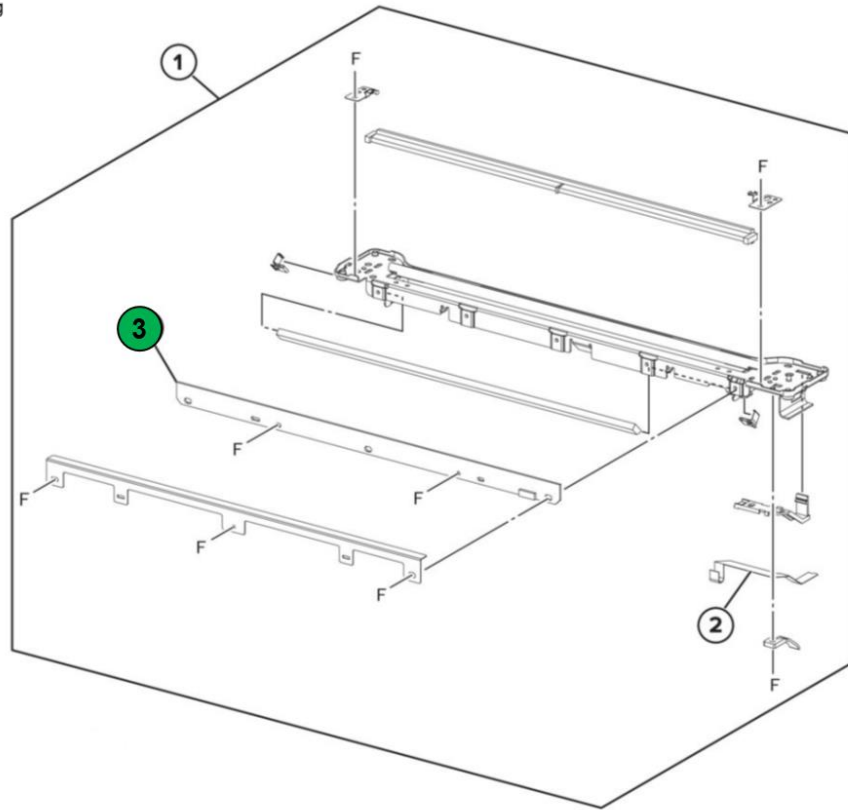


Figure 24.1: Scanner lamp assembly 2

Table 24: Scanner lamp assembly 2 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
3	Scanner lamp LED board
Table Component Count (without options)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 1
BFR Plastics	= 0
Battery	= 0

Section 25: Scanner transport

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

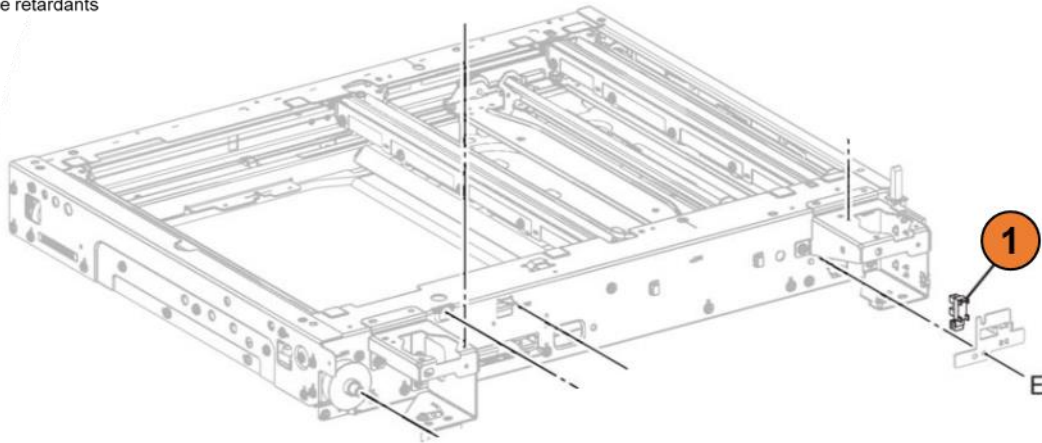


Figure 25.1: Scanner transport

Table 25: Scanner transport - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
1	Sensor (scanner lamp)
Table Component Count (without options)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 1
Battery	= 0

