

XEROX®

Service Manual
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FaxCentre 2121/2121L



FaxCentre 2121/2121L Service Documentation

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Service Manual Formats

Table 1: Service Manual Formats

Part number	Format
708P88661	Hardcopy
708P88662	PDF on CD

Introduction

General Precautions

In order to prevent accidents and to prevent damage to the equipment, please read the precautions listed below carefully and follow them closely before servicing the machine.

Warnings, Cautions and Notes

WARNING

A warning is used whenever an operating or maintenance procedure, practice, condition or statement, if not strictly observed, could result in personal injury.

CAUTION

A caution is used whenever an operation or maintenance procedure, practice, condition or statement, if not strictly observed, could result in damage to the equipment.

Note: A note is used where it is essential to highlight a procedure, practice, condition or statement.

Safety Precautions for Inspection and Service


- When performing inspection and service procedures, observe the following precautions to prevent accidents and ensure utmost safety.
*Depending on the model, some of the precautions given in the following do not apply.
- Different markings are used to denote specific meanings as detailed below.


WARNING


- Indicates a potentially hazardous situation which, if not avoided, may result in personal injury. It may also be used to alert against unsafe practices.

CAUTION

- The following graphic symbols are used to give instructions that need to be observed.

 Used to call the CSE's attention to what is graphically represented inside the marking (including a warning).

 Used to prohibit the CSE from doing what is graphically represented inside the marking.

 Used to instruct the CSE to do what is graphically represented inside the marking.

Warnings

WARNING

Always observe precautions.



- Parts requiring special attention in this product will include a label containing the mark shown on the left plus warning notes. Be sure to observe the warnings.
- Be sure to observe the “Safety Information” given in the Operator’s Manual.

Before starting any procedure, be sure to unplug the power cord.



- This product contains a high-voltage unit and a circuit with a large current capacity which may present the risk of an electric shock or burn.
- The product also contains mechanical parts that can start with no warning.

WARNING

Toner and drum cartridge warning.



- Do not dispose of the drum cartridge or toner cartridge into a fire. The cartridges could explode.

Use only specified parts.



- For replacement parts, always use the genuine parts specified in the manufacturer’s parts manual. Installing a wrong or unauthorized part may impact product certification and could result in a hazardous situation.
- Always replace a blown electrical fuse or thermal fuse with its corresponding genuine part specified in the manufacturer’s parts manual. Installing a fuse of a different make or rating could lead to a possible fire. If a thermal fuse blows frequently, the temperature control system may have a problem and action must be taken to eliminate the cause of the problem.

Handle the power cord with care and never use a multiple outlet.



- Do not break, crush or otherwise damage the power cord. Placing a heavy object on the power cord, pulling or bending it may damage it, resulting in risk of fire or electric shock.
- Do not use a multiple outlet to which any other appliance or machine is connected.

Be careful with the high-voltage parts.



- A part marked with the symbol shown on the left carries a high voltage. Touching it could result in an electric shock or burn. Be sure to unplug the power cord before servicing this part or the parts near it.

Do not work with wet hands.



- Do not unplug or plug in the power cord, or perform any kind of service or inspection with wet hands. Doing so could result in an electric shock.

Do not touch a high-temperature part.



- A part marked with the symbol shown on the left and other parts such as the exposure lamp and fuser roll can be very hot while the machine is energized. Touching them may result in a burn.
- Wait until these parts have cooled down before replacing them or any surrounding parts.

WARNING

This product must be connected to a protective ground circuit.



- This product shall be operated from the type of electrical supply indicated on the products data plate. If there is uncertainty if the electrical supply meets the requirements, consult the local power company for advice
- This product is supplied with a plug that has a protective ground pin. This plug will only fit into a grounded electrical outlet. This is a safety feature. To avoid risk of electrical shock, the electrical outlet should be replaced if the plug can not be inserted into it. Never use a grounded adaptor plug to connect the product to an electrical outlet that lacks a ground connection.

Do not modify the product.



- Any unauthorized alteration, which may include the addition of new functions or connection of external devices, may impact the product certification. Please contact your authorized local dealer for more information.

Restore all parts and harnesses to their original positions.



- To promote safety and prevent product damage, make sure that wire harnesses are returned to their original positions and properly secured in their clamps and saddles in order to avoid hot parts, high-voltage parts, sharp edges, or being crushed.
- To promote safety, make sure that all tubing and other insulating materials are returned to their original positions. Make sure that floating components mounted on the circuit boards are at their correct distance and position off the boards.

Cautions

WARNING

Precautions for service jobs.



- A star washer and spring washer, if used originally, must be reinstalled. Omitting them may result in contact failure which could cause an electric shock or fire.
- When reassembling parts, make sure that the correct screws (size, type) are used in the correct places. Using the wrong screw could lead to stripped threads, poorly secured parts, poor insulating or grounding, and result in a malfunction, electric shock or injury.
- Take great care to avoid personal injury from possible burrs and sharp edges on the parts, frames and chassis of the product.
- When moving the product or removing an option, use care not to injure your back or allow your hands to be caught in mechanisms.

WARNING

Precautions for servicing with covers and parts removed.



- Wherever feasible, keep all parts and covers mounted when energizing the product.
- If energizing the product with a cover removed is absolutely unavoidable, do not touch any exposed live parts and use care not to allow your clothing to be caught in the moving parts. Never leave a product in this condition unattended.
- Never place disassembled parts or a container of liquid on the product. Parts falling into, or the liquid spilling inside, the mechanism could result in an electric shock or fire.
- Never use a flammable spray near the product. This could result in a fire.
- Make sure the power cord is unplugged before removing or installing circuit boards or plugging in or unplugging connectors.
- Always take care when actuating an interlock switch when a cover is opened or removed. The use of folded paper or some other object may damage the interlock switch mechanism, possibly resulting in an electric shock, injury or blindness.



Precautions for the working environment.



- The product must be placed on a flat, level surface that is stable and secure.
- Never place this product or its parts on an unsteady or tilting workbench when servicing.
- Provide good ventilation at regular intervals if a service job must be done in a confined space for a long period of time.
- Avoid dusty locations and places exposed to oil or steam.
- Avoid working positions that may block the ventilation ports of the product.

Precautions for the Laser Beam.



- Removing the cover marked with the caution label could lead to possible exposure to the laser beam, resulting in eye damage. Be sure to unplug the power cord before removing this cover.
- When handling the laser unit, observe the “Precautions for Handling Laser Equipment.”

Precautions for storing the toner or drum cartridge.



- Be sure to keep the toner or drum cartridge out of the reach of children. Licking the imaging cartridge or ingesting its contents is harmful to your health.

Other Precautions

- When handling circuit boards, observe standard ESD procedures.
- The Drum is a very delicate component. Observe the precautions given in Handling of the Image Cartridge and Print Unit.

Note: *The replacement of a circuit board may call for readjustments or resetting of particular items, or software installation.*

Precautions for Installation

Installation site

To ensure utmost safety and avoid breakdown, the machine should NOT be used in a place:

- Where it will be subjected to extremely high or low temperature or humidity.
- Where it will be subjected to sudden fluctuations in either temperature or humidity.
- Which is exposed to direct sunlight.
- Which is in the direct air stream of an air conditioner, heater, or ventilator.
- Which has poor ventilation or is dusty.
- Which does not have a stable, level floor or where it will receive undue vibration.
- Which is near any kind of heating device.
- Which is near volatile flammables (thinner, gasoline, etc.).
- Where it may be splashed with water which could result in electrical shorts.
- Which puts the operator in the direct stream of exhaust from the printer.
- Where ammonia gas might be generated, such as Blueprint Machines.

Power source

- If any other electrical equipment is attached to the same power outlet, make sure that the capacity of the outlet is not exceeded.
- Use a power source with little voltage fluctuation.
- Ensure that the machine does not sit on the power cord or communications cable of other electric equipment, and that it does not become wedged into or underneath the mechanism.
- Make the following checks at frequent intervals:
 - Is the power plug abnormally hot?
 - Are there any cracks or scrapes in the cord?
 - Has the power plug been inserted fully into the outlet?
 - Does anything, including the machine itself, sit on the power cord?
- Use an outlet with a rating of 110V - 127V, 15A minimum.

Precautions for Use

To ensure the machine is used in an optimum condition

- Never place a heavy object on the machine or subject the machine to shocks.
- Insert the power plug all the way into the outlet.
- Do not attempt to remove any panel or cover that is secured while the machine is operating.
- Do not turn OFF the machine while it is in a print cycle.
- Provide good ventilation if the machine is to be used for a long time in a narrow room.
- Never use flammable sprays near the machine.
- If the machine becomes inordinately hot or produces abnormal noise, immediately turn it OFF and unplug it.
- Do not turn ON the power switch at the same time that you plug the power cord into the outlet.
- When unplugging the power cord, do not pull on the cord; hold the plug and pull it out.
- Do not bring any magnetized object near the machine.

Operating environment

The operating environmental requirements of the machine are as follows:

- Temperature: 10°C to 30°C (50°F to 86°F).
- Humidity: 15% to 85%.
- Rate of temperature change: 10°C(50°F)/hr.
- Rate of humidity change: 10%/hr.

Power requirements

The power source voltage requirements are as follows.

- Voltage fluctuation: 110V - 127V +6%/-10%.
- Frequency: 50/60 Hz \pm 3 Hz.

Miscellaneous precautions

Use the following precautions when servicing laser printers:

- When a service call needs to be performed in the laser beam path, such as when working around the ROS or Drum, unplug the power cord of the machine from the outlet.

Precautions for Service

- When performing inspection and service procedures, observe the following precautions to prevent mishandling of the machine and its parts.

Note: Depending on the model, some of the precautions given in the following do not apply.

1. Precautions before service

- When the user is using a word processor or personal computer from a wall outlet of the same line, take necessary steps to prevent the circuit breaker from opening due to overloads.
- Never disturb the LAN by breaking or making a network connection, altering termination, installing or removing networking hardware or software, or shutting down networked devices without the knowledge and express permission of the network administrator or the user.

2. How to use this book

Repairs and adjustments

- To reassemble the product, reverse the order of disassembly unless otherwise specified.

Troubleshooting

- If a component on a PWB or any other functional unit including a motor is defective, the text only instructs you to replace the whole PWB or functional unit and does not give troubleshooting procedures applicable within the defective unit.
- All troubleshooting procedures contained herein assume that there are no breaks in the harnesses and cords and all connectors are plugged into the right positions.
- The procedures preclude possible malfunctions due to noise and other external causes.

3. Precautions for service

- Keep all removed parts in good order and keep tools under control so that none will be lost or damaged.
- After completing a service job, perform a safety check. Make sure that all parts, wiring and screws are returned to their original positions.
- Do not pull out the toner hopper while the toner bottle is turning. This could result in a damaged motor or locking mechanism.

4. Precautions for dis/assembly

- Be sure to unplug the machine from the outlet before attempting to service the machine.
- The basic rule is not to operate the machine any time during disassembly. If it is absolutely necessary to run the copier with its covers removed, use care not to allow your clothing to be caught in revolving parts such as the timing belt and gears.
- Before attempting to replace parts, make sure that the power cord of the machine has been unplugged from the wall outlet.
- While the product is powered on, do not unplug or plug connectors into the circuit boards or harnesses.
- Never use flammable sprays near the copier.
- When reassembling parts, make sure that the correct screws (size, type) and lock washer are used in the correct places.

5. Precautions for circuit inspection

- Never create a closed circuit across connector pins except those specified in the text and on the printed circuit.
- When creating a closed circuit and measuring a voltage across connector pins specified in the text, be sure to use the GND wire.

6. Handling of PWB's

During transportation/storage

- During transportation or when in storage, new PWB's must not be indiscriminately removed from their protective conductive bags.
- Do not store or place PWB's in a location exposed to direct sunlight and high temperature.

- When it becomes absolutely necessary to remove a Board from its anti-static bag or case, always place it on its anti-static mat in an area as free as possible from static electricity.
- Do not touch the pins of the IC's with your bare hands.
- Protect the PWB's from any external force so that they are not bent or damaged.

During inspection/replacement

- Avoid checking the IC directly with a multimeter; use connectors on the board.
- Never create a closed circuit across IC pins with a metal tool.
- Before unplugging connectors from the PWB's, make sure that the power cord has been unplugged from the outlet.
- When removing a board from its conductive bag or anti-static case, do not touch the pins of the ICs or the printed pattern. Place it in position by holding only the edges of the board.
- When touching the PWB, observe standard ESD procedures.
- Note that replacement of a PWB may call for readjustments or resetting of particular items.

7. Handling of other parts

- The magnet roller generates a strong magnetic field. Do not bring it near a watch, floppy disk, magnetic card, or CRT tube.

8. Handling of the Image Cartridge and Print Unit

Note: Only for products employing an Imaging Cartridge and Print Unit.

During transportation/storage

- The storage temperature is in the range between -20°C and $+40^{\circ}\text{C}$ (-4°F to 104°F).
- In summer, avoid leaving the imaging cartridge and print unit in a car for a long time.

Handling

- Store the imaging cartridge and print unit in a place that is not exposed to direct sunlight.

Precautionary information on the drum inside the imaging cartridge and print unit

- Use care not to contaminate the surface of the drum with oil-base solvent, fingerprints, and other foreign matter.
- Do not scratch the surface of the drum.
- Do not attempt to wipe clean the surface of the drum.

Safety Information

The U.S.A/Canada (CDRH) Regulation

- This machine is certified as a Class I Laser product under Radiation Performance Standard according to the Food, Drug and Cosmetic Act of 1990. Compliance is mandatory for laser products marketed in the United States and is reported to the Centre for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration of the U.S. Department of Health and Human Services (DHHS). This means that the device does not produce hazardous laser radiation.
- The label shown on page xiii indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.
- There is no possibility of danger from a laser, provided the machine is serviced according to the instruction in this manual.

Laser Safety Information

CAUTION

Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

With specific regard to laser safety, the equipment complies with performance standards for laser products set by government, national and international agencies as a Class 1 laser product. It does not emit hazardous light, as the beam is totally enclosed during all phases of customer operation and maintenance.

Do not remove parts labelled as shown in Figure 1, until the power cord has been disconnected.

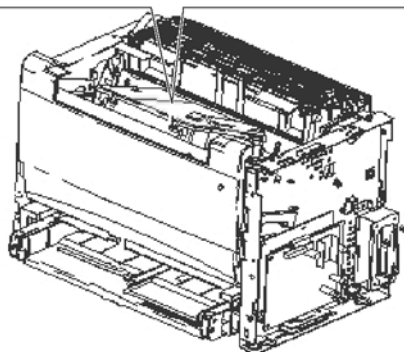


Figure 1

Internal laser radiation

Table 1: Internal Laser Radiation

Semiconductor Laser	
1. Maximum power of the laser diode	15 mW
2. Maximum average radiation power (see note)	36.903 micro Watt
3. Wavelength	770-800 nm

Note: At laser aperture of the ROS Unit.

- This product employs a Class 3b laser diode that emits an invisible laser beam. The laser diode and the scanning polygon mirror are incorporated in the ROS unit.

WARNING

The ROS unit is NOT A FIELD SERVICE ITEM. Therefore, the ROS unit should not be opened under any circumstances.

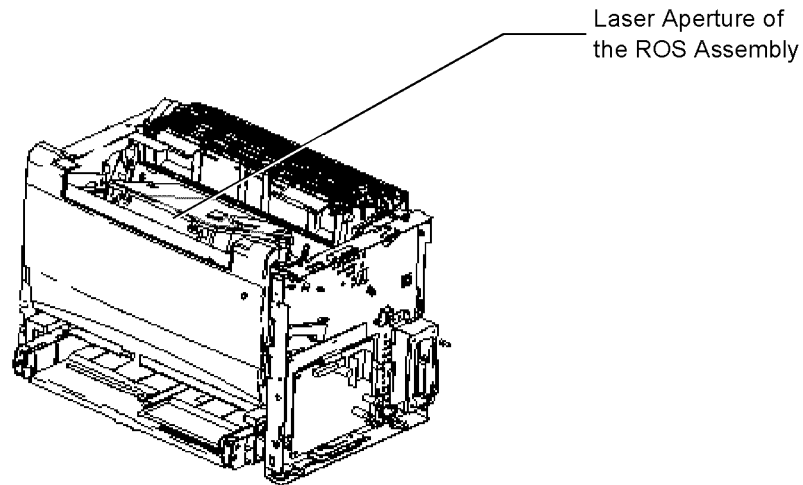


Figure 2

Laser Safety Label

- A laser safety label is attached to the machine as shown below.

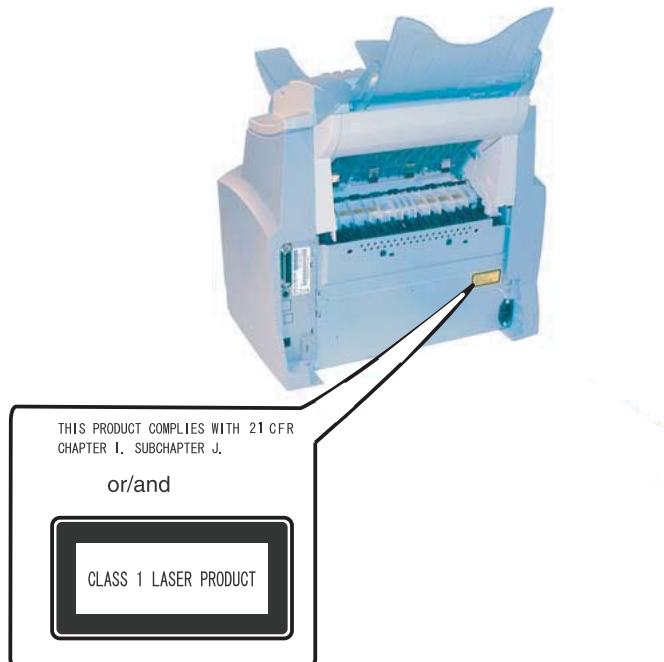


Figure 3

Toner Cartridge Service

Only toner cartridges supplied by Xerox should be used. Printing defects or set damage caused by the use of non-approved print cartridges or un-licensed toner refills are not covered by the guarantee.

Precautions on safe-keeping of toner cartridge

Excessive exposure to direct light for more than a few minutes may cause damage to the cartridge.

Service life of toner cartridge

If the printed image is light due to the toner supply becoming low you can temporarily improve the print quality by redistributing the toner (shake the print cartridge). However, you should replace the print cartridge to solve the problem permanently.

Note: *Special procedures will need to be followed if the toner cartridge is replaced prematurely, as the smart card will be rejected.*

Redistributing toner

When the print cartridge is near the end of its life, white streaks or light print occurs. The Error LED will come on. You can temporarily re-establish the print quality by redistributing the remaining toner in the cartridge.

Note: *Help the environment by recycling your used toner cartridge. Refer to the recycling brochure packed with the toner cartridge for details.*

1. Open the front cover.
2. Lightly push the used cartridge down, then pull it out.
3. Unpack the new toner cartridge and gently shake it horizontally four or five times to distribute the toner evenly inside the cartridge.
4. Save the box and the cover for shipping. Slide the new toner cartridge in until it locks into place.

Standard guarantee for consumable parts

Please refer to User Manual or instructions on Fax/Printer Consumables SVC manual for the criteria for judging the quality of consumable parts the standard guarantee on those parts.

How to identify a refilled toner cartridge

One way security screws are used in the manufacture of the cartridge – check if these are damaged.

Handling of Consumables

Before using any consumables, always read the label on its container carefully.

- Paper can get damp. To prevent absorption of moisture, store paper in a place with low relative humidity.
- Keep consumables out of the reach of children.
- If your hands become soiled with toner, wash them with soap and water.
- Do not throw away any used consumables. They are to be re-cycled.
- Do not burn, bury in the ground, or throw into the water any consumables.
- Do not store consumables in a place which:
 - Is hot and humid.
 - Is subject to direct sunlight.
 - Has an open flame nearby.

Health and Safety Incident Reporting

I. Summary

This section defines requirements for notification of health and safety incidents involving Xerox products (equipment and materials) at customer locations.

II. Scope

Xerox Corporation and subsidiaries worldwide.

III. Objective

To enable prompt resolution of health and safety incidents involving Xerox products and to ensure Xerox regulatory compliance.

IV. Definitions

Incident

An event or condition occurring in a customer account that has resulted in injury, illness or property damage. Examples of incidents include machine fires, smoke generation, physical injury to an operator or service representative. Alleged events and product conditions are included in this definition.

V. Requirements

Initial Report

1. Xerox organisations shall establish a process for individuals to report product incidents to Xerox Environment Health & Safety within 24 hours of becoming aware of the event.
2. The information to be provided at the time of reporting is contained in Appendix A (Health and Safety Incident Report involving a Xerox product).
3. The initial notification may be made by any of the following methods:
 - For incidents in North America and Developing Markets West (Brazil, Mexico, Latin American North and Latin American South):
 - Phone* Xerox EH&S at: 1-800-828-6571.
 - Electronic mail Xerox EH&S at: Doris.Bush@xerox.com.
 - Fax Xerox EH&S at: 1-585-422-6449 [intelnet 8*222 6449].
 - For incidents in Europe and Developing Markets East (Middle East, Africa, India, China and Hong Kong):
 - Phone* Xerox EH&S at: +44 (0) 1707 353434.
 - Electronic mail Xerox EH&S at: Elaine.Grange@xerox.com.
 - Fax Xerox EH&S at: +44 (0) 1707 353914 [intelnet 8*668 3914].

*Initial notification made by phone must be followed within 24 hours by a completed incident report and sent to the indicated electronic mail address or fax number.

Note: *If sending a fax, please also send the original via internal mail.*

Responsibilities for resolution

1. Business Groups/Product Design Teams responsible for the product involved in the incident shall:
 - a. Manage field bulletins, customer correspondence, product recalls, safety retrofits.
 - b. Fund all field retrofits.
1. Field Service Operations shall:
 - a. Preserve the Xerox product involved and the scene of the incident inclusive of any associated equipment located in the vicinity of the incident.
 - b. Return any affected equipment/part(s) to the location designated by Xerox EH&S and/or the Business Division.
 - c. Implement all safety retrofits.
2. Xerox EH&S shall:
 - a. Manage and report all incident investigation activities.
 - b. Review and approve proposed product corrective actions and retrofits, if necessary.
 - c. Manage all communications and correspondence with government agencies.
 - d. Define actions to correct confirmed incidents.

VI. Appendices

The Health and Safety Incident Report involving a Xerox Product (Form # EH&S-700) is available at the end of the manual.

1. Service Call Procedures

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SCP 1 Service Call Actions

Procedure

Throughout this manual, observe the following Warnings:

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

WARNING

Do not touch the fuser while it is hot.

WARNING

Take care during this procedure. Sharp edges may be present that can cause injury.

1. Take note of symptoms or error messages.
2. Ask the operator to describe or demonstrate the problem.
3. Make sure that:
 - The power cord is connected to the wall outlet and to the machine.
 - All cables are connected correctly.
4. If available, check the machine service log book for any previous actions that may be relevant to the call.
5. Review any defective print or copy samples.
6. Perform '1. Initial Checks RAP'.

SCP 2 Preventive Maintenance

To maintain the machine in good working order, it is recommended to periodically perform the following operations:

- Clean the paper transport rolls (document feed rolls, feed rolls, idler rolls).
- Clean the retard pad.
- Clean the CIS window.
- Clean the control panel keys and the machine covers.

Note: To clean the machine, use a soft cloth. Never use abrasives or detergents.

Paper Transport Rolls

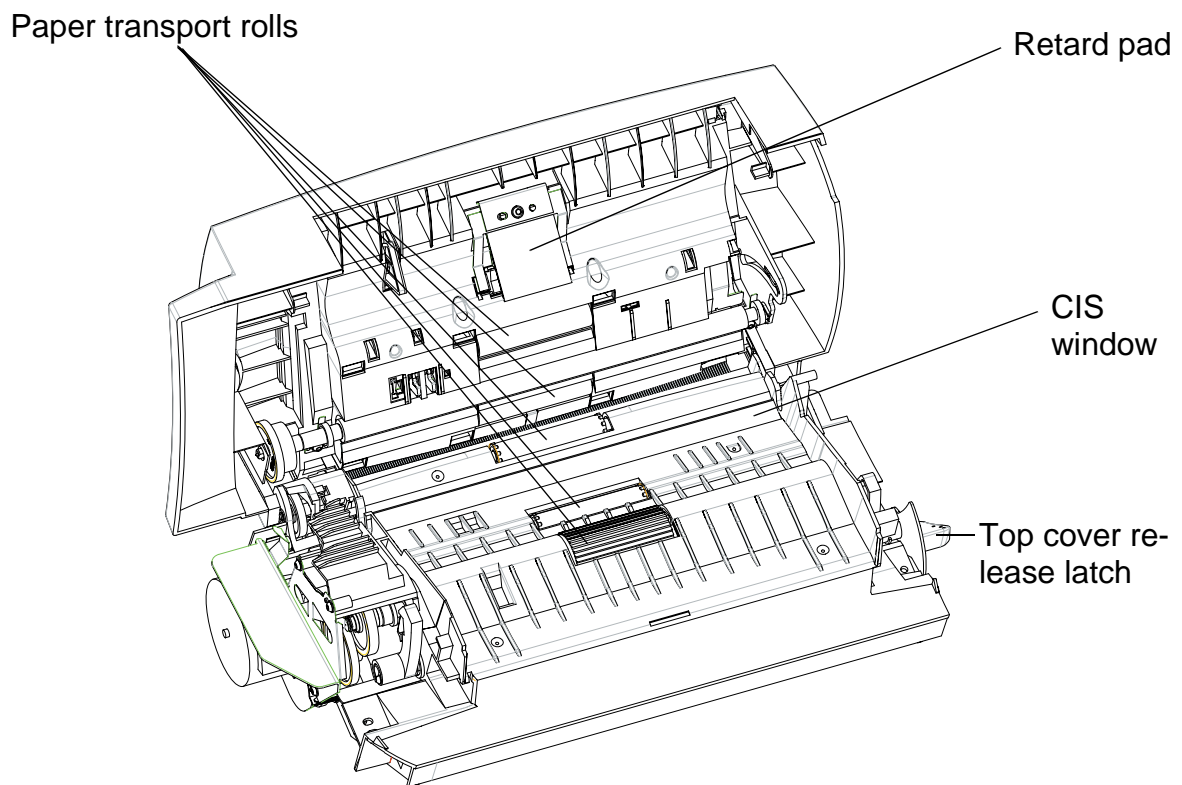


Figure 1

To clean the paper transport rolls perform the following:

1. Set the on/off switch to "O" (off).
2. Open the control panel/scanner by actuating the cover release latch located on the left of the machine.

CAUTION

The opening is limited to approx 60° by stops. Do not try to force the panel any further.

3. Clean the rolls of the document feeder and feed shafts, and also the two idler rolls located on the mobile part of the scanner, with a lint-free cloth moistened with film remover.

Note: *To clean them, rotate them in the same direction as during paper transport. The recommended interval is between 2 to 6 months.*

Retard Pad

To clean the retard pad, perform the following:

1. Set the on/off switch to “O” (off).
2. Open the control panel/scanner by pressing the cover release latch located on the left of the machine.

CAUTION

The opening is limited to approx 60° by stops. Do not try to force the panel any further.

3. Wipe the elements of the retard pad with a lint-free cloth soaked with film remover.

Note: *The recommended interval is between 2 to 6 months.*

CIS Window

To clean the CIS Window, perform the following:

1. Set the on/off switch to “O” (off).
2. Open the control panel/scanner by pressing the cover release latch located on the left of the machine.

CAUTION

The opening is limited to approx. 60° by stops: do not try to force the panel any further.

3. Wipe the scanner window with a lint-free cloth moistened with film remover, or with antistatic paper tissues as used for cleaning optical glass.

Note: *The recommended interval is to be defined depending on utilization. After cleaning, it is advised to make a local copy to check the cleanliness of the window.*

Control Panel Keys and Covers

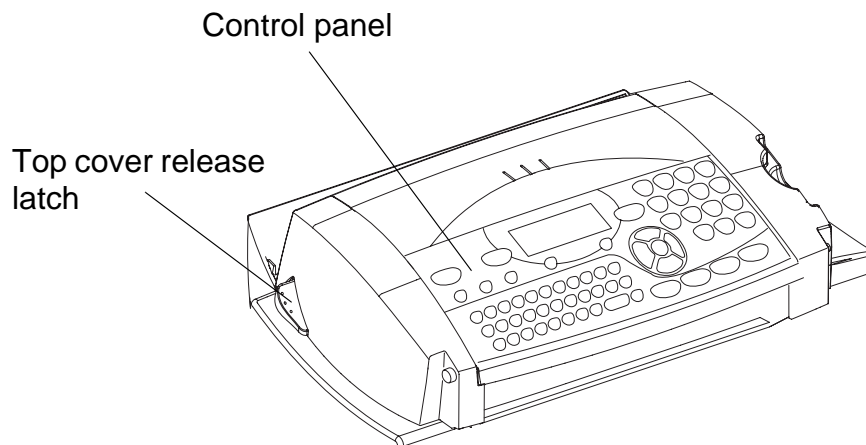


Figure 2

Cleaning the Control Panel Keys

1. Set the on/off switch to “O” (off).
2. Clean the top of the control panel and the keys with a cloth dampened with water. Perform when required.

Cleaning the Covers

- It is advisable to clean all covers during a service call.
- It is recommended to wipe covers with a cloth dampened with water during a service call.

SCP 3 HSF1 Schedule

- To ensure that the machine produces good output pages and to extend its service life, it is recommended that the maintenance procedures described in this schedule be carried out as instructed.

Table 1: Maintenance Schedule

Component	Clean	Replace		Reference
		Continuous	One printed page per job	
Paper Feed Roll	When a paper feed failure occurs	Replace when a paper feed failure occurs		PL 12
BTR	-	50K		PL 12
Drum Cartridge	-	20K	16K	PL 13
Toner Cartridge (for replacement)	-	3K/6K	2.4K/4.8K	PL 13
Toner Cartridge (shipped with printer)	-	1.5K	1.2K	
Fuser	-	50K		PL 10

Note: The drum cartridge and toner cartridge are usually replaced by the user.

Note: The contents of the Maintenance List are subject to change without notice.

Note: For the part numbers, see Parts Manual and Parts Modification Notice.

SCP 4 Final Actions

Final Actions are used to evaluate the total operation of the system and to identify the actions required to complete the service call.

Procedure

- Exercise the machine in all modes.
- Make a proof copy or print of a customer document.
- If any of the customers selections were changed, return them to the customers preferred settings.
- At the first service and at any subsequent service where changes are made or options are added, print the configuration report and store it with the machine log book. Discard any previous versions of the configuration report.
- Mark off any hardware/software options and modifications installed and/or enabled on the Tag matrix card.
- Complete the machine service log book (GP 23).
- Remove and destroy any copies of test patterns.
- Ensure the machine and service area are clean before leaving the customer premises.
- Provide customer training if required.

2. Status Indicator RAPs

1 Initial Checks RAP	3
2 Paper Misfeed Initial Actions RAP	4
3 Paper Transport Jam RAP	5
4 Fuser/Exit Misfeed RAP	6
5 Polygon Motor Malfunction RAP	7
6 Laser Malfunction RAP	8
7 Fuser Fan Malfunction RAP	9
8 Warm-Up Failure RAP	10
9 Abnormally Low Fuser Temperature RAP	11
10 Abnormally High Fuser Temperature RAP	12
11 High Voltage Failure RAP	13
12 Controller Related Malfunctions RAP	14
13 Power Supply Failure RAP	15
14 Noise from Paper Tray RAP	16

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1 Initial Checks RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Initial Inspection

1. Check the power

- The machine does not work no matter how long you wait.
 - Is the power switch (machine and wall socket) turned on?
 - Is the power cord connected to the machine correctly?
 - Is the power cord connected to the wall socket correctly?
 - Is the wall socket working?
 - Is the unit rated at the same voltage as the supply?
- Does the fan work when power is turned on?
 - Check the connectors on the LVPS and/or HVPS, PL 11.
 - Check the fuses on the LVPS and/or HVPS, PL 11.

2. Check the installation environment

- Ensure the installation surface is flat, level and free from vibration. If necessary, move the machine.
- Ensure that the temperature and humidity of the surroundings are within specification. If necessary, move the machine.
- Ensure that the machine is positioned away from any air conditioning or other heating or cooling equipment. Also ensure that it is not positioned in a direct draft from any air conditioning, fan or open window. If necessary, move the machine.
- Ensure the machine is not positioned in direct sunlight. If unavoidable, use a curtain to shade the machine.
- Ensure the machine is installed in a clean dust free environment. Move the machine to a clean area if necessary.
- Some industrial or cleaning processes give off fumes which can affect the machine. Move the machine away from this type of air pollution.

3. Check the paper type

- Only use paper which is of suitable quality, weight and size. See the User Guide.

4. Check the overall condition of the machine

- Clean the paper transport areas. Any rollers with dirty surfaces should be cleaned. If necessary, install new rollers.

2 Paper Misfeed Initial Actions RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- Initial machine checks when a paper jam occurs in the printer.

Table 1: Paper Misfeed Initial Actions

Checks and Causes	Solutions
1. Does the paper meet product specifications?	1. Replace paper
2. Is the paper curled, wrinkled or damp?	2. Replace paper and instruct user of correct paper storage.
3. Is the paper transport path deformed, dirty, or obstructed with foreign matter?	3. Clean the paper path.
5. Is the roll dirty, deformed, or worn?	5. Clean the roll and replace if necessary.
6. Are paper guides at correct position to accommodate paper?	6. Slide the paper guides up against edges of the paper stack.
7. Does the paper feed switch operate correctly when checked?	7. Correct or Install a new switch.

Note: Reset the misfeed condition by opening and closing the front door after the misfeed has been cleared.

3 Paper Transport Jam RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- The Paper Feed Switch is actuated too early after the paper feed sequence has started.
- The Paper Feed Switch is not actuated within the correct time after the paper feed sequence has started.
- The Paper Feed Switch is de-actuated too early after it has actuated.
- The Paper Feed Switch is not de-actuated within the correct time after it has actuated.

Table 2: Paper Feed/Transport Misfeed

Checks and Causes	Solutions
1. Check the registration switch (PL 12, Wiring Diagram 2).	1. Install a new registration switch (PL 12).
2. Check the exit sensor (PL 10, Wiring Diagram 1).	2. Install a new exit sensor (PL 10).
3. Check the paper feed solenoid (PL 12, Wiring Diagram 1).	3. Install a new paper feed solenoid (PL 12). 4. Install a new Main PBA (PL 5). 5. If the JAM still occurs, install a new CPU (PL 5).
4. Are the stripper fingers dirty, deformed, worn?	4. Install a new fuser (PL 10).

4 Fuser/Exit Misfeed RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- The Exit sensor is de-actuated due to paper left in the fuser.
- The paper de-actuates the Exit Sensor too early after the paper feed switch has been actuated.
- The paper does not de-actuate the Exit Sensor within the correct period of time after the paper feed switch has been actuated.

Table 3: Fuser/Exit Misfeed

Checks and Causes	Solutions
1. Check the registration switch (PL 12, Wiring Diagram 2).	1. Install a new registration switch (PL 12).
2. Check the exit sensor (PL 10, Wiring Diagram 1).	2. Install a new exit sensor (PL 10). 3. Install a new Main PBA (PL 5). 4. If the fuser/exit misfeed still occurs, Install a new CPU (PL 5).

5 Polygon Motor Malfunction RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- All drives are shut down and a hardware error message (Printer Error Mirror) is displayed on the control panel.
- The LOCK signal is not detected within a predetermined period of time that begins 1 sec. after the Polygon Motor has been energized.
- No new LOCK signal is detected for a 1-sec. period that begins 1.5 sec. after the first LOCK signal was detected.
- The LOCK signal is not detected for a continuous 0.5-sec period in a state in which the Polygon Motor runs.
- The LOCK signal remains ON for a continuous 5-sec period or more when the Polygon Motor remains de-energized.

Table 4: Polygon Motor Malfunction

Checks and Causes	Solutions
1. Check cables for connection.	1. Tighten loose connections and correct other connections as necessary.
2. Check ROS (PL 11, Wiring Diagram 2).	2. Install a new ROS (PL 11). 3. Install a new Main PBA (PL 5). 4. If the Polygon Motor Malfunction still occurs, Install a new CPU (PL 5).

6 Laser Malfunction RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- The laser output exceeds the upper limit value.
- The laser output remains lower than the lower limit value.
- The Start Scan signal is not detected at all within a predetermined period of time after the laser has been turned ON.
- The Start Scan signal is turned OFF.

Table 5: Laser Malfunction

Checks and Causes	Solutions
1. Check cables for connection.	1. Tighten loose connections and correct connections as necessary.
2. Check the ROS (PL 11, Wiring Diagram 2).	2. Install a new ROS (PL 11). 3. Install a new Main PBA (PL 5). 4. If the Laser Malfunction still occurs, Install a new CPU (PL 5).

7 Fuser Fan Malfunction RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- The LOCK signal remains HIGH or LOW continuously for a predetermined period of time while the fuser fan remains energized.

Table 6: Fuser Fan Malfunction

Checks and Causes	Solutions
1. Check the motor connectors.	1. Tighten loose connections and correct as necessary.
2. Check the fuser fan (PL 9, Wiring Diagram 3) for possible overload.	2. Install a new fuser fan (PL 9). 3. If the fuser fan malfunction still occurs, Install a new Main PBA (PL 5).

8 Warm-Up Failure RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- The machine fails to warm up.
- The voltage of the thermistor remains low for a predetermined period of time when a warm-up cycle is started.
- The temperature detected by the thermistor remains lower than a reference value for a predetermined period of time for the period of time that begins 5 sec after, and ends 9 sec after, the start of the warm-up cycle (where the temperature detected by the thermistor is 80°C/176°F or less).
- The temperature detected by the Thermistor does not increase for a 3-sec period or more for the period of time that begins after the lapse of a predetermined period of time after the fuser roll heat lamp has been turned ON and ends when the lamp is turned OFF.
- The fuser roll heat lamp remains ON for a 30-sec period or more (except during the period through which the Main Motor remains energized).

Table 7: Warm-Up Failure

Checks and Causes	Solutions
1. Check the thermistor as its voltage might remain low during the warm-up cycle.	1. Install a new fuser (PL 10). 2. Install a new Main PBA (PL 5). 3. Install a new LVPS (PL 11).
2. Check the thermostat.	
3. Check the fuser.	

9 Abnormally Low Fuser Temperature RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

The temperature detected by the thermistor remains lower than the set temperature continuously for a predetermined period of time while the fusing temperature control is being provided.

The set temperatures are as follows:

- 140°C/284°F during a print mode at 600 dpi.
- 110°C/230°F during a print mode at 1200 dpi.
- 70°C/158°F during the standby mode.

Table 8: Abnormally Low Fuser Temperature

Check and Cause	Solutions
1. Check the thermistor.	1. Install a new fuser unit (PL 10). 2. Install a new Main PBA (PL 5). 3. Install a new LVPS (PL 11).
2. Check the thermostat.	
3. Check the fuser.	

10 Abnormally High Fuser Temperature RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- The temperature detected by the thermistor remains higher than 235°C/455°F for a predetermined period of time.

Table 9: Abnormally High Fuser Temperature

Checks and Causes	Solutions
1. Check the thermistor.	1. Install a new fuser (PL 10). 2. Install a new Main PBA (PL 5). 3. Install a new LVPS (PL 11).
2. Check the thermostat.	
3. Check the fuser.	

11 High Voltage Failure RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- The Drum Charge Monitor Voltage (HVC_MON) signal falls outside a predetermined range at any time after the lapse of a predetermined period of time after the power switch has been turned ON.
- The Image Transfer Voltage Monitor signal (T_MON_V) and Image Transfer Current Monitor signal (T_MON_I) fall outside a corresponding predetermined range.

Table 10: High Voltage Failure

Checks and Causes	Solutions
1. Check the HVPS.	1. If a High Voltage Failure still occurs, install a new HVPS (PL 11).

12 Controller Related Malfunctions RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

The following are controller related malfunctions and failures:

- Engine Initialization failure.
- Engine I/F failure.
- ROM Malfunction.
- DRAM Malfunction.
- EEPROM Malfunction.
- Video transfer malfunction.
- Data decompression failure.
- Video output failure.
- Unsupported engine failure.

Table 11: Controller Related Malfunction

Checks and Causes	Solutions
1. Check the flat cable connections	1. Tighten loose connections or correct and replace connections as necessary.
2. Check the harness between PJ1 on the Main PBA and PJ4201 in the CPU (Wiring Diagram 1).	2. Tighten if the connection is loose, or correct as necessary. 3. If Malfunctions still occur, Install a new CPU (PL 5).

13 Power Supply Failure RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- The machine fails to turn ON when it is powered.

Table 12: Power Supply Failure

Checks and Causes	Solutions
1. Check that the power cord is connected into the power outlet.	1. Connect the power cord into the power outlet
2. Check that the power cord is connected to the machine.	2. Connect the power cord correctly into the machine.
3. Disconnect the power cord from the power outlet and the machine.	3. Check the continuity of the power cord. If necessary, install a new power cord (PL 1).
4. Check if the power switch is turned ON.	3. Turn ON the power switch.
5. Check the fuses on the LVPS are not conducting.	4. Install a new LVPS (PL 11). 5. Install a new Main PBA (PL 5).

14 Noise from Paper Tray RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- Noise from the paper tray when the machine is feeding paper.

Procedure

1. Apply plastislip grease (PL 13) to the pivot points of the paper lift plate. Refer to Figure 1 and Figure 2.



Figure 1

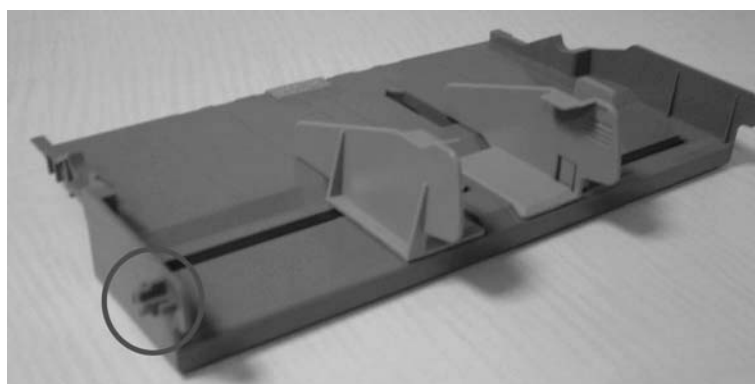


Figure 2

3. Image Quality

IQ 1 Blank Print and Black Print RAP	3
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IQ 1 Blank Print and Black Print RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- Print page is completely blank or completely black.



Table 1: Blank Print and Black Print

Checks and Causes	Solutions
1. Determine the source of the problem. Make a copy. Print an internal test pattern. Note: To print an internal test pattern, set SOS 1 Bit 8 to 1, then press the # key, refer to GP 4.	
2. Printed page is blank.	1. Check that the toner cartridge is not empty. If necessary, install a new toner cartridge (PL 13). 2. Check ROS connectors for proper connection.
3. Is the coupling of the drive mechanism of the imaging cartridge properly connected?	2. Check coupling of drive mechanism for connection and correct as necessary, or Install a new Imaging Cartridge (Drum Cartridge, Toner Cartridge, PL 13).
4. Is the drum charge voltage contact point or drum ground contact point of the drum cartridge properly connected?	3. Check, clean, or correct contact point.
5. Is the HVPS (PL 11) connector connected properly?	4. Connect it properly.
6. Outgoing fax page is completely black.	5. Run a shading calibration.

Table 1: Blank Print and Black Print

Checks and Causes	Solutions
7. Is the problem eliminated when step 4 was checked?	6. Install a new HVPS (PL 11). 7. Install a new Main PBA (PL 5). 8. If the problem still occurs, Install a new CPU (PL 5). 9. Install a new ROS (PL 11).

IQ 2 Deletions RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- White spots occur periodically on the print.



Table 2: Deletions

Checks and Causes	Solutions
1. Determine the source of the problem. Make a copy. Print an internal test pattern. Note: To print an internal test pattern, set SOS 1 Bit 8 to 1, then press the # key, refer to GP 4.	
2. Is paper damp?	1. Load fresh paper.
3. Is the drum scratched?	2. Install a new Drum Cartridge (PL 13).
4. Is there foreign matter in paper path?	3. Remove foreign matter.
5. Is BTR dirty or scratched?	4. Install a new BTR (PL 12). 5. Install a new HVPS (PL 11). 6. Install a new Main PBA (PL 5).

IQ 3 Contamination on Back of Page RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- The back page is contaminated.

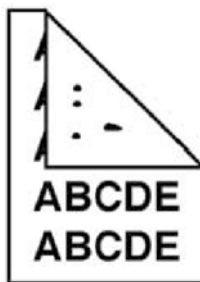


Table 3: Contamination on Back of Page

Checks and Causes	Solutions
1. Is there foreign matter in the paper path?	1. Remove foreign matter.
2. Is fuser roll dirty or scratched?	2. Install a new Fuser Assembly (PL 10).
3. Is BTR dirty or scratched?	3. Install a new BTR (PL 12).

IQ 4 Light Image RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- The printed image is light, with no ghost.

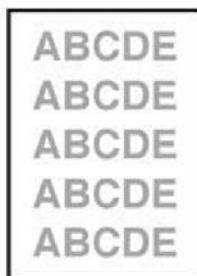


Table 4: Light Image

Checks and Causes	Solutions
1. Determine the source of the problem. Make a copy. Print an internal test pattern. Note: To print an internal test pattern, set SOS 1 Bit 8 to 1, then press the # key, refer to GP 4.	
2. Are the machine settings correct?	1. Correct the settings.
3. Is the paper damp?	2. Load fresh paper.
4. Is there toner left in toner cartridge?	3. Install a new Toner Cartridge (PL 13).
5. Is drum at end of life?	4. Install a new Drum Cartridge (PL 13).
6. Is developing bias faulty?	5. Install a new HVPS (PL 11). 6. Install a new Main PBA (PL 5).
7. Is image transfer faulty?	7. Install a new Transfer Unit (PL 12). 8. Install a new HVPS (PL 11). 9. Install a new Main PBA (PL 5).

IQ 5 Background RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- Light or Dark background on the print.

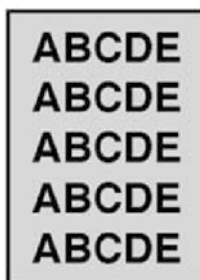


Table 5: Background

Checks and Causes	Solutions
1. Determine the source of the problem. Cover the ROS window. Make a copy.	1. If the fault is no longer present, clean the ROS window or install a new ROS, PL 11.
2. Is drum scratched?	2. Install a new Drum Cartridge (PL 13).
3. Is developing bias making good contact?	3. Clean contact terminal or check terminal position.
4. Is the problem eliminated after checks have been made up to step 3?	4. Install a new HVPS (PL 11). 5. Install a new Main PBA (PL 5).

IQ 6 White Lines and White Streaks RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- Straight thin white vertical lines occur in the printing.
- Straight white vertical bands occur in the printing.

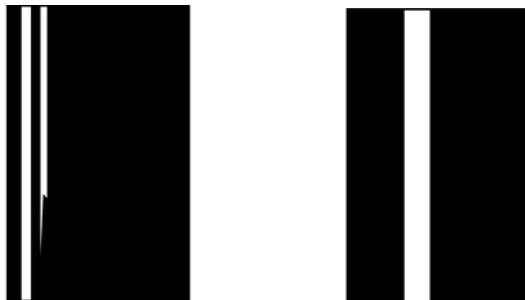


Table 6: White Lines and White Streaks

Checks and Causes	Solutions
1. Is BTR damaged, scratched or dirty?	1. Install a new BTR (PL 12).
2. Is drum scratched or dirty?	2. Install a new Drum Cartridge (PL 13).
3. Is fuser roll scratched or dirty?	3. Install a new Fuser Assembly (PL 10).
4. Is ROS window dirty?	4. Clean ROS window.
5. Is the problem eliminated after checks have been made up to step 4?	5. Install a new Main PBA (PL 5).

IQ 7 Black Lines and Black Streaks RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- Straight thin black vertical lines occur in the printing.
- Straight black vertical bands occur in the printing.

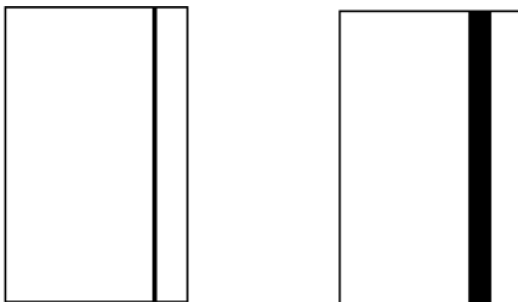


Table 7: Black Lines and Black Streaks

Checks and Causes	Solutions
1. Is BTR damaged, scratched or dirty?	1. Install a new BTR (PL 12).
2. Is drum scratched or dirty?	2. Install a new Drum Cartridge (PL 13).
3. Is fuser roll scratched or dirty?	3. Install a new Fuser Assembly (PL 10).
4. Is the CIS window dirty?	4. Clean the CIS window.
5. Is the problem eliminated after checks have been made up to step 4?	5. Install a new Main PBA (PL 5).