Section 26: Tray 1

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

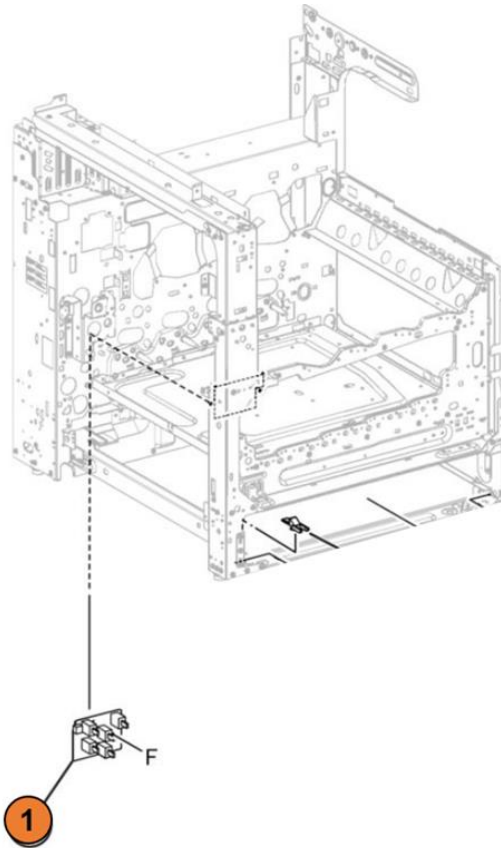


Figure 26.1: Tray 1

Table 26: Tray 1 - Printed Circuit Boards >10cm² and Brominated Plastic Components

Item	Description
1	Sensor (tray 1 paper size)
Table Component Count (<i>without options</i>)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 1
Battery	= 0

Section 27: Tray 1 feed 2

- LCD > 100 cm²
- PCBs > 10 cm²
- Printer components containing Brominated flame retardants
- Battery