IQ 8 Ghost Images RAP

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Description

- The printed sheets have ghosted images.

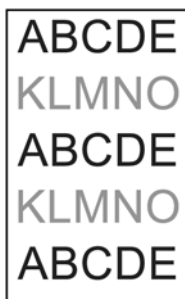


Table 8: Ghosted Image

Checks	Causes	Solutions
1. Distance between the image and the ghost image is 50.6 mm.	1. BTR is scratched.	1. Install a new BTR (PL 12).
2. Distance between the image and the ghost image is 51.8 mm.	2. Flexible sleeve is scratched or dirty.	2. Install a new Toner Cartridge (PL 13).
3. Distance between the image and the ghost image is 75.3 mm.	3. Pressure roller is scratched or dirty.	3. Install a new Fuser Assembly (PL 10).
4. Distance between the image and the ghost image is 94.2 mm.	4. Drum is scratched or dirty. 5. Fuser roll is scratched or dirty.	4. Install a new Drum Cartridge (PL 13). 5. Install a new Fuser Assembly (PL 10).

IQS 1 Copy Density

Document

Test pattern 82E2020

Specification

Set the machine contrast (M 8 4 1 5) to maximum and the machine luminosity (M 8 4 1 6) to 1 point less than normal. Make a copy of the test pattern, Figure 1.

Compare the copy with the test pattern:

- The density of 4.1 line pair must be as dark or darker than the original.
- The density of the 3.0 line pair must be as dark as the original.
- The 3.3 blue area must be black.
- The 2.0, 2.2 and 2.4 areas must be black.

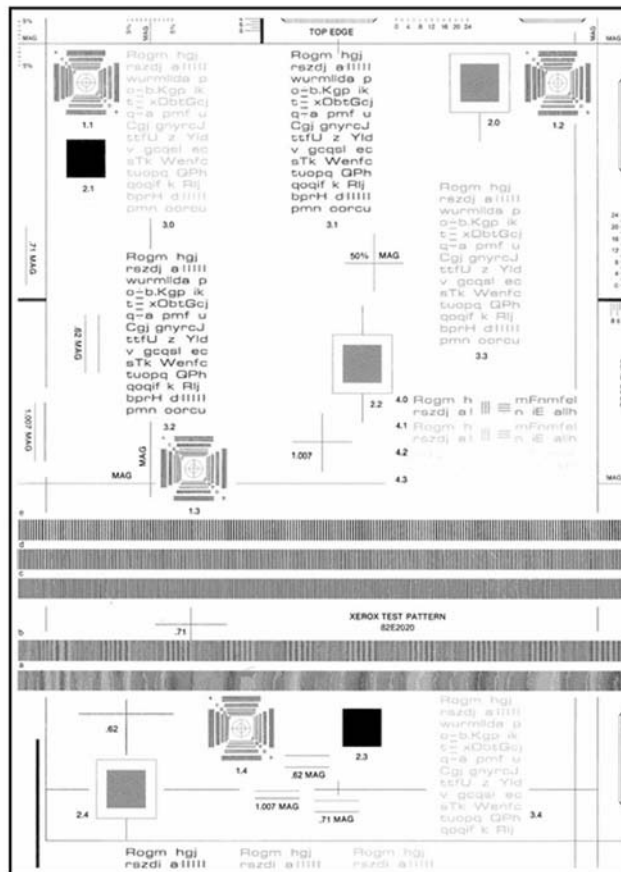


Figure 1

4. Repairs/Adjustments

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General Repairs and Adjustments Information

Note: Before any repair or adjustment, the machine must be switched off and all cords on the back of the machine disconnected (phone line, LAN, parallel port and power cord). Remove the document trays and the paper feed tray.

Tools

- Phillips screwdriver.
- Torx hex screwdriver (Torx10). Refer to PL 13.
- Flat screwdriver (medium size).

REP 1 Cleaning the Paper Feed Roll

Parts list on PL 12

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the imaging cartridge.

Note: *The Imaging Cartridge is the Drum Cartridge, to which the Toner Cartridge is mounted.*

2. Using a soft cloth, wipe the surface of the paper feed roll.

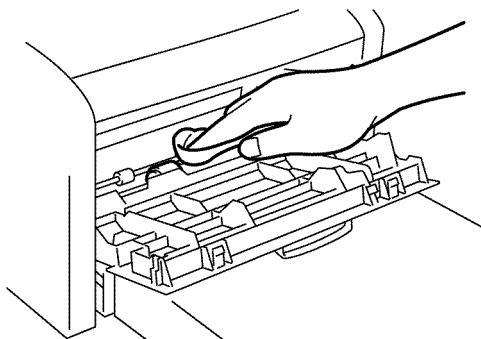


Figure 1

REP 2 Paper Feed Roll

Parts list on PL 12

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the imaging cartridge.

Note: *The Imaging Cartridge is the Drum Cartridge, to which the Toner Cartridge is mounted.*

2. Remove the paper feed roll.

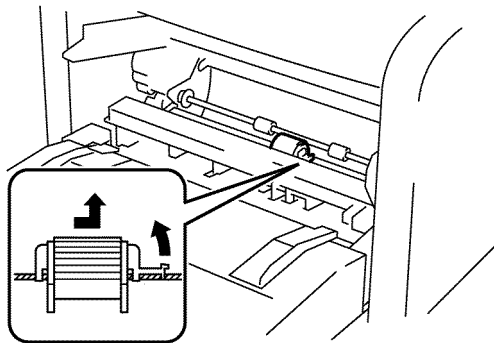


Figure 1

REP 3 Bias Transfer Roller (BTR)

Parts list on PL 12

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the imaging cartridge.

Note: *The Imaging Cartridge is the Drum Cartridge, to which the Toner Cartridge is mounted.*

2. Release the locking tabs (white) on the right and left ends of the bias transfer roller. Rotate the BTR downwards, then remove it.

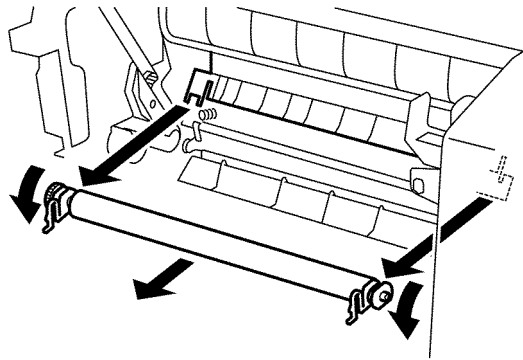


Figure 1

3. Pull out the bushings on the right and left ends, and the gear, from the BTR removed from its holder. Install the bushings and the gear to the new BTR.

Note: *Do not touch, or dirty with chemicals or toner, the surface of the BTR, as indentations in and dirt on the surface of the BTR adversely affect the quality of the printed image. When handling the BTR, hold onto the shaft and bushings of the roller. To avoid contaminating the new BTR, always place it on a new, clean sheet of paper.*

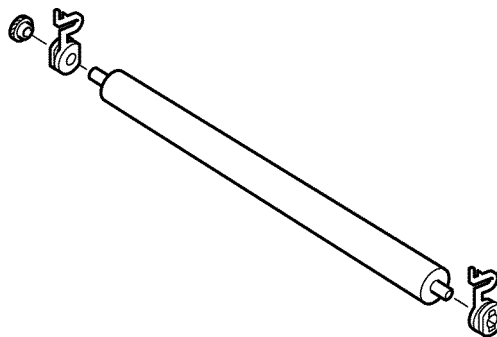


Figure 2

Replacement

1. Insert the new BTR into the BTR holder.
2. Rotate the locking tabs into the original up right position.

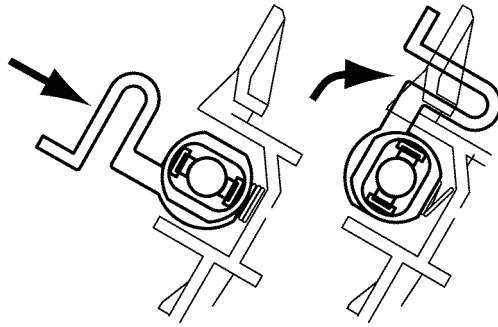


Figure 3

REP 4 Toner Cartridge

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Open the front door.

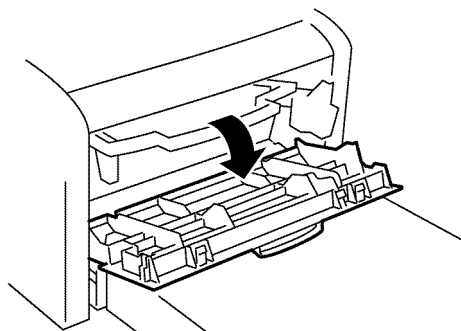


Figure 1

2. Remove the imaging cartridge.

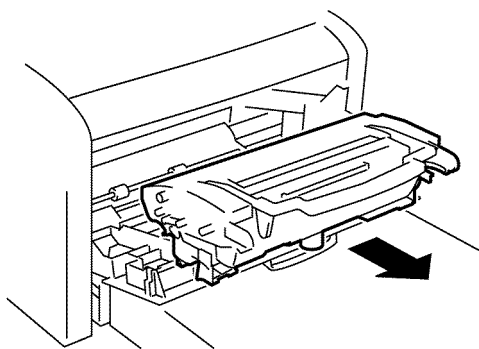


Figure 2

3. Pull the lever of the toner cartridge in the direction shown in the illustration and disconnect the toner cartridge from the drum cartridge.

Note: If the Drum Cartridge is to be placed on a floor or similar place, use care to prevent Toner from spilling.

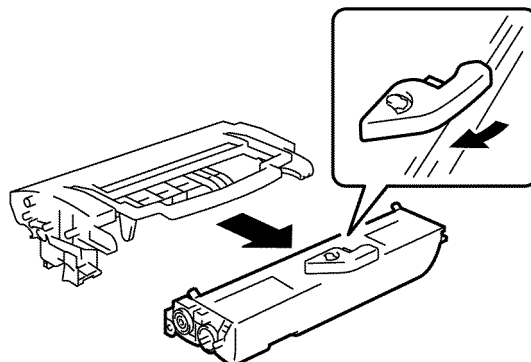


Figure 3

Replacement

1. Take out a new toner cartridge and shake it in the horizontal direction sufficiently so that toner is agitated.

Note: Placing the Toner Cartridge in an upright position or shaking it vigorously will spill toner.

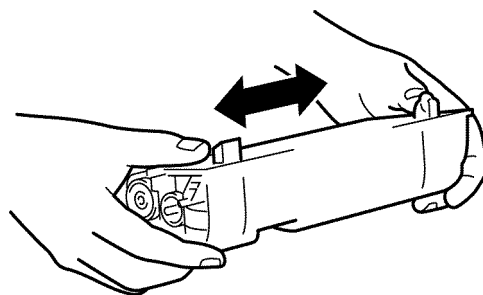


Figure 4

2. Install the new toner cartridge to the drum cartridge.

Note: Insert the Toner Cartridge along the guide provided on the Drum Cartridge frame and make sure that the Toner Cartridge is not tilted when inserted.

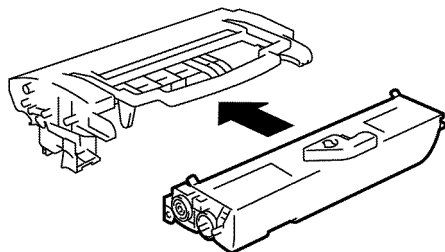


Figure 5

3. Install the imaging cartridge in the machine.

Note: Insert the Imaging Cartridge along the guide provided on the machine frame.

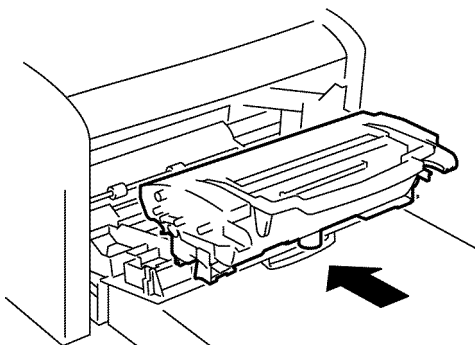


Figure 6

4. Close the front door.

REP 5 Drum Cartridge

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the imaging cartridge.

Note: *The Imaging Cartridge is the Drum Cartridge, to which the Toner Cartridge is mounted.*

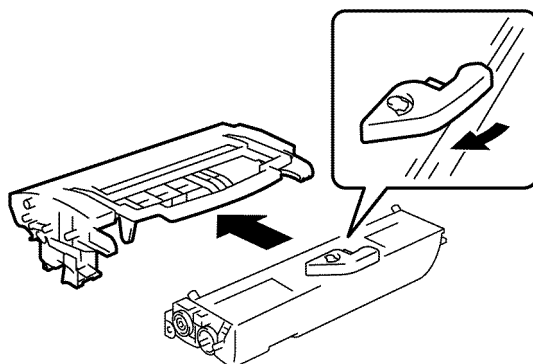


Figure 1

2. Pull the lever of the toner cartridge in the direction shown in the illustration and disconnect the drum cartridge.

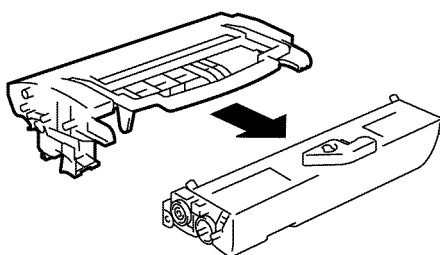


Figure 2

Replacement

1. Mount the toner cartridge to a new drum cartridge.

Note: Insert the Toner Cartridge along the guide provided on the new Drum Cartridge frame and make sure that the Toner Cartridge is not tilted when inserted.

2. Install the imaging cartridge in the machine.

Note: Insert the Imaging Cartridge along the guide provided on the machine frame.

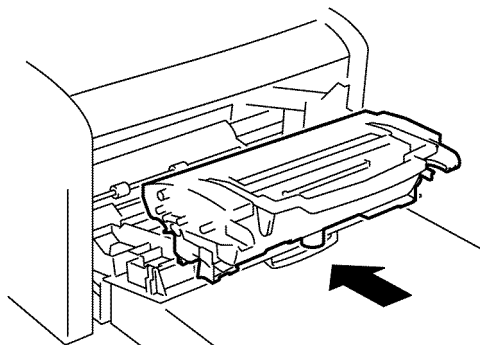


Figure 3

3. Close the front door.

REP 6 Fuser Assembly

Parts list on PL 10

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

WARNING

Do not touch the fuser or any surfaces around the fuser while they are hot.

Removal

1. Turn OFF the power switch, unplug the power cord and let the machine cool down.
2. Remove the left and right covers.
3. Remove the Control Panel/Scanner Chassis Assembly (REP 19).
4. Remove two screws and two washers. Then, remove the fuser protective cover.

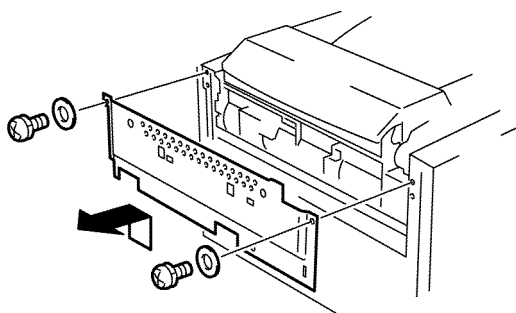


Figure 1

5. Remove the upper transport cover.
Remove two screws, unplug three connectors, and remove the fuser.

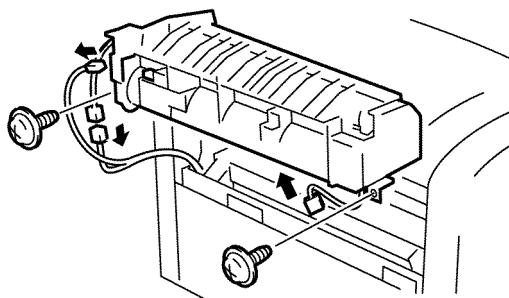


Figure 2

6. Remove the fuser exit guide assembly from the fuser.

Replacement

1. Take out the fuser and packing materials.
2. Connect the fuser exit guide assembly to the new fuser.
3. Connect connector A.

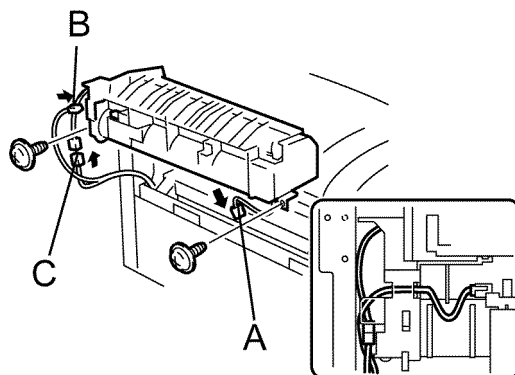


Figure 3

4. Mount the fuser in the machine and secure it in position by tightening the two screws.
5. Connect connectors B and C.

Note: When installing the Fuser, route the harness as shown in Figure 3. Do not trap the harness between the Fuser and Machine.

6. Reinstall the fuser protective cover.

REP 7 Main PBA

Parts list on PL 5

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the Right Cover (REP 25).
2. Disconnect all external connectors to the CPU board.
3. Remove two screws then the CPU metal cage.
4. Disconnect all connectors and the flat cable from the Main PBA.

CAUTION

Use utmost care not to snap off the flat cable.

5. Remove four screws then the Main PBA.

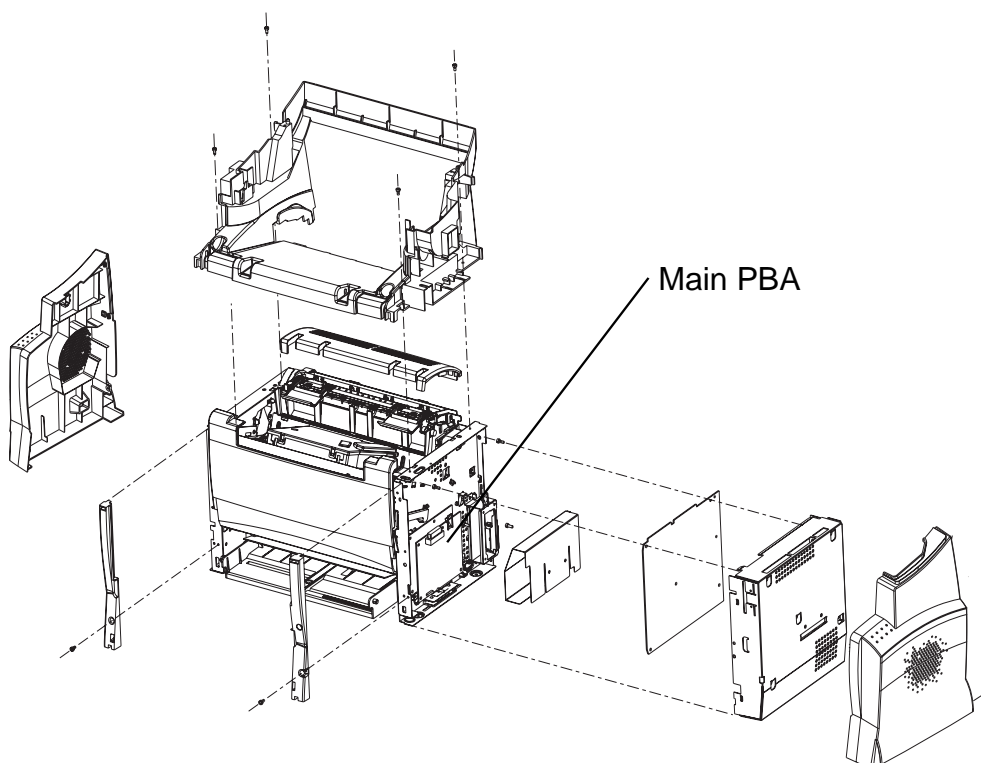


Figure 1

Replacement

1. The replacement is the reverse of the removal procedure.

REP 8 LVPS and HVPS

Parts list on PL 11

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the Fuser Assembly (REP 6, steps 1 to 6)
2. Remove two screws and the power switch stay.

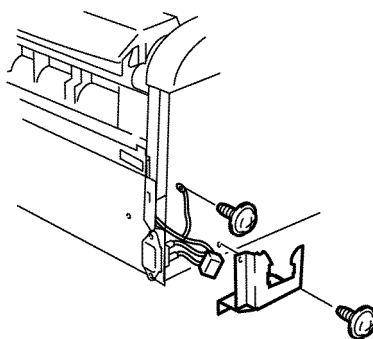


Figure 1

3. Remove the CPU metal cage (REP 18, steps 3 to 5).
4. Disconnect PJ7 from the Main PBA.
5. Remove five screws, disconnect two ground harnesses, disconnect CN1 from the HVPS and CN3 on the LVPS, then remove the power unit assembly as shown in Figure 2.

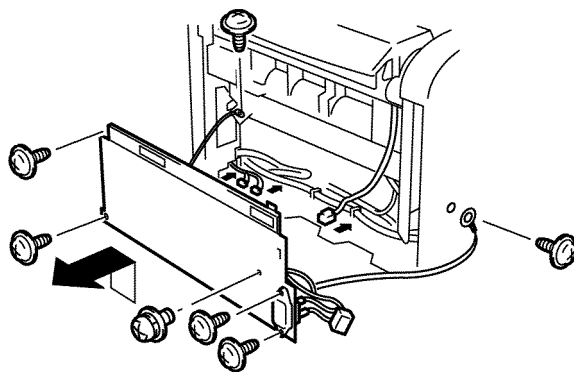


Figure 2

6. Remove four screws then the LVPS as shown in figure 3.

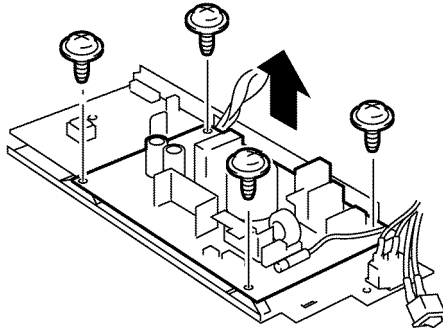


Figure 3

7. Remove one screw then the HVPS as shown in the figure 4.

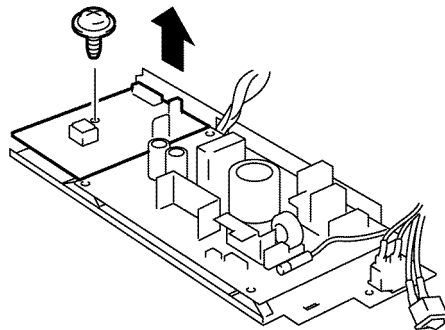


Figure 4

Replacement

1. The replacement is the reverse of the removal procedure.

REP 9 ROS

Parts list on PL 11

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

WARNING

Avoid exposure to laser beam. Invisible laser radiation.

Removal

1. Remove the control panel/scanner chassis assembly (REP 19, steps 1 to 9).
2. Remove the fuser exit guide assembly from the fuser.
3. Remove the CPU metal cage (REP 18, steps 3 to 5).
4. Disconnect one connector and one flat cable from the Main PBA.

Note: Use utmost care not to snap off the flat cable.

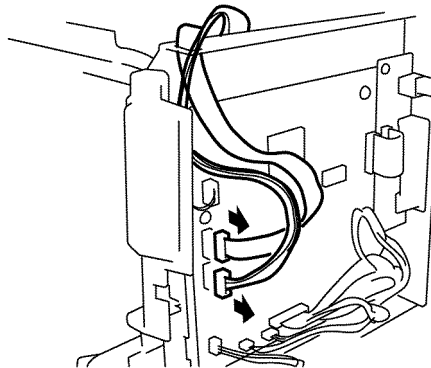


Figure 1

5. Remove three screws and the ROS.

Note: When reinstalling the ROS, tighten the screws in the numerical order shown in the illustration.

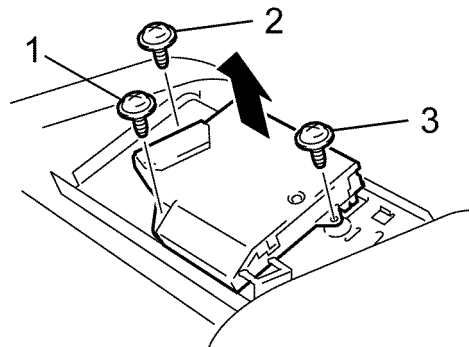


Figure 2

Replacement

1. The replacement is the reverse of the removal procedure.

CAUTION

Do not touch the window on the under side of the ROS. A dirty window can cause image quality problems.

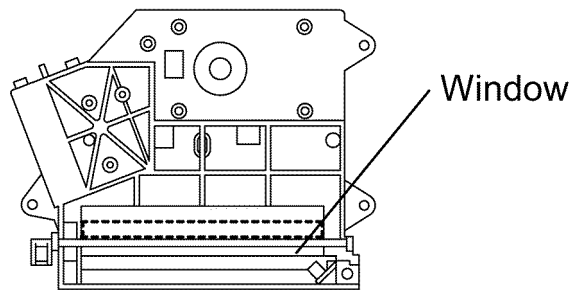


Figure 3

REP 10 Main Motor

Parts list on PL 9

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the left cover (REP 24).
2. Disconnect one connector.
3. Remove two screws, two washers, then the main motor.

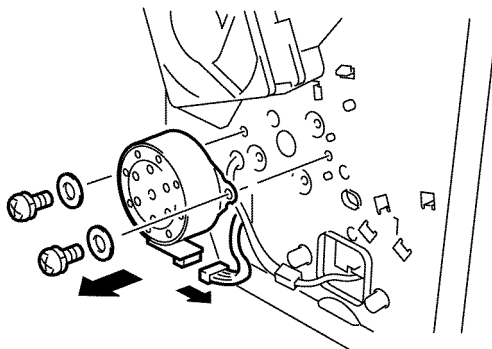


Figure 1

Replacement

1. The replacement is the reverse of the removal procedure.

REP 11 Paper Empty Sensor

Parts list on PL 12

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the imaging cartridge (REP 4 steps 1 and 2).
2. Use a flat bladed screwdriver to carefully release the right side of the front door, then remove the front door.
3. Remove the left cover (REP 24) and the right cover (REP 25).
4. Remove the CPU metal cage (REP 18, steps 3 to 5).
5. Disconnect PJ12 and PJ14 from the Main PBA.
6. Unhook two tabs, disconnect one connector. Remove the paper feed upper guide assembly.

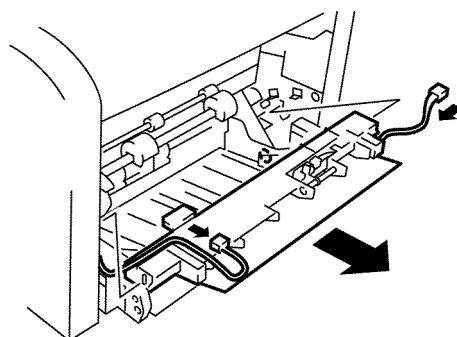


Figure 1

7. Unhook two tabs and remove the tray.

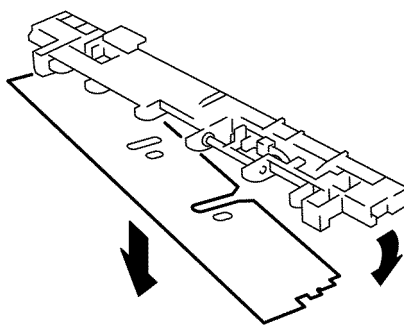


Figure 2

8. Disconnect one connector and remove the paper empty sensor.

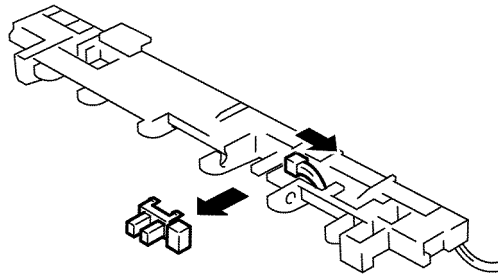


Figure 3

Replacement

1. The replacement is the reverse of the removal procedure.

REP 12 Paper Feed Solenoid

Parts list on PL 12

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the left cover (REP 24).
2. Disconnect the paper feed solenoid inline connector.

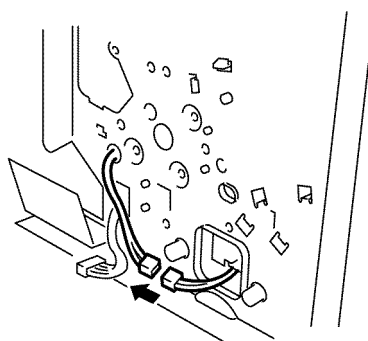


Figure 1

3. Remove one screw, then the paper feed solenoid.

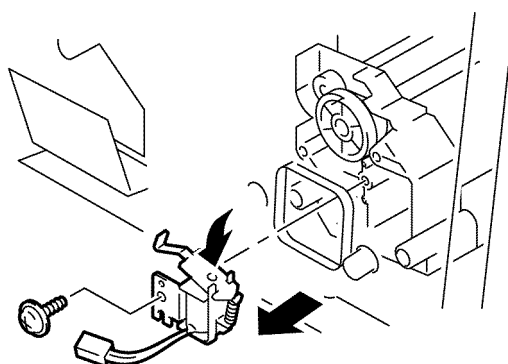


Figure 2

Replacement

1. Mount the paper feed solenoid and tighten one screw.

2. Turn the gear in the direction of the arrow shown below so that the arm of the paper feed solenoid catches the gear.

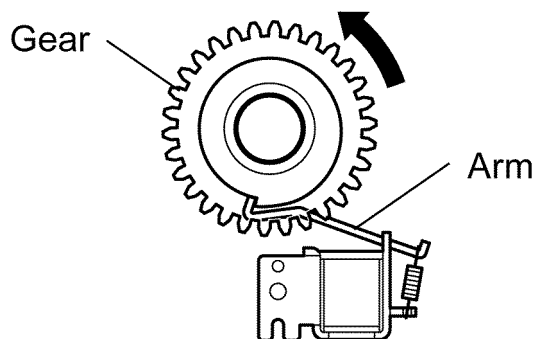


Figure 3

REP 13 Paper Feed Clutch

Parts list on PL 12

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

1. Remove the Fusing Assembly (REP 6).
2. Remove the Power Unit Assembly (REP 8).
3. Remove the Paper Feed Upper Guide Assembly (REP 11, steps 1 to 6).
4. Disconnect one connector and remove the Cooling Fan Motor, PL 9 item 2.
5. Remove the Main Motor.

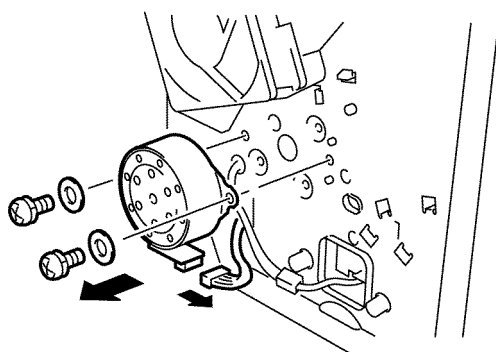


Figure 1

6. Remove the Paper Lifting Plate Assembly.

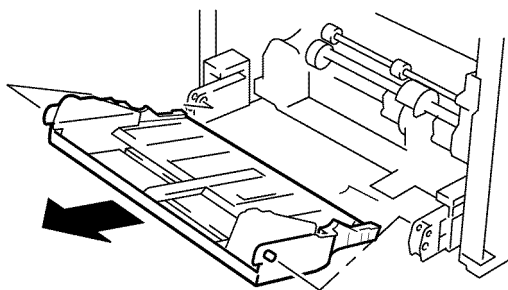


Figure 2

7. Disconnect the Paper Feed Solenoid inline connector. Remove four screws, then carefully release the Left Frame.

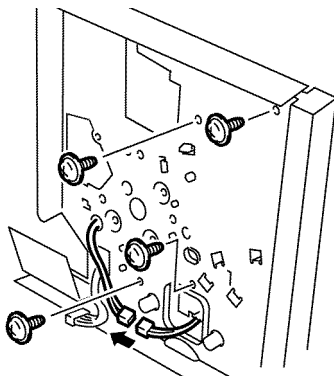


Figure 3

8. Remove one screw, then the Paper Feed Solenoid.

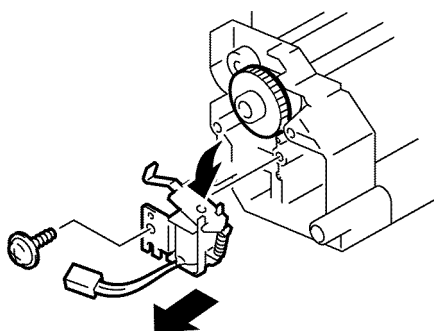


Figure 4

9. Remove one screw, then the Paper Feed Clutch.

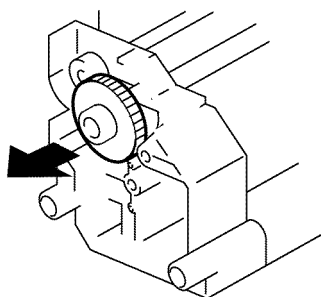


Figure 5

Replacement

1. The replacement is the reverse of the removal procedure.

CAUTION

Take care when re-installing the left frame. Make sure all components are correctly aligned before installing the screws.

REP 14 Wrap Spring Feed Clutch

Parts list on PL 12

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the Paper Feed Clutch (REP 13).
2. Remove the coupling gear, then the Wrap Spring Feed Clutch.

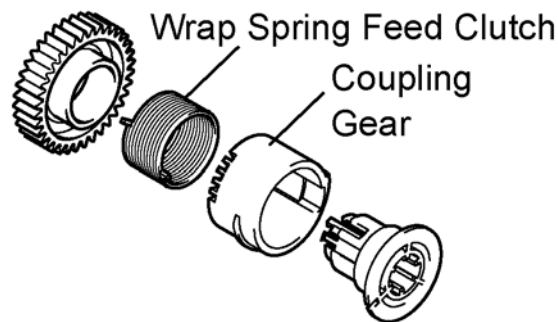


Figure 1

Replacement

The Coupling Gear has five positions for adjusting the position of the Feed Roller (Figure 2).

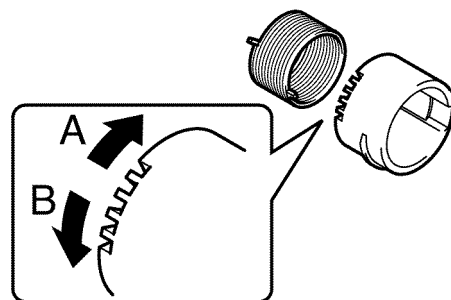


Figure 2

When the Wrap Spring Feed Clutch is replaced, adjust the set position of the Coupling Gear so that the Feed Roller is correctly positioned. The procedure is as follows.

1. Assemble the Paper Feed Clutch.
2. Re-install the Paper Feed Solenoid.

3. Manually rotate the Feed Roller until the cam on the Paper Feed Clutch is engaged with the Paper Feed Solenoid armature.

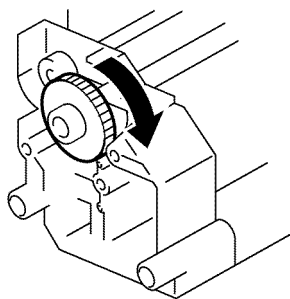


Figure 3

4. Check the position of the Feed Roller. If the Feed Roller is biased clockwise (Figure 4), move the coupling gear in the direction of A (refer to Figure 2).

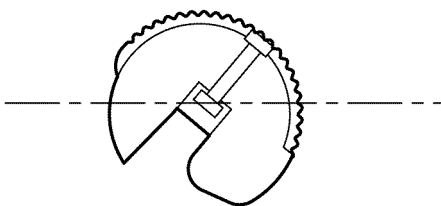


Figure 4

5. If the Feed Roller is biased counter-clockwise (Figure 5), move the coupling gear in the direction of B (refer to Figure 2).

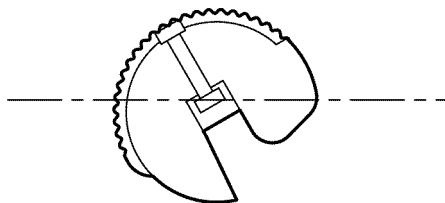


Figure 5

REP 15 White Roller

Parts list on PL 4

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Stand at the back of the machine.
2. Press the top cover release latch.
3. Press outwards on the latch and release the stop.
4. Press outwards on the latch, hold and extract the white roller.
5. Remove and keep the gear and the bearings.

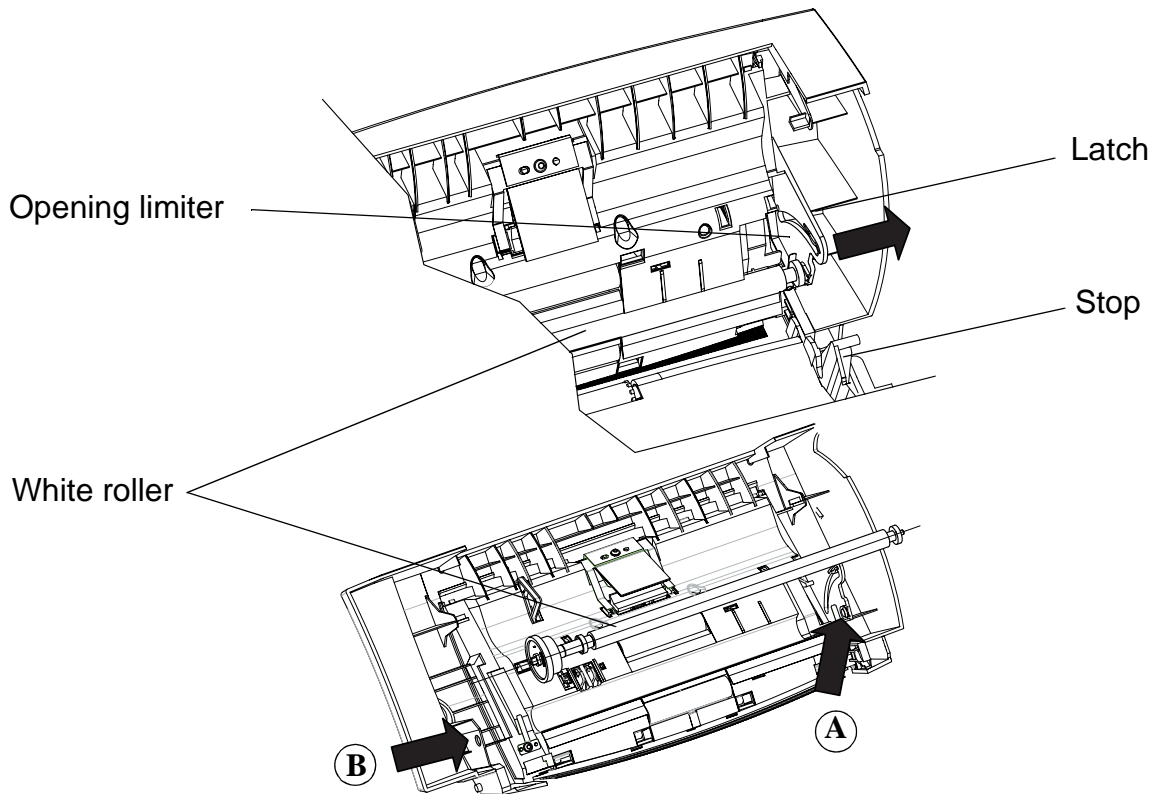


Figure 1

Replacement

1. Unpack the new white roller and inspect it visually. Fit the bearings and gear on the new roller.
2. Place the equipped white roller in end housing B, oriented the same way as during removal.

3. Press on the latch and place the other end of the white roller in end housing A.
4. Press on the latch and close the control panel, letting the stop lock behind the latch.

REP 16 Scanner Retard Pad

Parts list on PL 4

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Stand at the back of the machine.
2. Press the top cover release latch.
3. Press outwards on the latch and release the stop.
4. Hold the retard pad assembly while removing the mounting screw. Remove the assembly.

Note: The fixing plate is attached to a ground wire. Move the plate to one side to remove the remaining parts.

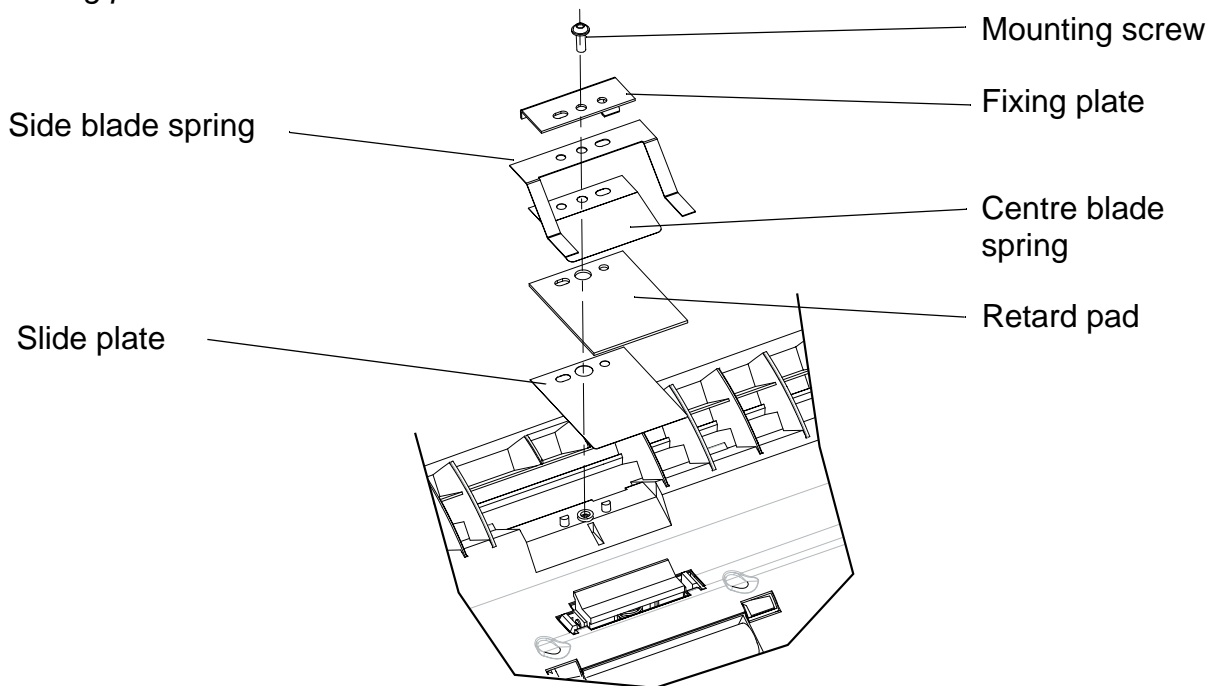


Figure 1

Replacement

1. Visually inspect the new parts.
2. Put the new parts in place on the control panel in the following order: Slide plate, retard pad, centre blade spring, side blade spring and fixing plate. Make sure the parts are oriented correctly. Insert the mounting screw and tighten it.
3. Press on the latch and close the control panel, letting the stop lock behind the latch.

REP 17 Control Panel/Circuit Board/Key Pad/Display/Glass/Top Cover with Loudspeaker

Parts list on PL 6

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

CAUTION

The active surface of the CIS is fragile and light-sensitive. Take care to protect it and to expose it to light as little as possible during this operation.

Removal

1. Stand at the back of the machine.
2. Press the top cover release latch.

Use a flat screwdriver as a lever at the four locations shown in Figure 1 to unclip and remove the top cover of the control panel, then close the chassis again.

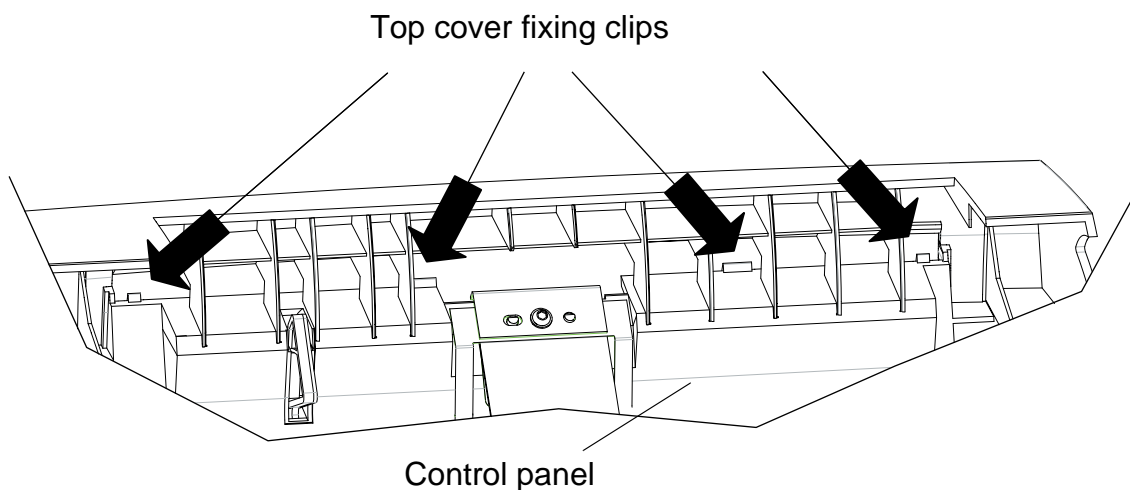


Figure 1

3. Stand in front of the machine.

- Lift the control panel at its upper right-hand corner (A), hold it and apply a medium amount of pressure halfway down its side (B). First free the right-hand side of the control panel by pushing downwards (C).

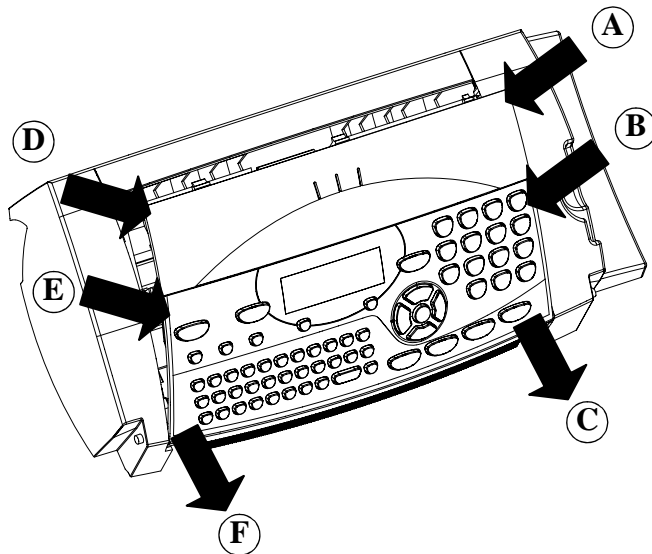


Figure 2

- Lift the control panel at its upper left-hand corner (D). Hold it and apply a medium amount of pressure halfway down its side (E), then free the left-hand side of the control panel by pushing downwards (F). Disconnect the control panel flat cable and remove the control panel.
- Disconnect the flat cable of the display, and the loudspeaker connector.
- Remove the eight mounting screws of the control panel board. Remove the control panel board, the key pad, the display, the glass and the control panel cover.

Replacement

- Unpack and visually inspect the new parts.
- Put the new parts in place on the control panel cover in the following order: glass, display, key pad then control panel circuit board. Screw in and tighten the eight mounting screws.
- Connect the connectors of the loudspeaker and of the display.
- Connect the CIS flat cable to the connector on the control panel board.

5. Position the lower part of the control panel on the chassis and clip it in place. Press down on the upper part of the control panel to complete the assembly.