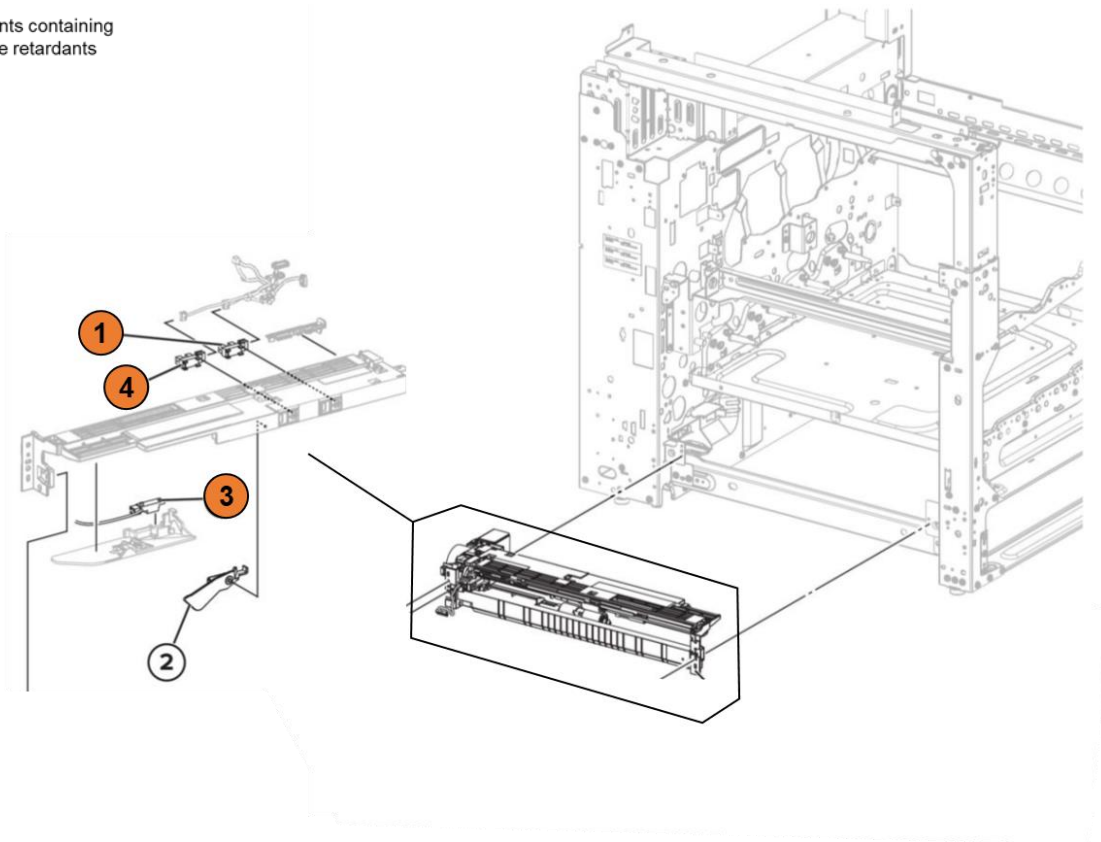


Figure 27.1: Tray 1 feed 2

Table 27: Tray 1 feed 2 - Printed Circuit Boards >10cm² and Brominated§ Plastic Components

Item	Description
1	Sensor (tray 1 paper present)
3	Sensor (tray 1 feed)
4	Sensor (tray 1 media level)
Table Component Count (without options)	
LCD>100cm ²	= 0
PCBs>10cm ²	= 0
BFR Plastics	= 3
Battery	= 0

Annex A – Printer components with Brominated Flame Retardants

Item	Description	Parts Marking	Qty	MX931	Location
1	Sensor (MPF paper present)		1	X	MPF 3
2	Fuser exhaust fan		1	X	Fuser exhaust
3	Cartridge fan		1	X	Fuser exhaust
4	Sensor (registration transport)		1	X	Registration
5	Sensor (bin full)		1	X	Exit 2
6	Sensor (exit 2)		1	X	Exit 4
7	Sensor (ADF cover)		1	X	ADF 2
8	Sensor (ADF paper present)		1	X	ADF feed 2
9	Sensor (ADF exit roller nip)		1	X	ADF feed 3
10	Sensor (ADF transport)		1	X	ADF transport
11	Sensor (ADF scan 1)		1	X	ADF transport
12	Sensor (ADF mixed paper width 3)		1	X	ADF registration 1
13	Sensor (ADF mixed paper width 1)		1	X	ADF registration 1
14	Sensor (ADF mixed paper width 2)		1	X	ADF registration 1
15	Sensor (ADF scan 2)		1	X	ADF registration 1
16	Sensor (ADF paper length 1)		1	X	ADF registration 2
17	Sensor (ADF paper length 2)		1	X	ADF registration 2
18	Sensor (ADF tray paper width 2)		1	X	ADF registration 2
19	Sensor (ADF tray paper width 3)		1	X	ADF registration 2
20	Sensor (ADF tray paper width 1)		1	X	ADF registration 2
21	Sensor (scanner paper size)		1	X	Scanner CCD assembly
22	Sensor (scanner cover angled)		1	X	Scanner lamp assembly 1
23	Sensor (scanner lamp)		1	X	Scanner transport
24	Sensor (tray 1 paper size)		1	X	Tray 1
25	Sensor (tray 1 paper present)		1	X	Tray 1 feed 2
26	Sensor (tray 1 feed)		1	X	Tray 1 feed 2
27	Sensor (tray 1 media level)		1	X	Tray 1 feed 2
Minimum Count =			27		

Annex B – Printed Circuit Boards >10cm²

Item	Description	Qty	MX931	Location
1	7" LCD Display board within the assembly	1	X	Control Panel
2	LVPS	1	X	Electronics 2
3	HVPS	1	X	Electronics 2
4	Engine controller board	1	X	Electronics 2
5	RIP Controller board	1	X	Electronics 2
6	MCU board	1	X	Electronics 2
7	Drive gearbox card	1	X	Motors
8	Laser Printhead card	1	X	Laser Printhead
9	ADF controller board	1	X	ADF 2
10	Scanner CCD module board	1	X	Scanner CCD assembly
11	Scanner controller board	1	X	Scanner CCD assembly
12	Scanner lamp LED board	1	X	Scanner lamp assembly 2
Minimum Count =		12		