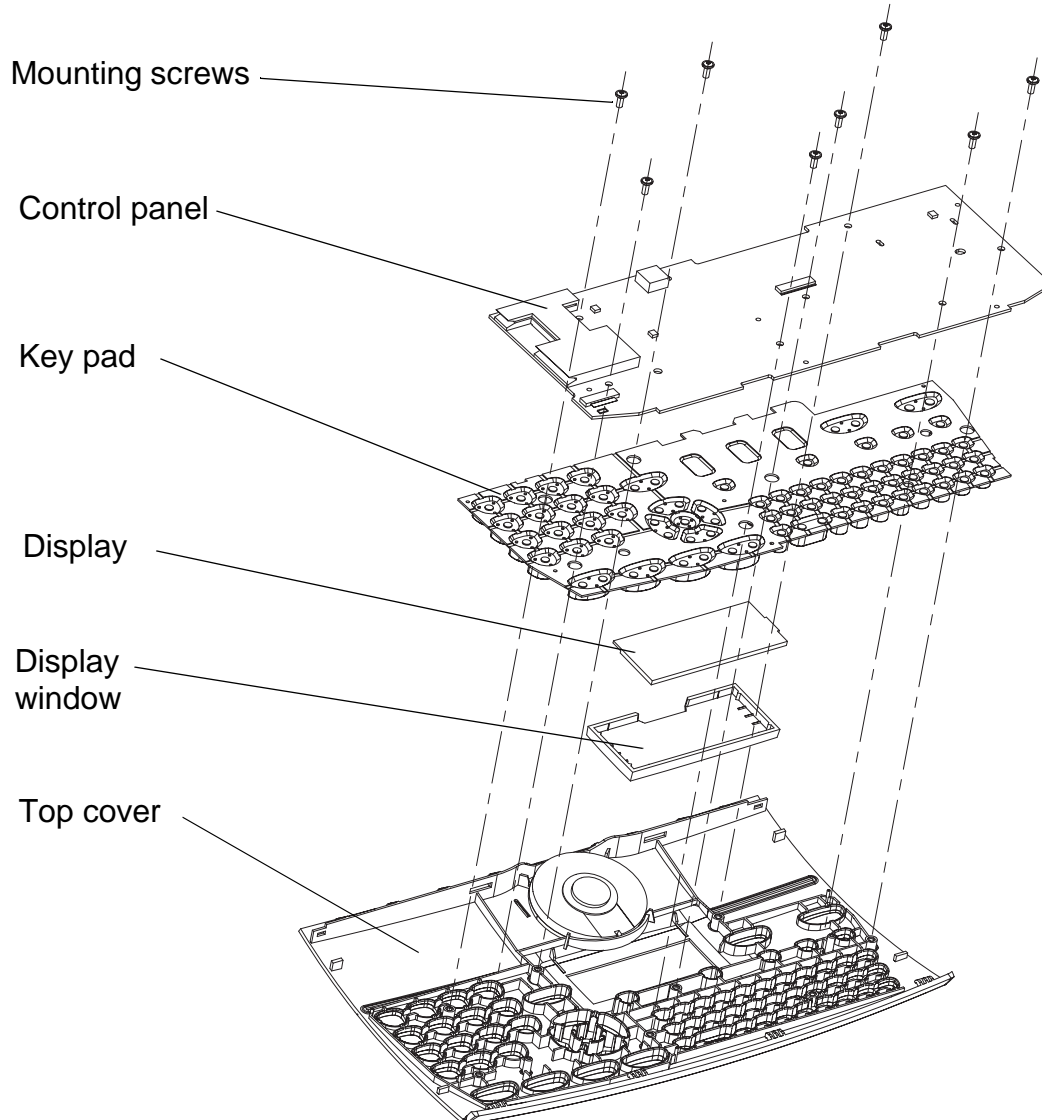


Figure 3

REP 18 CPU Board

Parts list on PL 5

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Perform a remote readout (if the function has been enabled).
2. Save the directory and the parameters on a directory card (MENU * 5).
3. Remove the right hand cover (REP 25).
4. Disconnect all external connectors to the CPU board.
5. Remove two screws, then the CPU metal cage.

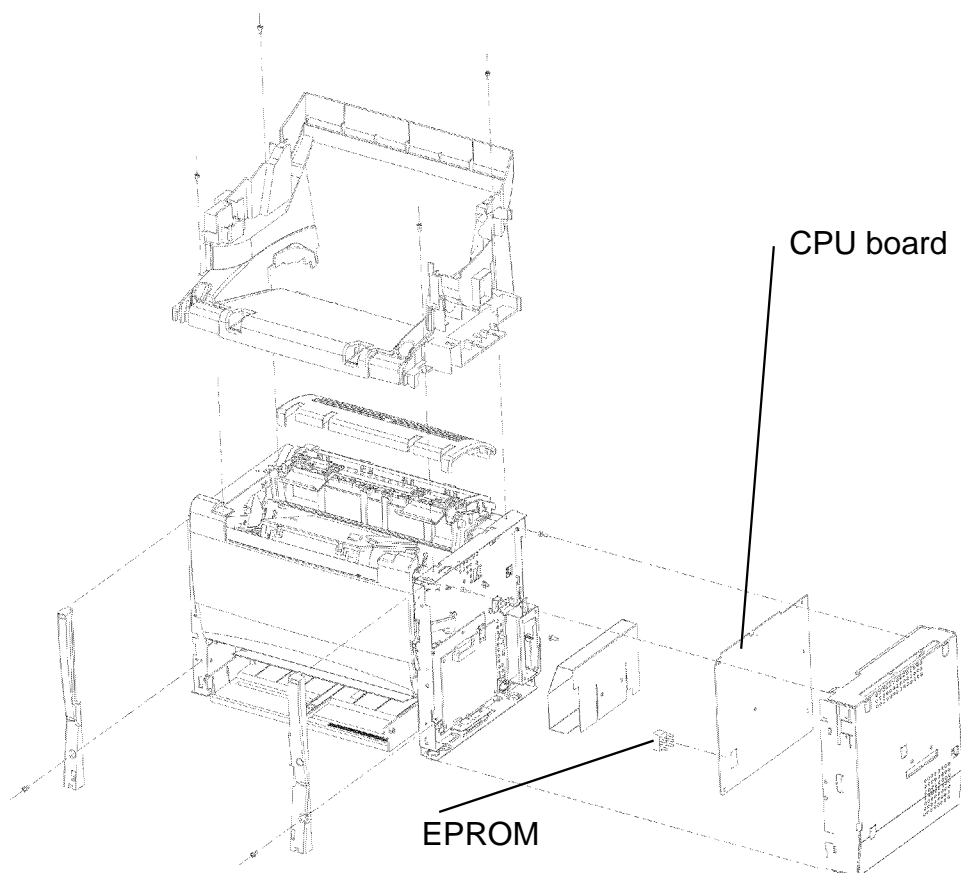


Figure 1

6. Remove the five mounting screws, then the CPU board.

Replacement

1. Unpack and visually inspect the new parts.
2. Install the EPROM memory from the old CPU board onto the new board (refer to Figure 1).
3. Position the CPU board, screw in and tighten the five mounting screws.
4. Reconnect all cables.
5. Replace the right cover and close the control panel.
6. Restore directory and parameters from the directory (MENU * 9).
7. Perform a remote readout (if the function has been enabled).
8. Perform a scanner calibration (MENU 8 0).

Note: *It is essential that the E2PROM memory “stays” with the machine, because this memory contains:*

- The consumables counters.
- The counters of the number of printed pages.
- The remote readout counters.
- The network options (FSI, GDF, kit LAN).

REP 19 Control Panel/Scanner Chassis Assembly

Parts list on PL 5

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the document trays from the machine.
2. Open the front door.
3. Remove the left cover, (REP 24).
4. Remove the two screws shown in Figure 1.

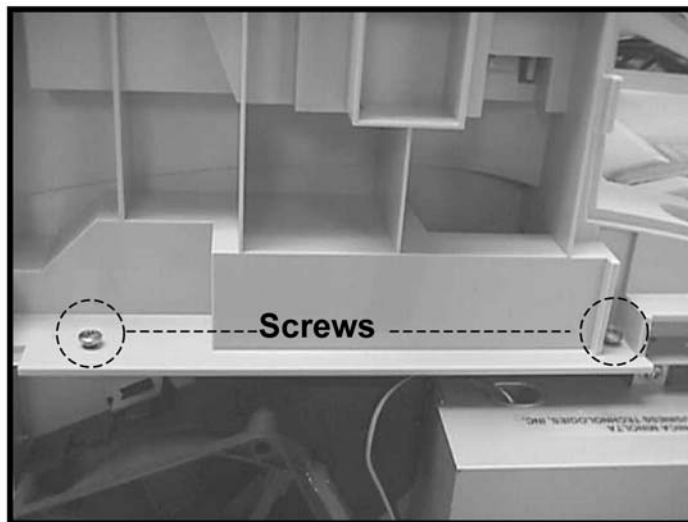


Figure 1

5. Remove the right cover (REP 25).

6. Remove the two screws shown in Figure 2.

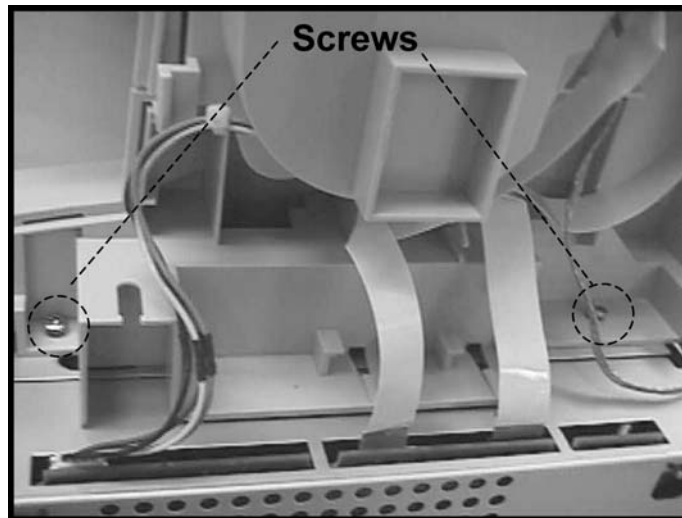


Figure 2

7. Disconnect the cables shown in figure 3.

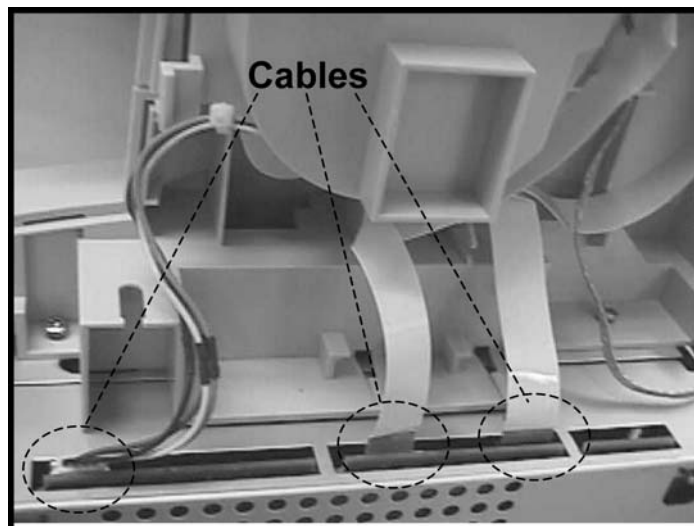


Figure 3

CAUTION

Take note of the blue reinforcing tape on the flat cables. The cables must be reconnected in the same orientation.

8. Disconnect the shielded ground cable shown in Figure 4.

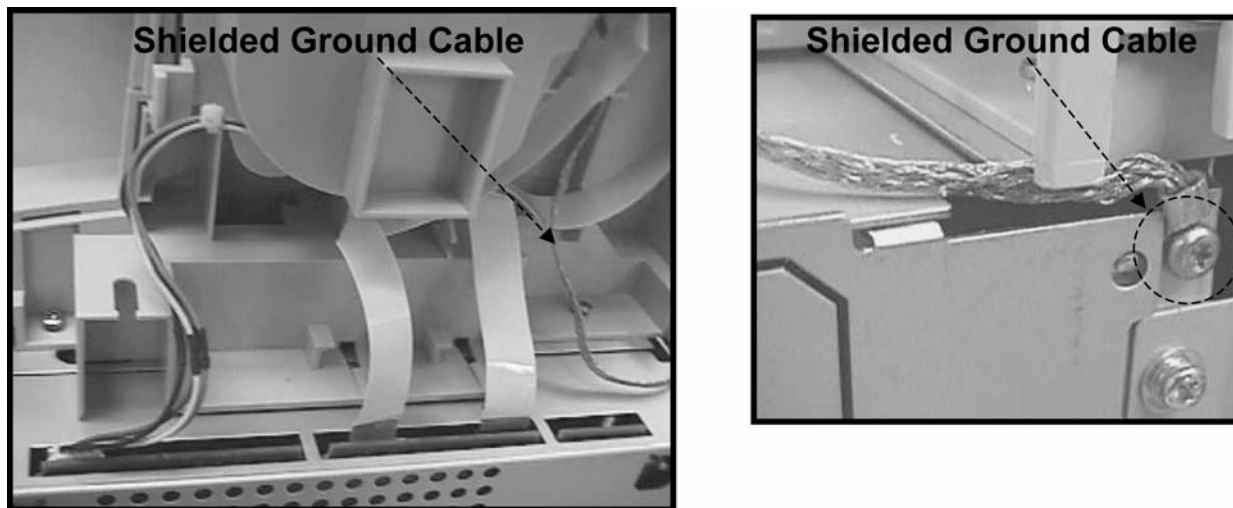


Figure 4

9. Remove the scanner assembly by lifting it and carefully sliding it to the front of the machine.

CAUTION

Take care not to damage the paper output guides.

Replacement

CAUTION

Take care not to damage the upper transport cover when placing the scanner assembly back into position. Lift the paper output guides before placing the scanner assembly so that they don't interfere with the assembly.

1. The replacement is the reverse of the removal procedure.
2. Perform a scanner calibration (MENU 8 0).
3. Print out a gray scale sample. Press # (make sure SOS1, Bit 8 is set to 1).

REP 20 CIS Flat Cable

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Dis-assemble the scanner assembly (REP 23).
2. Turn the scanner up side down. Remove the three screws show in Figure 1.

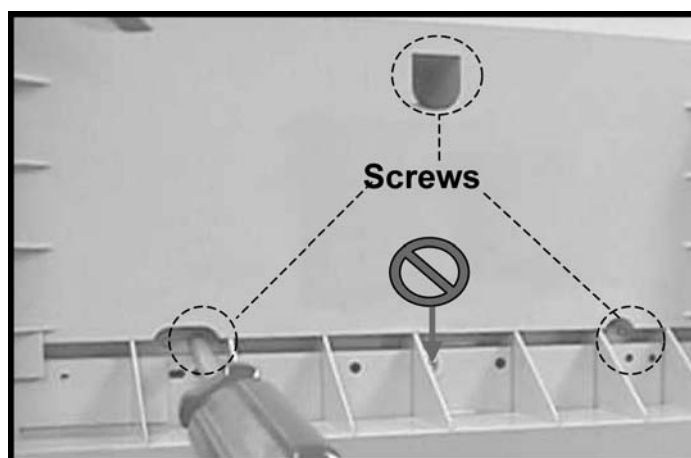


Figure 1

3. Remove the two cover screws shown in Figure 2.

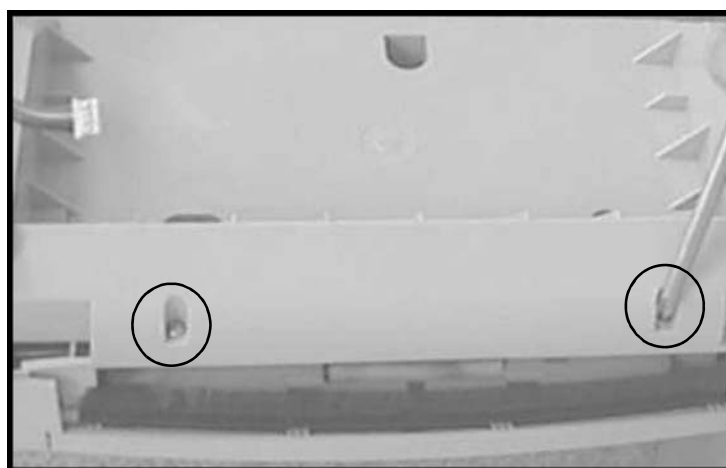


Figure 2

4. Remove the scanner lower cover.

CAUTION

Take care not to damage the CIS assembly ribbon cable.

5. Remove the CIS securing screw, then the CIS assembly, Figure 3.

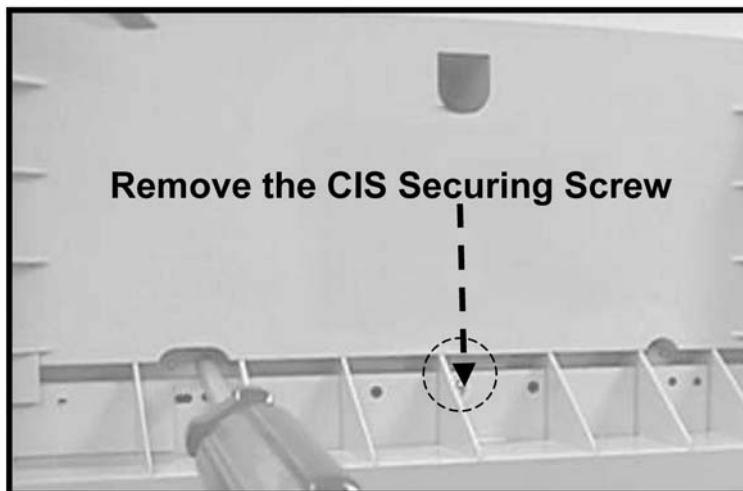


Figure 3

6. Disconnect the CIS flat cable from the CIS. Remove the CIS flat cable.

Replacement

1. The replacement is the reverse of the removal procedure.

REP 21 Motor Drive

Parts list on PL 8

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Dis-assemble the control panel/scanner chassis assembly (REP 23).
2. Free the wires that supply the motor drive from their cable guide.
3. Remove the two mounting screws. Disconnect the grounding screw.
4. Remove the motor drive. Remove and keep the 44/18 gear.

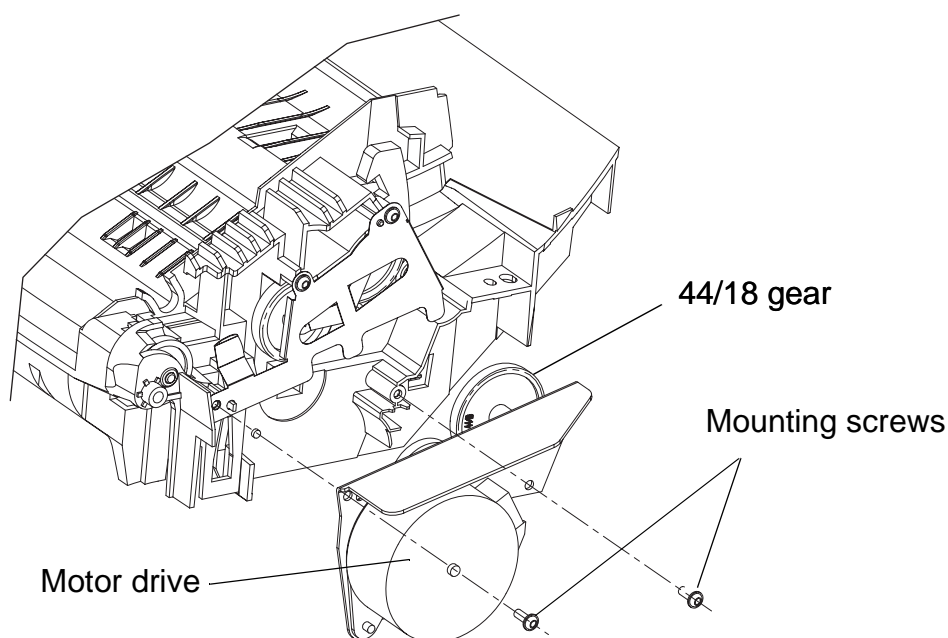


Figure 1

Replacement

1. Unpack and visually inspect the new parts.
2. Attach the 44/18 gear on the motor drive.
3. Pass the wires in the wire guide. Connect the grounding screw in the original location.
4. Screw in and tighten the two mounting screws.

REP 22 Control Panel, Flat Cable and Chassis

Parts list on PL 4

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the top cover (REP 17) and the control panel/chassis assembly (REP 19).
2. Disconnect the grounding screws located under the top cover.
3. Press the control panel opening latch.
4. Press outwards on the latch and release the stop.
5. Free the control panel flat cable.
6. With the control panel assembly placed on a work surface, take hold of the control panel and lift the chassis towards the right to free the left-hand joint, then push it forward to free the right hand joint. Disconnect the control panel grounding wire and remove the chassis.

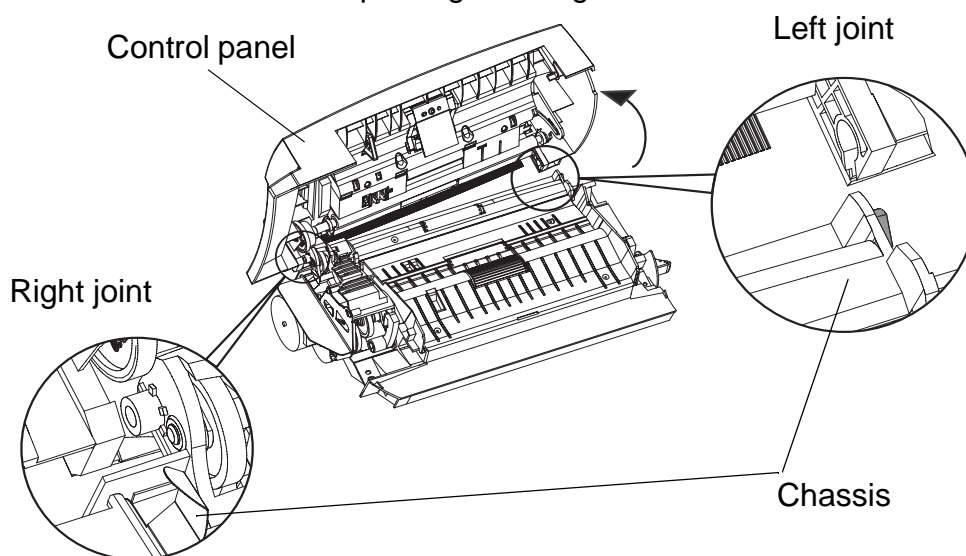


Figure 1

7. Free the control panel flat cable from the cable guide and remove it.

Replacement

1. Unpack and visually inspect the new parts.
2. Connect the grounding wire to the control panel. Join the control panel and chassis at the right hand joint, then position them at right angles to each other, and join them at the left-hand joint.
3. Press on the latch and close the control panel, letting the stop lock behind the latch.
- 4.

REP 23 Dis-Assembling the Scanner

Parts List on PL 2

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the Control Panel/Scanner Chassis Assembly (REP 19).
2. Remove the screw beside the scanner release button as shown in Figure 1.



Figure 1

3. Remove the screw on the right side of the scanner beside the alignment pin as shown in Figure 2.

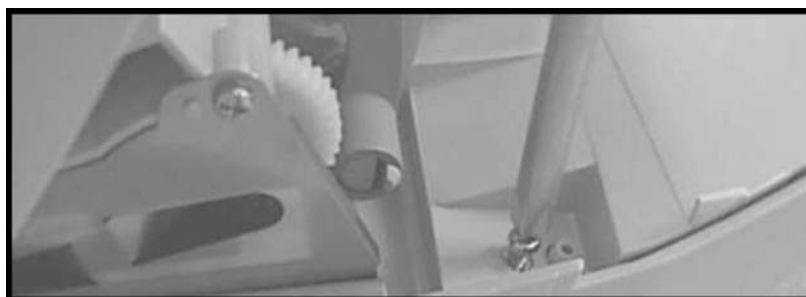


Figure 2

4. Release the catch on the left of the Control Panel/Scanner Chassis Assembly, Figure 3.

Left catch

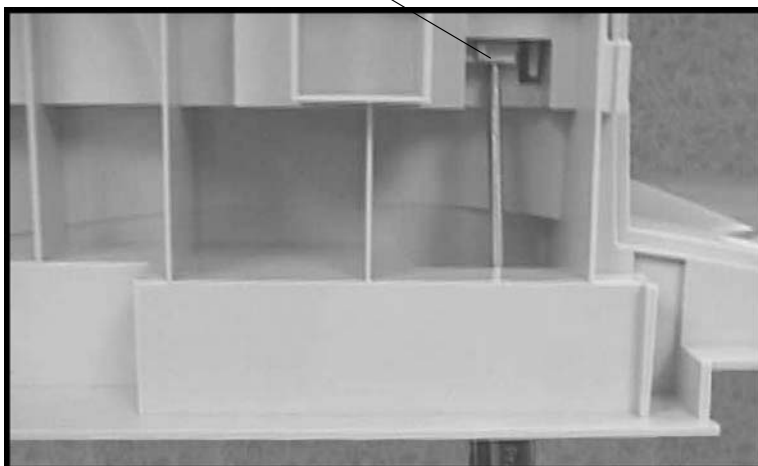


Figure 3

5. Release the right catch located underneath the right side of the Control Panel/Scanner Chassis Assembly, Figure 4.

Right catch

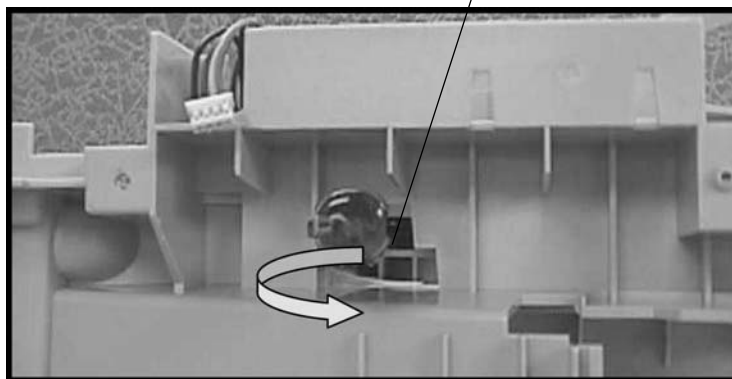


Figure 4

6. Separate the Control Panel/Scanner Chassis from the lower scanner frame.

Replacement

1. The replacement is the reverse of the removal procedure.

REP 24 Left Cover

Parts list on PL 2

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the screw located on the rear of the machine, above the power cord connection.

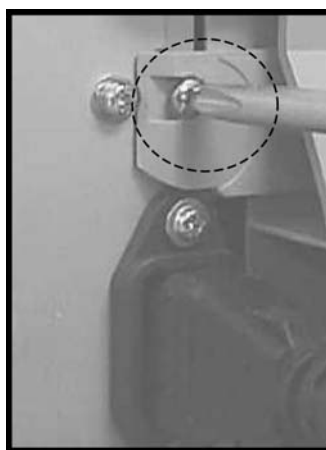


Figure 1

2. Release the rear of the cover, then remove the cover toward the front of the machine.

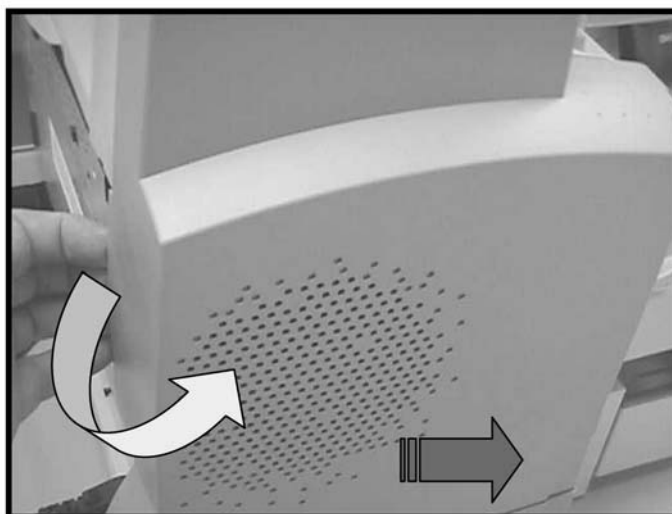


Figure 2

Replacement

1. Slide the cover in place. Fit the cover by firmly pushing into place as indicated in Figure 3.

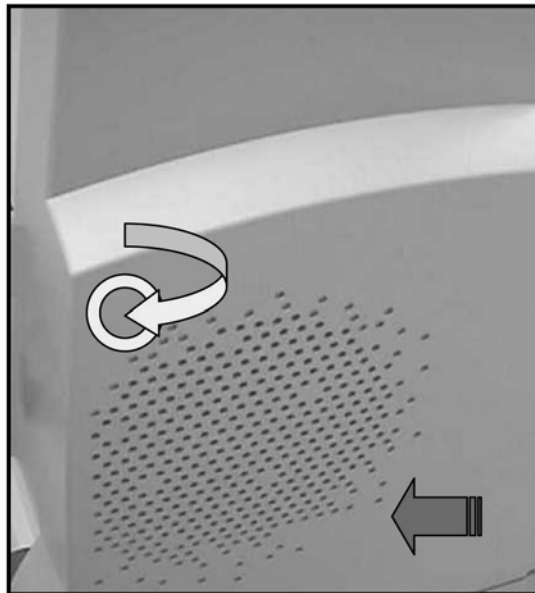


Figure 3

2. Reinstall the screw on the rear.

REP 25 Right Cover

Parts list on PL 2

WARNING

Switch off the electricity to the machine. Disconnect the power cord from the customer supply while performing tasks that do not need electricity. Electricity can cause death or injury. Moving parts can cause injury.

Removal

1. Remove the screw located at the rear of the right cover.

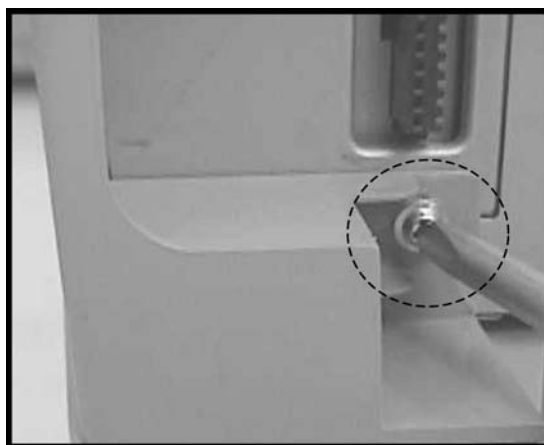


Figure 1

2. Release the rear of the cover, then remove the cover toward the front of the machine.

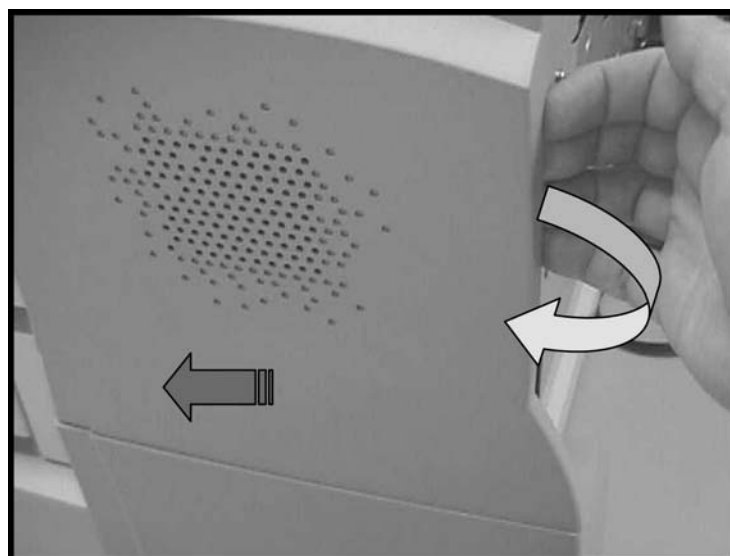


Figure 2

Replacement

1. Slide the cover in place. Fit the cover by firmly pushing into place as indicated in Figure 3.

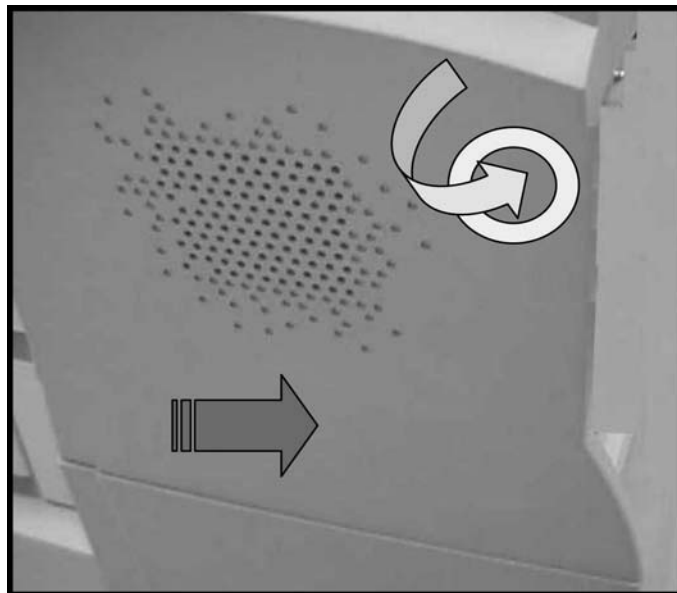


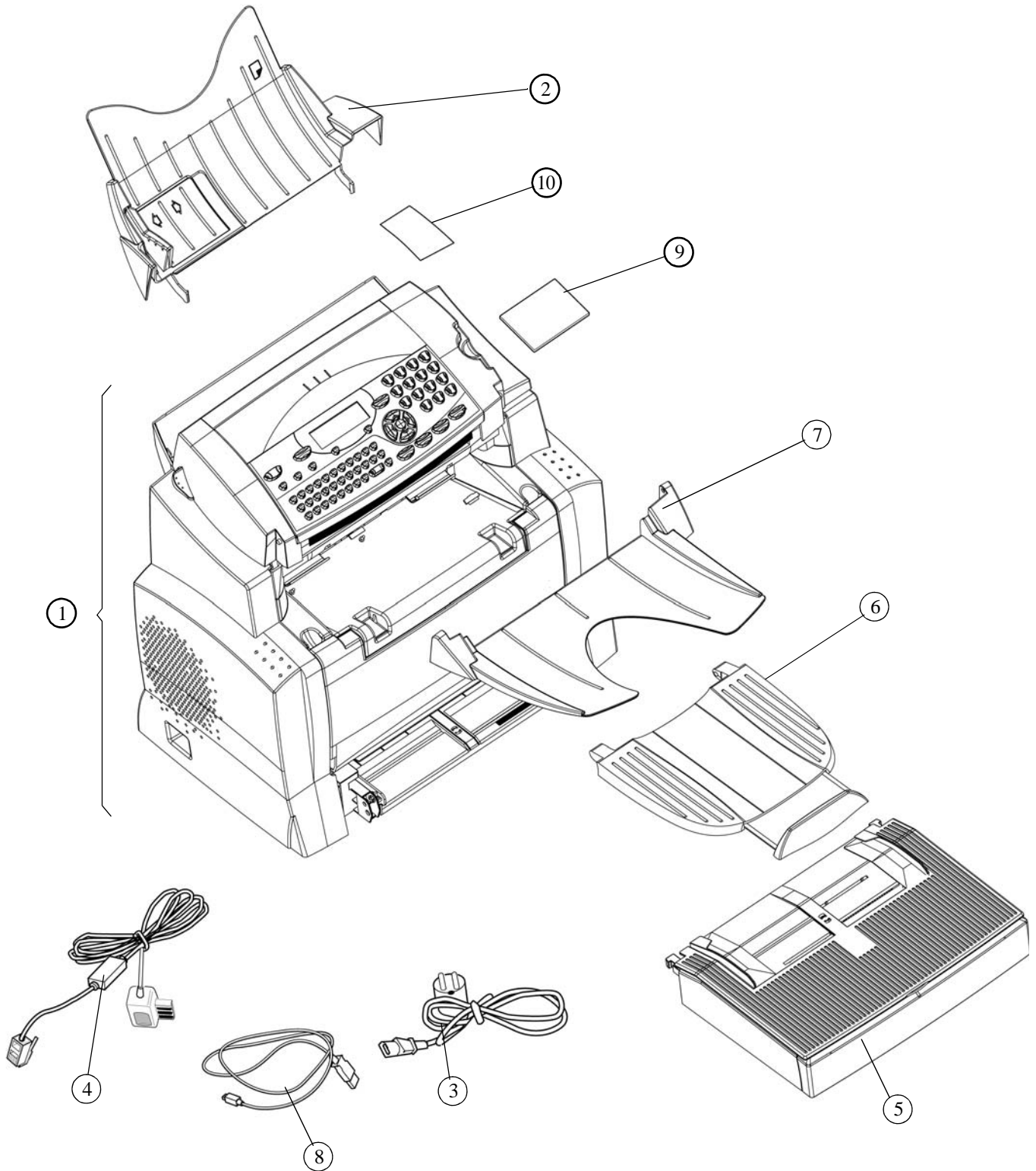
Figure 3

2. Reinstall the screw on the rear.

5. Spare Parts List

PL 1 FaxCentre 2121 Assemblies and Trays 2
PL 2 Machine Assembly 4
PL 3 Control Panel and Scanner 6
PL 4 Retard Pad and White Roller Assemblies 8
PL 5 Printer Unit Assembly 10
PL 6 Control Panel Assembly 12
PL 7 Paper Tray 14
PL 8 CIS Support and Motor Drive Assemblies 16
PL 9 Drive/Transfer Unit 18
PL 10 Fuser Assembly 20
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PL 13 Consumables, Tools and Kits 26

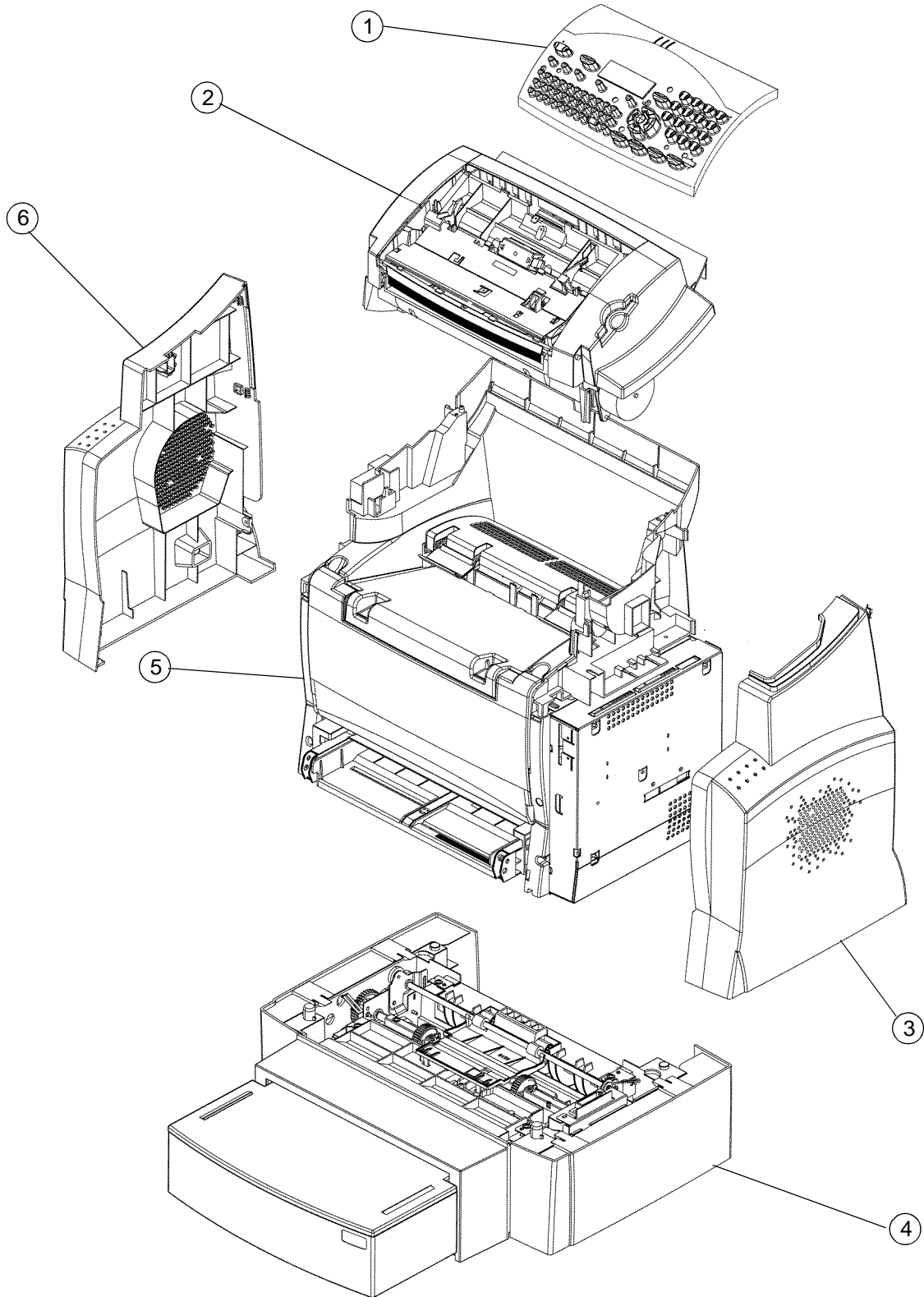
PL 1 FaxCentre 2121 Assemblies and Trays



PL 1 FaxCentre 2121 Assemblies and Trays

Item	Part Number	Description	Remark
1		Machine MF de base	Not spared
2	050N00509	Document input tray Introduceur scanner assemblé	
3	117N01773	AC Power cord Cordon d'alimentation secteur	
4	117N01774	Telephone line cord Cordon ligne téléphonique	
5	050N00510	Paper feed tray Bac papier imprimante	
6	050N00511	Paper output tray Réceptacle imprimante assemblé	
7	050N00512	Document output tray Réceptacle sortie scanner	
8	117N01784	USB Cable	
9	091N80262	Directory card	
10	091N80261	Legend label	

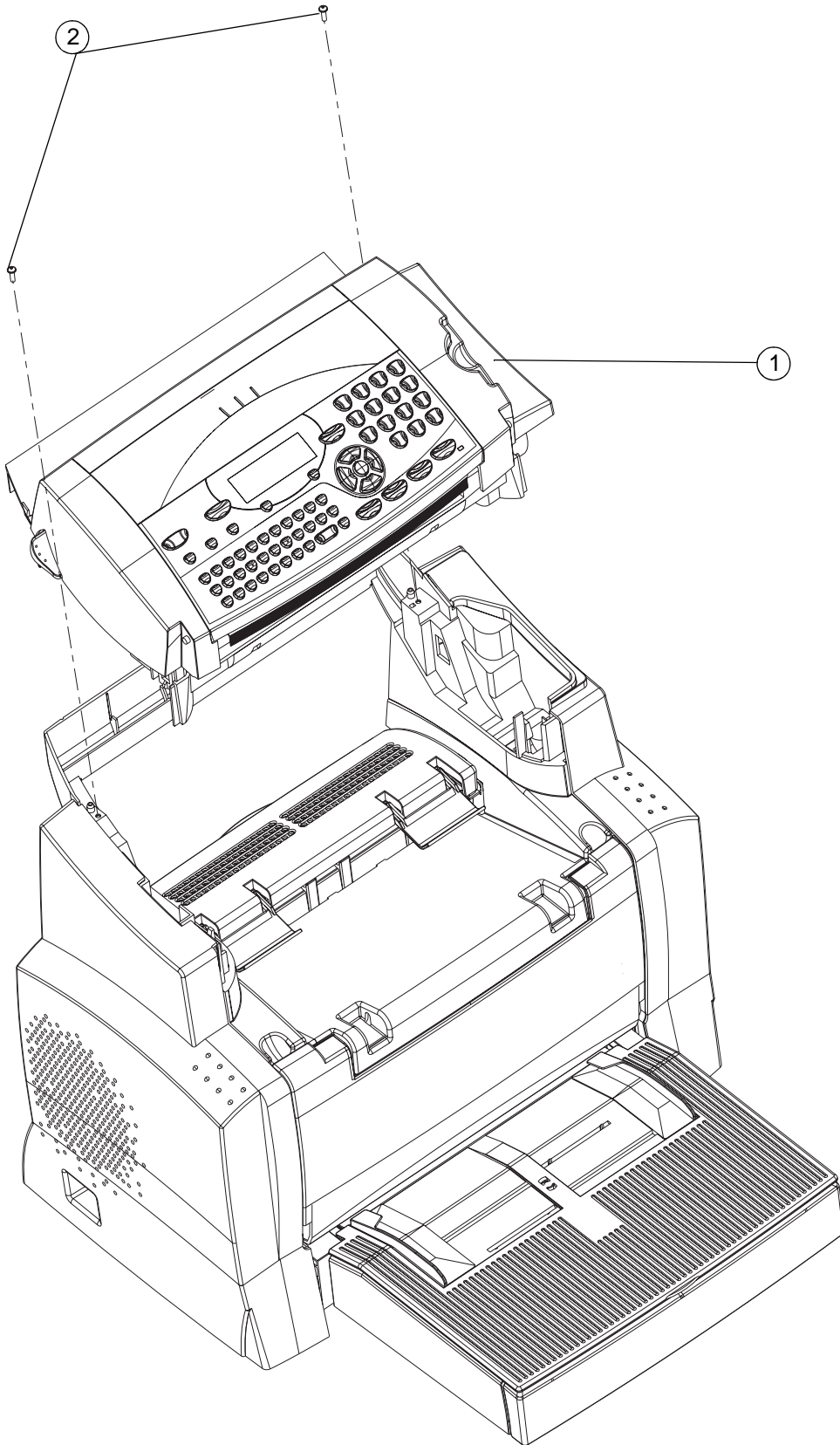
PL 2 Machine Assembly



PL 2 Machine Assembly

Item	Part Number	Description	Remark
1		Control panel Pupitre équipé	Refer to PL 6
2		Scanner assembly Scanner assemblé	Refer to PL 4, REP 23
3	002N02656	Right cover Capot droit	REP 25
4	050N00515	Paper tray 2 (optional) Bac supplémentaire 500 feuilles (selon modèle ou option	
5		Printer assembly Imprimante assemblée ROHS	Not spared
6	002N02657	Left cover Capot gauche	REP 24

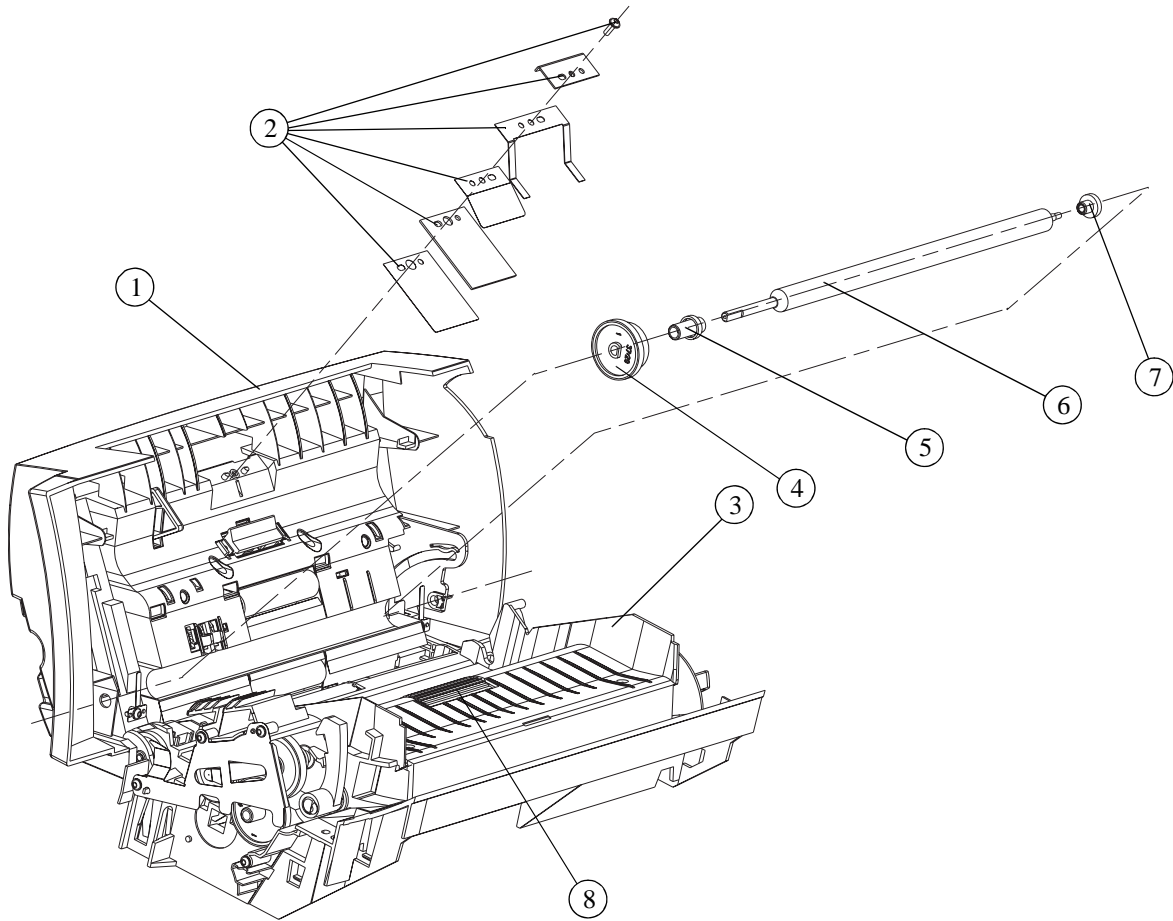
PL 3 Control Panel and Scanner



PL 3 Control Panel and Scanner

Item	Part Number	Description	Remark
1		Control panel-scanner chassis assembly Ensemble pupitre-châssis scanner	Refer to PL 4
2		Mounting screws for printer/control panel-scanner Vis de fixation imprimante pupitre-scanner	Part of PL 13 item 1

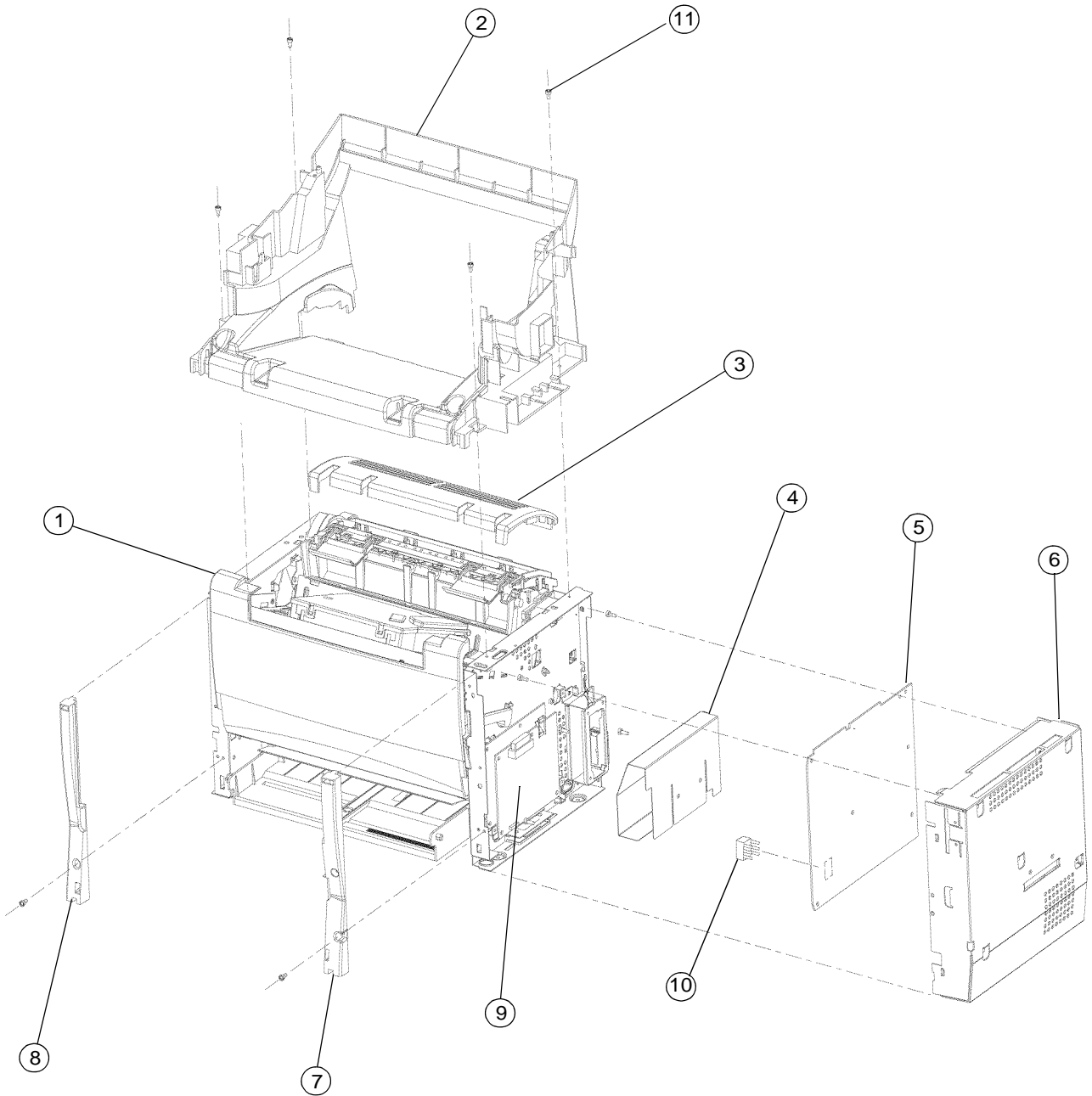
PL 4 Retard Pad and White Roller Assemblies



PL 4 Retard Pad and White Roller Assemblies

Item	Part Number	Description	Remark
1	002N02658	Control panel assembly Ensemble pupitre	REP 22
2	019N00929	Scanner retard pad assembly Kit déliasseur	REP 16
3	101N01412	Scanner chassis assembly Ensemble châssis scanner	
4	007N01574	37-29 pinion gear Pignon 37-29	
5	013N13869	Bearing Palier	
6	022N02313	White roller Rouleau blanc	REP 15
7	013N13870	Bearing Palier	
8	022N02314	Feed roll assembly Ensemble rouleau chargeur	

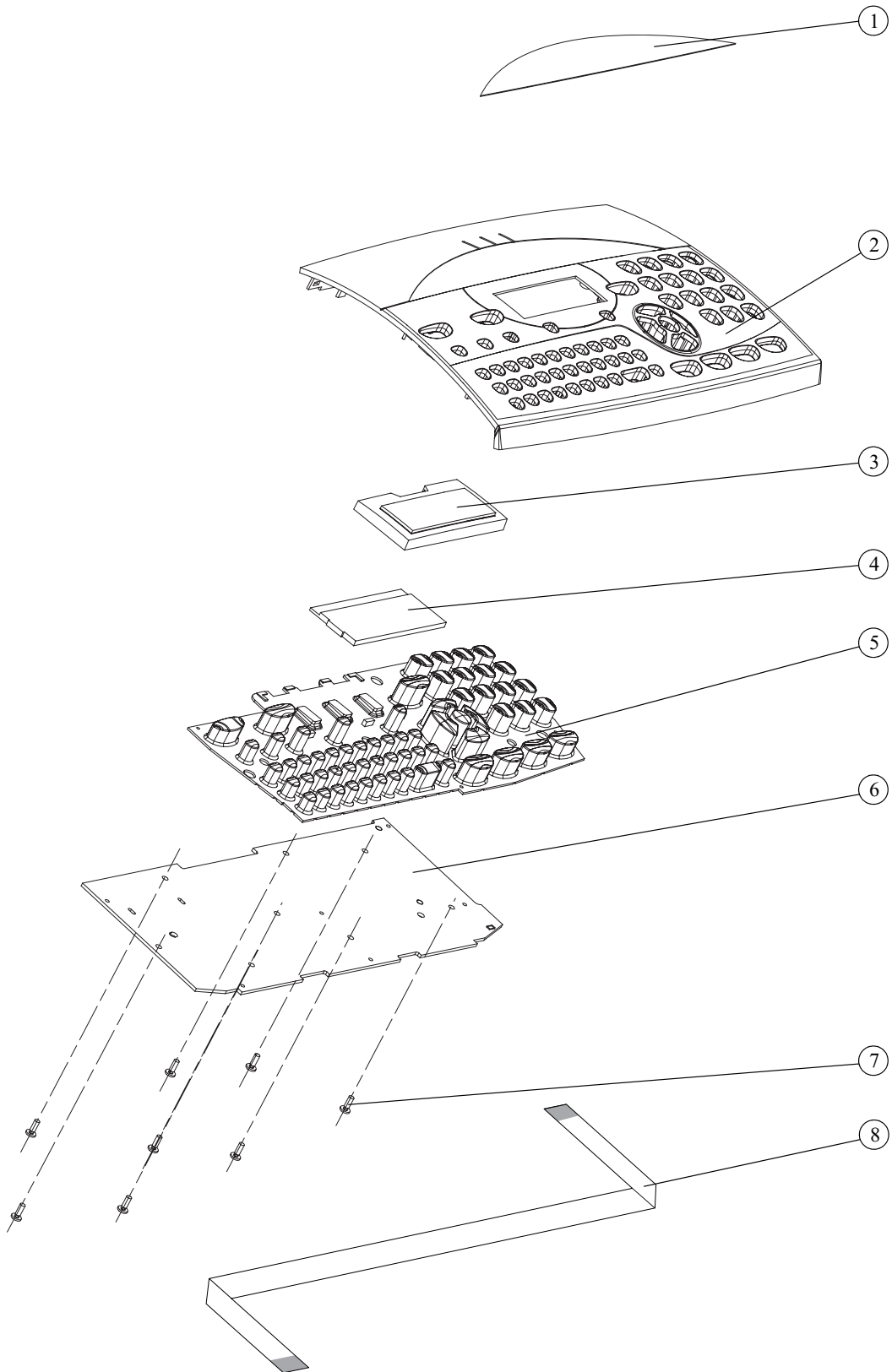
PL 5 Printer Unit Assembly



PL 5 Printer Unit Assemblies

Item	Part Number	Description	Remark
1		IOT Engine Imprimante	Not spared
2	002N02659	Top cover assembly Interface colorée	REP 19
3	002N02660	Jam access cover Capot accès papier	
4	002N02661	CPU board cover Mylar carte UC	
5	140N63243 140N63244	CPU board (F2121) CPU board (F2121L) Carte UC	REP 18
6	002N02662	Card cage cover Tôle UC	
7	002N02663	Front right cover Fixation avant droite	
8	002N02664	Front left cover Fixation avant gauche	
9	140N63253	Main PBA	REP 7
10		EPROM	Not spared
11		Mounting screws for the top cover assembly	Part of PL 13 item 1

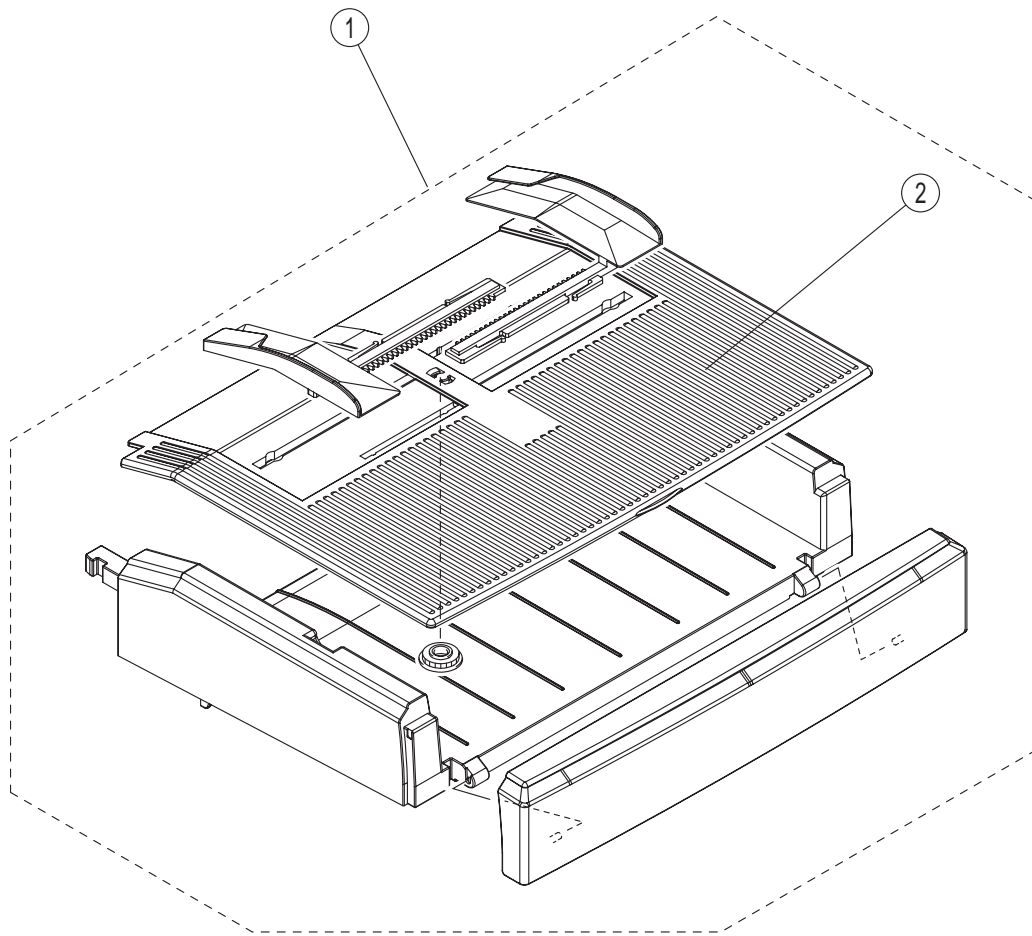
PL 6 Control Panel Assembly



PL 6 Control Panel Assemblies

Item	Part Number	Description	Remark
1	091N80263 091N80264	Control panel label (F2121) Control panel label (F2121L) Etiquette plastron	
2	002N02685	Control panel top cover Plastron	REP 17
3	062N00280	Display glass Vitre afficheur	REP 17
4	128N00528	LCD display Afficheur LCD	REP 17
5	019N00938	Key pad Elastomère	REP 17
6	140N63254	UI Control board Cartre pupitre	REP 17
7		Mounting screws for control panel board Vis de fixation carte pupitre	Part of PL 13 item 1
8	117N01775	Control panel flat cable Nappe pupitre	

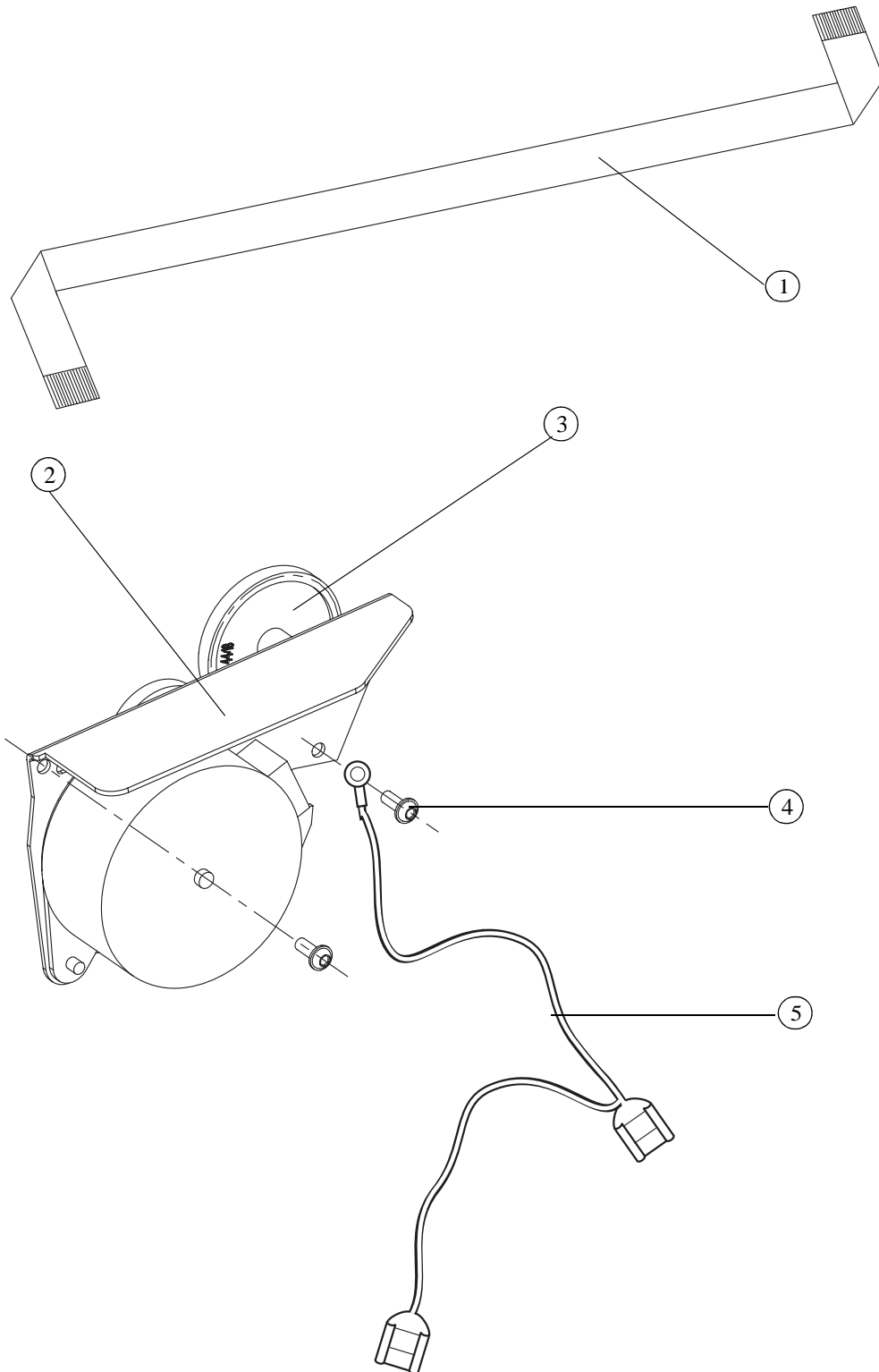
PL 7 Paper Tray



PL 7 Paper Tray

Item	Part Number	Description	Remark
1		Paper tray assembly Tiroir papier	Refer to PL 1
2	002N02665	Cover Couvercle	

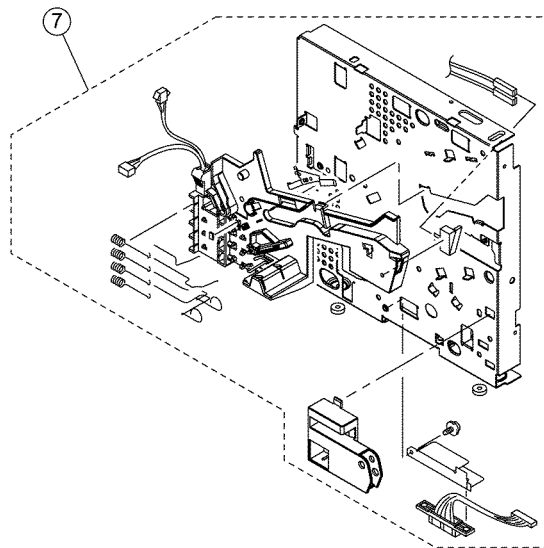
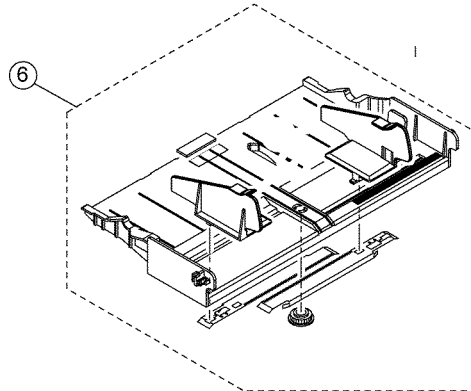
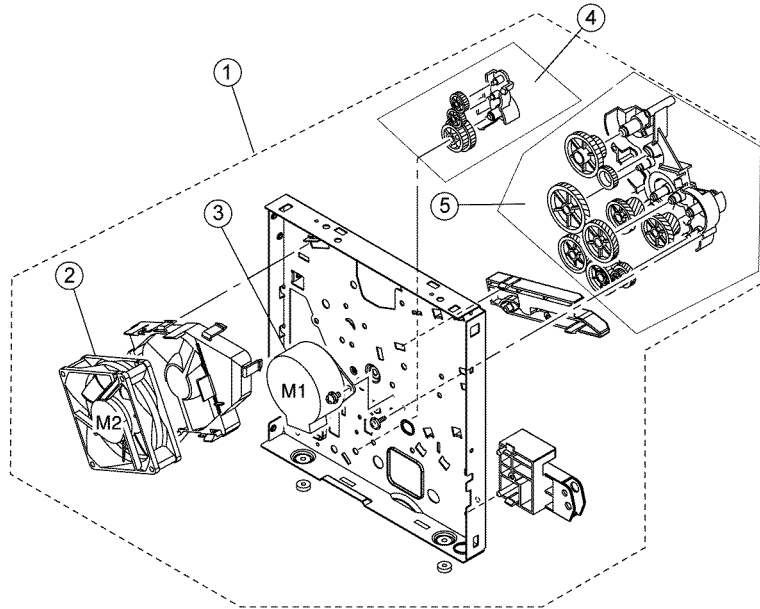
PL 8 CIS Support and Motor Drive Assemblies



PL 8 CIS Support and Motor Drive Assemblies

Item	Part Number	Description	Remark
1	117N01776	CIS flat cable Nappe CIS	REP 20
2	127N07532	CIS Motor assembly Motorisation	REP 21
3	007N01575	44/18 pinion gear Pignon 44/18	
4		Mounting screws for motor drive Vis de fixation motorisation	Part of PL 13 item 1
5	117N01777	Ground wire Fil de masse	

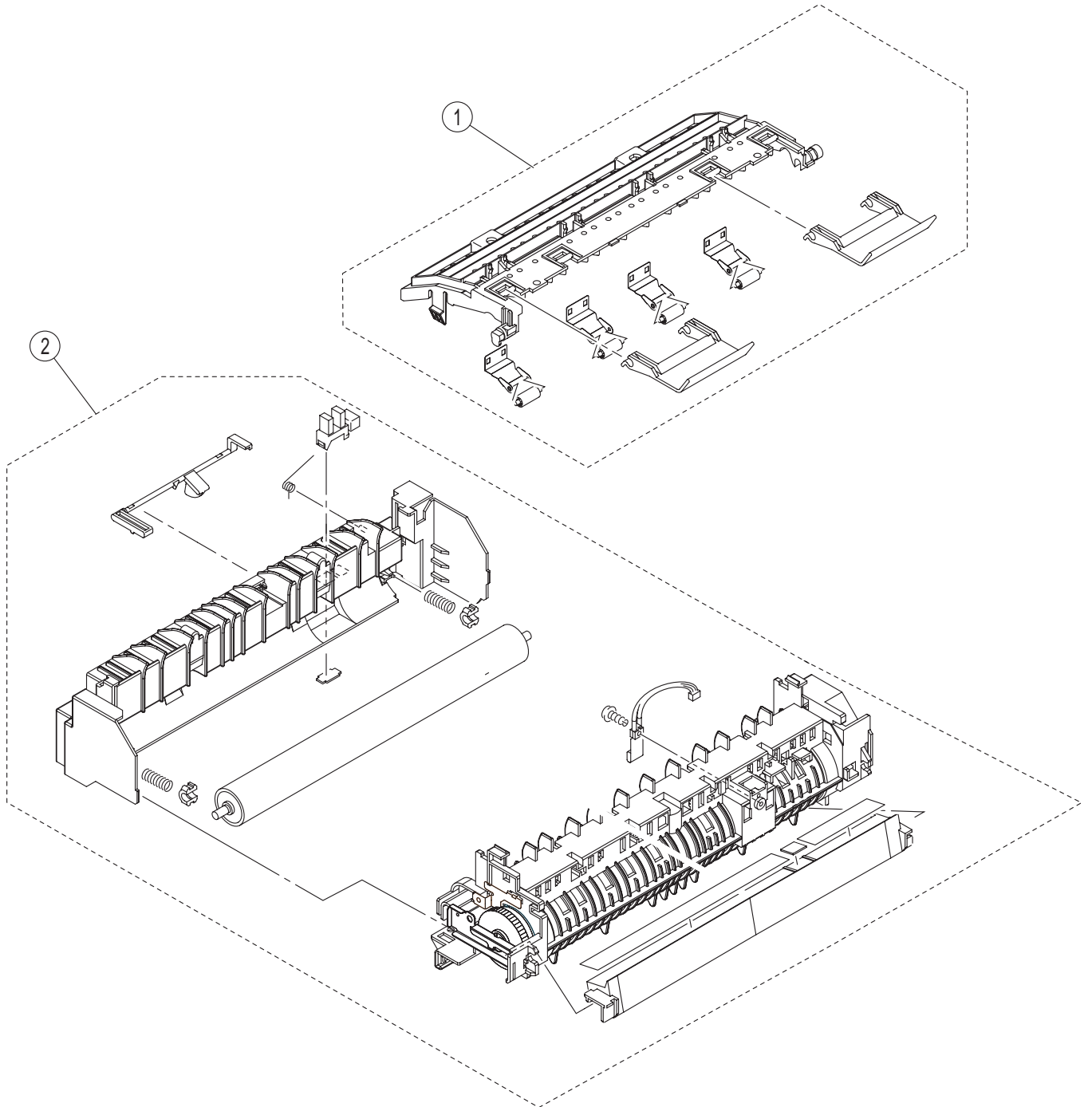
PL 9 Drive/Transfer Unit



PL 9 Drive/Transfer Unit

Item	Part Number	Description	Remark
1	007N01576	Drive assembly Structure gauche assemblée	
2	127N07540	Fuser fan Ventilateur	
3	127N07541	Main drive motor Moteur	REP 10
4		Drive gear assembly Support assemblé	Not spared
5		Drive gear assembly Platine assemblée	Not spared
6	038N00510	Paper feed guide Guide papier assemblé	
7		Right frame assembly Structure droite assemblée	Not spared

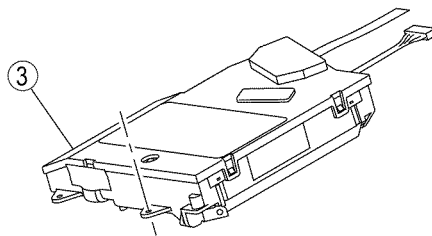
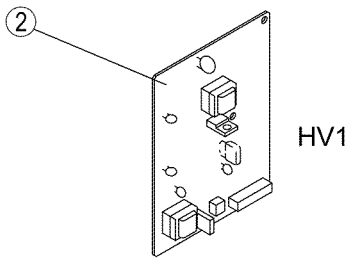
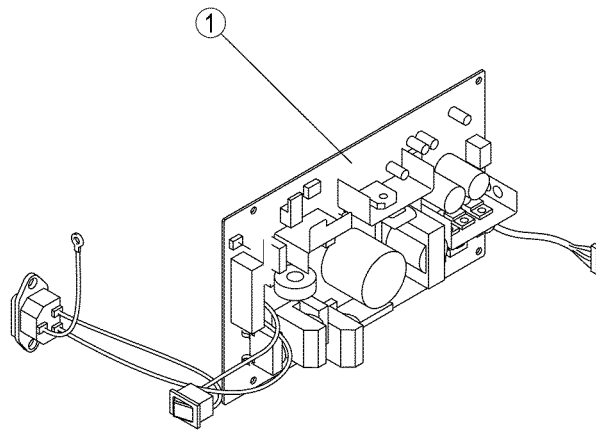
PL 10 Fuser Assembly



PL 10 Fuser Assembly

Item	Part Number	Description	Remark
1	032N00483	Transport assembly Guide assemblée	
2	126N00278	Fuser assembly Four	REP 6

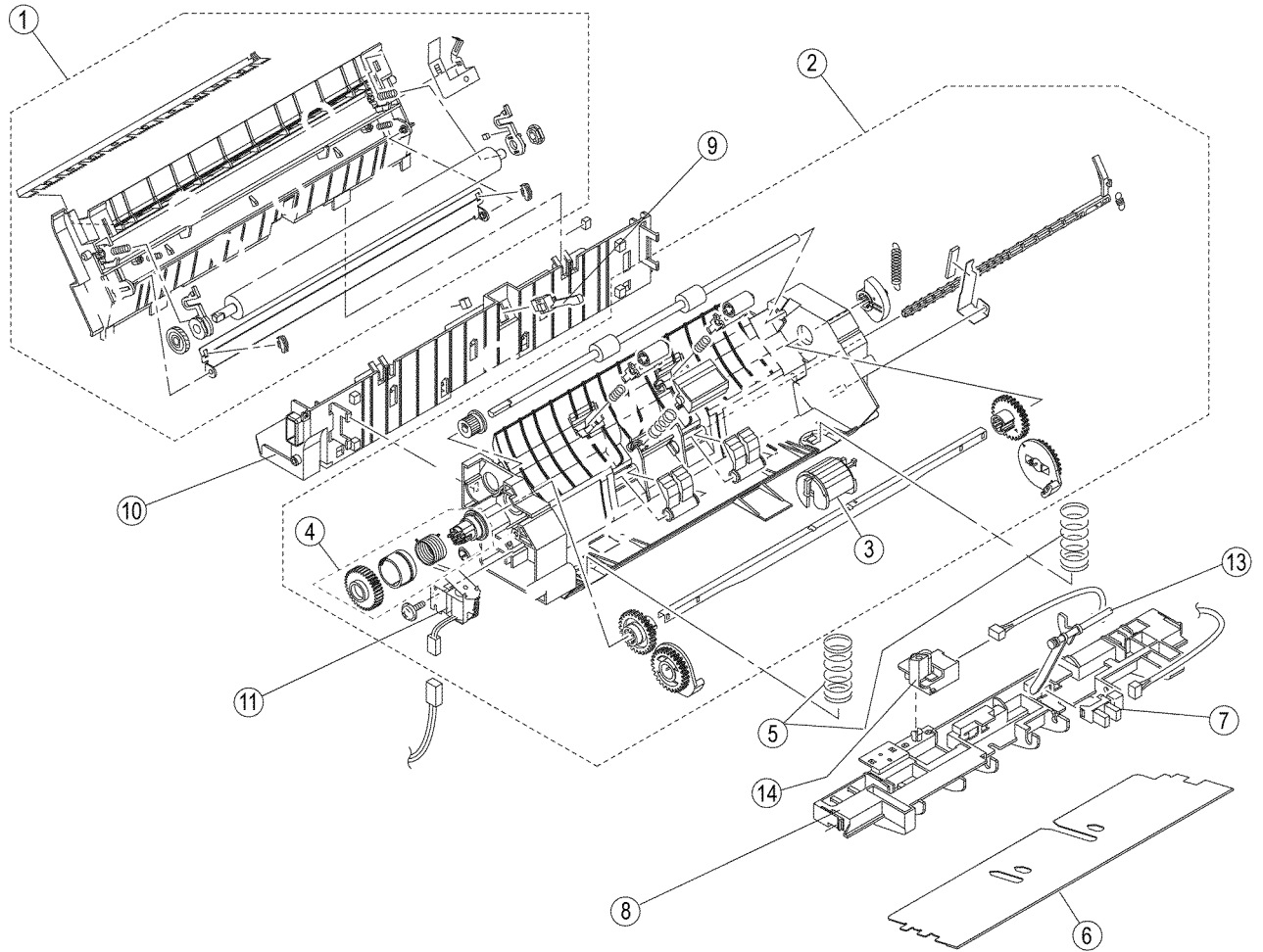
PL 11 Power Supplies and ROS Unit



PL 11 Power Supplies and ROS Unit

Item	Part Number	Description	Remark
1	105N02133	LVPS Carte alimentation	REP 8
2	112N00226	HVPS Carte HT	REP 8
3	062N00277	ROS assembly Tête d'impression assemblé	REP 9

PL 12 Paper Feed Section



PL 12 Paper Feed Section

Item	Part Number	Description	Remark
1	022N02316	BTR assembly Unité de transfert	
2	038N00511	Paper feed assembly Avance papier assemblée	
3	022N02315	Feed roll Galet	REP 1, REP 2
4	005N01101	Feed clutch Embrayage	REP 13, REP 14
5	009N01620	Normal force spring Ressort pour palette imprimante	
6	015N00603	Lift plate Palette imprimante	
7	107N00451	Tray empty sensor Capteur	
8	019N00930	Sensor mounting bracket Support	
9	110N01419	Registration switch Capteur	
10	038N00512	Paper guide Support	
11	121N01152	Feed solenoid Electro-aimant	REP 12
12	022N02328	Bias transfer roll (BTR)	
13	120N00515	Tray empty sensor actuator	
14	130N01502	Toner empty sensor	

PL 13 Consumables, Tools and Kits

**NO EXPLODED
VIEW PROVIDED**

PL 13 Consumables, Tools and Kits

Item	Part Number	Description	Remark
1	500N00114	Hardware kit	
2	095N99318	Packaging box with inserts	
3		Toner cartridge	Refer to the User Guide for the part number.
4		Drum cartridge	Refer to the User Guide for the part number.
5	043E00550	Plastislip grease	
6	600T41300	Torx bit kit with handle	

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6. General Procedures and Information

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GP 1 Product Specifications

Operating and Storage Specifications

Table 1: Operating And Storage Specifications

		FaxCentre 2121
Operating	Supply	220-240V, 50Hz (110-127V, 60Hz)
	Power Consumption (Standby)	Less than or equal to 15W
	Power Consumption (Printing)	850W
	Temperature	10°C to 32°C (50°F to 89°F)
	Temperature changes	Less than or equal to 10 °C/hour
	Humidity	20% to 80% (RH non-condensing)
	Humidity changes	Less than or equal to 20%/hour
	Altitude	0 to 2500 meters/8202 feet (above sea level).
	Ambient light	Less than or equal to 3000 lux
Fax Storage:	Temperature	0°C to 40°C (35°F to 104°F)
	Temperature changes	Less than or equal to 10°C (50°F)/hour
	Humidity	20% to 80% (RH non-condensing)
	Humidity changes	Less than or equal to 20%/hour
	Altitude	From 0 to 2500 meters/8202 feet (above sea level)
Consumables Storage:	Normal temperature	0°C to 35°C (32°F to 95°F)
	Extreme temperatures	-10°C to 0°C (14°F to 32 °F) and 35°C to 40°C(95°F to 104°F) (less than 10% of the storage time)
	Humidity	20% to 90% (RH non-condensing)
Maximum storage time		18 months

General Technical Specifications

Table 2: General Technical Specifications

		FaxCentre 2121
Machine	Dimensions (widthxdepthxheight)	420x530x510mm (17.1x21.6x20.8 inch)
	Weight	14 kg (30.8lb)
Consumables	Reference Paper (RP) Type	A4-80gsm (Legal/Letter-20lb)

Scanner Specifications

Table 3: Scanner Specifications

Item	FaxCentre 2121
Type	Color CIS
Resolution (dpi)	600
Grey scale	256 levels

Table 3: Scanner Specifications

Item		FaxCentre 2121
Paper size	Format	A4 (210 x 297mm)/ Letter(8.5 x 11 inch)
	Maximum width	216mm (8.5 inch)
	Minimum width	Guided: 209mm (8.2 inch)
		Not guided: 180mm (7 inch)
	Maximum length	1000mm (39.37 inch)
Paper weight		60gsm to 90gsm (16lb to 24lb)
Capacity of document loading tray		35 pages
Acquisition time for black and white document:	Normal (200 x 100dpi)	1.8 sec
	Fine (200 x 200dpi)	3.6 sec
	Super fine (200 x 400dpi)	5.4 sec
	Photo (200 x 200dpi)	3.6 sec
	300 dpi (300 x 300dpi)	5.4 sec
First copy/print out time for color document:	300 x 300dpi	16 sec
Zoom in steps of 1%		25% to 400%
Contrast		7 levels
Brightness		7 levels
Margin adjustment in steps of 0.5mm		7 levels

Printer Technical Specifications

Table 4: Printer Technical Specifications

Item		FaxCentre 2121
Type		B/W laser
Resolution (dpi)		600 x 600 (1200 dpi in half speed mode)
Max paper Size		A4 (210 x 297mm)/ Letter (8.5 x 11 inch)
Capacity of the paper feed tray in pages		250
Capacity of the optional second paper feed tray in pages		500
Paper weight		60gsm to 90gsm (16lb to 24lb)
Manual paper feed:	Paper (RP)	60gsm to 90gsm (16lb to 24lb)
	Heavy paper	90gsm to 163gsm (24lb to 43lb)
	Transparencies (Laser Printer compatible)	Yes
Capacity of the output tray in pages		100
Printing rate		20ppm
Printing area		206 x 292mm (8.1x11.5 inch)
Max number of jobs in the print queue		500
Consumable life	Max drum capacity (A4 pages, ratio 5%)	20000
	Max toner cartridge capacity (A4 pages, ratio 5%)	6000
Consumables management		By smart card
Weight of drum		300g (0.66lb)

Printer General Specifications

Table 5: Printer General Specifications

Item		FaxCentre 2121
Type		Desktop Laser Beam Printer
Exposure System		Laser diode + Polygon Mirror
Resolution	Normal	600dpi
	Half-speed	1200dpi
Copy Paper Size		A4, A5, B5 8.5 x 14 inch, 8.5 x 11 inch, 3 x 5 inch, 5.5 x 8.5 inch, 7 1/4 x 10 1/2 inch
Media Type		Plain paper (60gsm to 90gsm) (16lb to 24lb)
		Recycled paper (60gsm to 90gsm) (16lb to 24lb)
		OHP transparencies, letterhead, envelopes, labels
		Thick paper (91gsm to 163gsm) (24lb to 43lb)
		Postcard, prepaid postcard (with no crease)

Table 5: Printer General Specifications

Item		FaxCentre 2121
First Printing Time	At 600 × 600dpi	3 sec (A4L/Letter L)
	At 1200 × 600dpi	21 sec or less (A4L/Letter L)
	At 1200 × 1200dpi	21 sec or less (A4L/Letter L)
Multi Print Speed	At 600dpi	20ppm (A4)
		20ppm (Letter L)
Warm-up Time	Rated voltage supplied at 23°C	10 sec. or less
	From Pause to be ready for first print	21 sec. or less (for a condition immediately after power has been turned ON)
System Speed	Normal	115mm (4.5 inch)/sec
	Half-speed	57.505mm (2.2 inch)/sec
Paper Feeding System		1-way system (Multipurpose Tray)
Capacity (recommended paper)	MP Tray	150 sheet
Paper Exit System		Face down
Tray capacity		100 sheets
Drum Charging System		Rotating brush + pre-charge film
Developing System		FMT single-component developing system
BTR		Transfer Roller system
Drum		OPC (organic photoconductor)
Drum Cleaning System		Non-cleaner system
Detack System		Curvature separating system
		Charge Neutralizing Needle
Fuser System		Heated roller system
Dimensions		Width: 386.8mm (15.2 inch)
		Depth: 404.5mm (15.92 inch)
		Height: 348mm (13.7 inch)
Weight		7.8kg/17.16lb (including DC/TC)
Power Requirements		100V, 50/60Hz ± 3Hz, 9.2A or less
Max. Power Consumption		900W
Acoustic Noise	Standby	30dB(A) or less
	Printing	54dB(A) or less
Operating Environment		10°C to 35°C (50°F to 95°F), 15% to 85%

Controller Specifications

Table 6: Controller Specifications

Item		FaxCentre 2121
Control Panel		LED × 1, SW × 1
ASIC		N1-Chips (Naltec Original ASIC)
Memory Configuration	Standard ROM	64 KB (in ASIC)
	EEPROM	1 Kilobit
	Flash ROM	2 Megabits (250 KB)
	RAM	8 MB (64-Megabit SDRAM: 64 Megabits × 1)
Interface		USB 1.1
Resolution (dpi)	Normal	600 × 600
	Half Speed	1200 × 600, 1200 × 1200
Emulation		None
Printer Driver		Windows 98SE/2000/Me/XP
Test Print		Configuration page

Copier Specifications

Table 7: Copier Specifications

Item	FaxCentre 2121
Type	Black-and-white
Input resolution (optical) (dpi)	300 x 200 (fast) or 300 x 300 (quality)
Output resolution (dpi)	600 x 600
Paper size.	A4 (210 x 297mm)/Legal/Letter (8.5x11 inch)
Maximum speed with resolution 300 x 200 (fast)	20ppm
Multicopy	1 to 99
Zoom	25% to 400%
Zoom steps	1%

Fax-Modem Specifications

Table 8: Fax-Modem Specification

Item	FaxCentre 2121
Type	PSTN-G3
V34 Maximum speed (bps)	33600
V34Fax capacity (bps)	2400 to 33600
Incrementation (bps)	2400
V17 capacity (bps)	7200, 9600, 12000, 14000
V29 capacity (bps)	7200, 9600
V27 capacity (bps)	2400, 4800

Data-Modem Specifications

Table 9: Data-Modem Specifications

Item	FaxCentre 2121
Type	PSTN-V90
V90 Maximum speed (bps)	56000
V34Fax capacity (bps) Incrementation (bps)	28000 to 56000 1333
V34plus capacity (bps) Incrementation (bps)	2400 to 33600 2400
V32bis capacity (bps)	7200, 9600, 12000, 14400
V32 capacity (bps)	4800 to 9600
V22bis capacity (bps)	2400
V22 capacity (bps)	600 to 1200

Fax Communication Specifications

Table 10: Fax Communication Specifications

Item	FaxCentre 2121
Type	PSTN, ITU 30, G3
V34Fax Maximum speed (bps)	33600
Coding	MH, MR, MMR, JBIG
ECM	T30 ECM
Time to transmit	2.5 sec
Type of transmission	From memory and immediate
Max. send delay	24 hours
PSTN redial	10

Internet Access Specifications

Table 11: Internet Access Specifications

Item	FaxCentre 2121
Type	PSTN-V90
V90 Maximum speed (bps)	56000
Modem error correction mode	V42
Data compression	V42bis
ISP subscriptions	1 to 6 only 1 active
ISP access protocol	PPP
ISP access security	PAP & CHAP-MD5C
Internet protocol	TCP/IP

LAN Access Specifications

Table 12: LAN Access Specifications

Item	FaxCentre 2121
Type	Ethernet 10/100 base-T
Plug and Play configuration	DHCP & BOOTP
Internet protocol	TCP/IP
DNS	2 DNS servers access

E-mail and Fax Communication Specifications

Table 13: E-mail and Fax Communication Specifications

Item	FaxCentre 2121
Compatibility	ITU T37
Mail protocol: sending	SMTP
Mail protocol: polling	POP3
Mail format:	MIME
Charset	US-ASCII
Encoding	7 bits, base 64, quoted-printable

Keyboard and Screen Specifications

Table 14: Keyboard and Screen Specifications

Item	FaxCentre 2121
Keyboard	64 keys QWERTY
Screen	2 lines of 16 characters+7 icons

Address List Specifications

Table 15: Address List Specifications

Item	FaxCentre 2121
Capacity	500
Type	Name/PSTN and SMS number/e-mail
Transmission list	32
Transmission list capacity	499
Import/export directory	E-mail (CSV format)

General Characteristics of Consumables

For each consumable (toner cartridge and drum) a counter contains the current number of pages that can still be printed.

For a new consumable this counter is reset to the capacity of the consumable, expressed in number of pages, as specified by the manufacturer.

The displayed percentage is calculated by means of this counter, relative to the initial capacity of the consumable (from 100% to 1%).

The values of the consumable counters are updated regularly in the flash memory. At each power on, the machine the counters are read from the flash memory.

Furthermore, it is essential to initialize the new consumables with the smart card supplied with the consumable (refer to the User Guide).

GP 2 Machine Components

Front and Back View

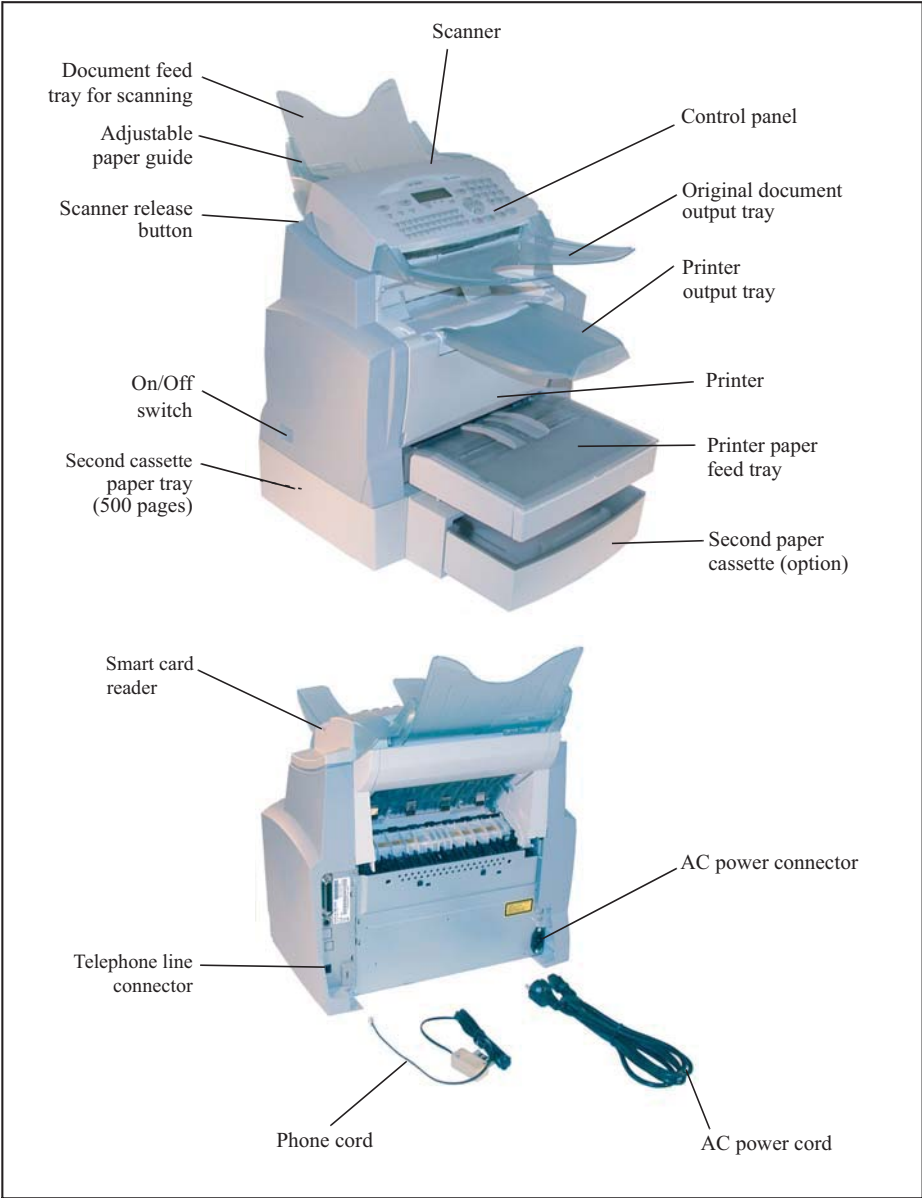


Figure 1

General Description

The MF series of machines is part of a range of multifunction SMS (Short Message Service) office equipment.

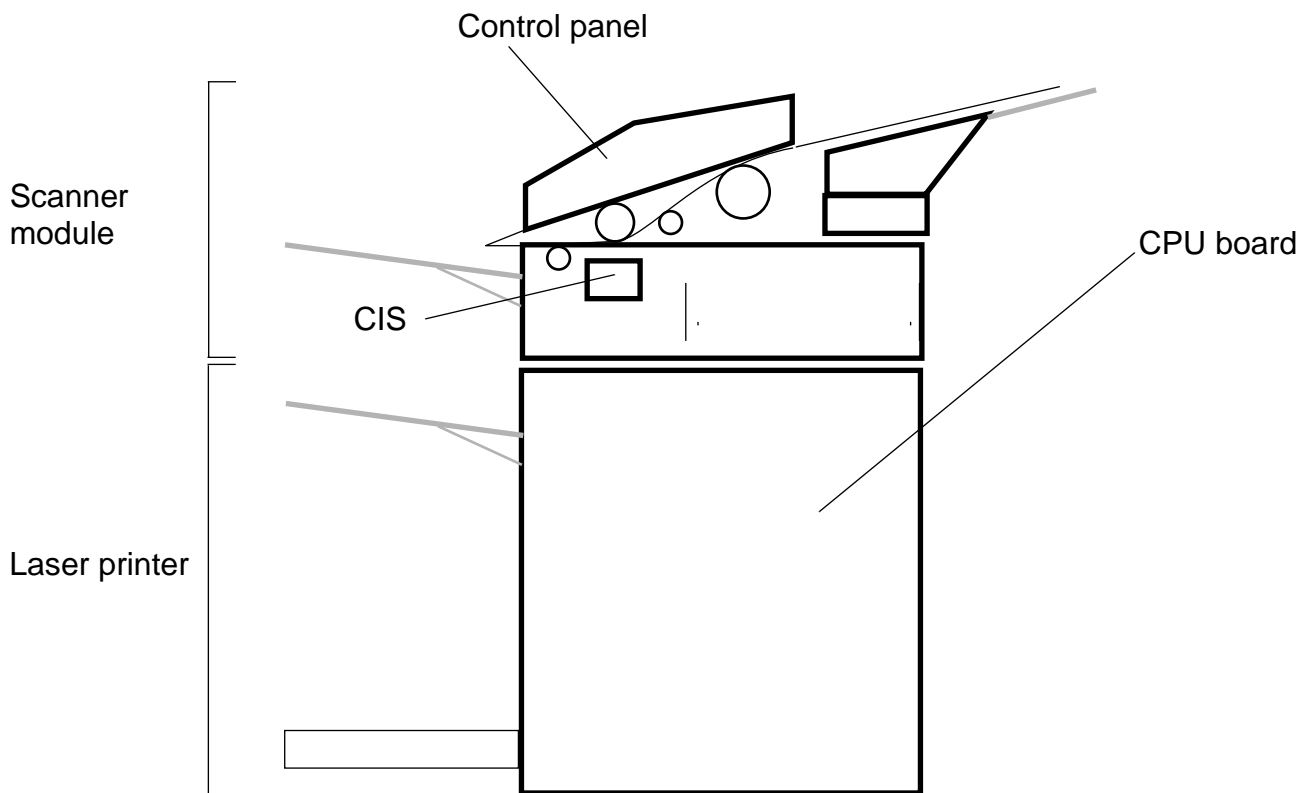


Figure 2

The product consists of a color scanner with a resolution of 300 dpi and a black-and-white laser printer with a resolution of 600dpi.

The documents to be processed are read by means of a sheet feeder scanner using CIS (Contact Image Sensor) technology.

The control panel comprises:

- An alphanumeric keyboard and function keys used to control the machine.
- A display with 2 lines of 16 characters and a line of icons, to display control messages and alerts to the user.
- A smart card reader used to initialize the consumables. It can also be used to store user functions (directory and user parameters).

When replacing the machine, it is advisable to transfer the consumables (toner cartridge and drum) and memory chip (from CPU PWB) to the new machine so as to keep the usage counters valid.

When replacing the consumables, perform the installation procedure for the new consumable item(s) (refer to the User Guide).

GP 3 Machine Dimensions and Installation Instructions

Machine Dimensions

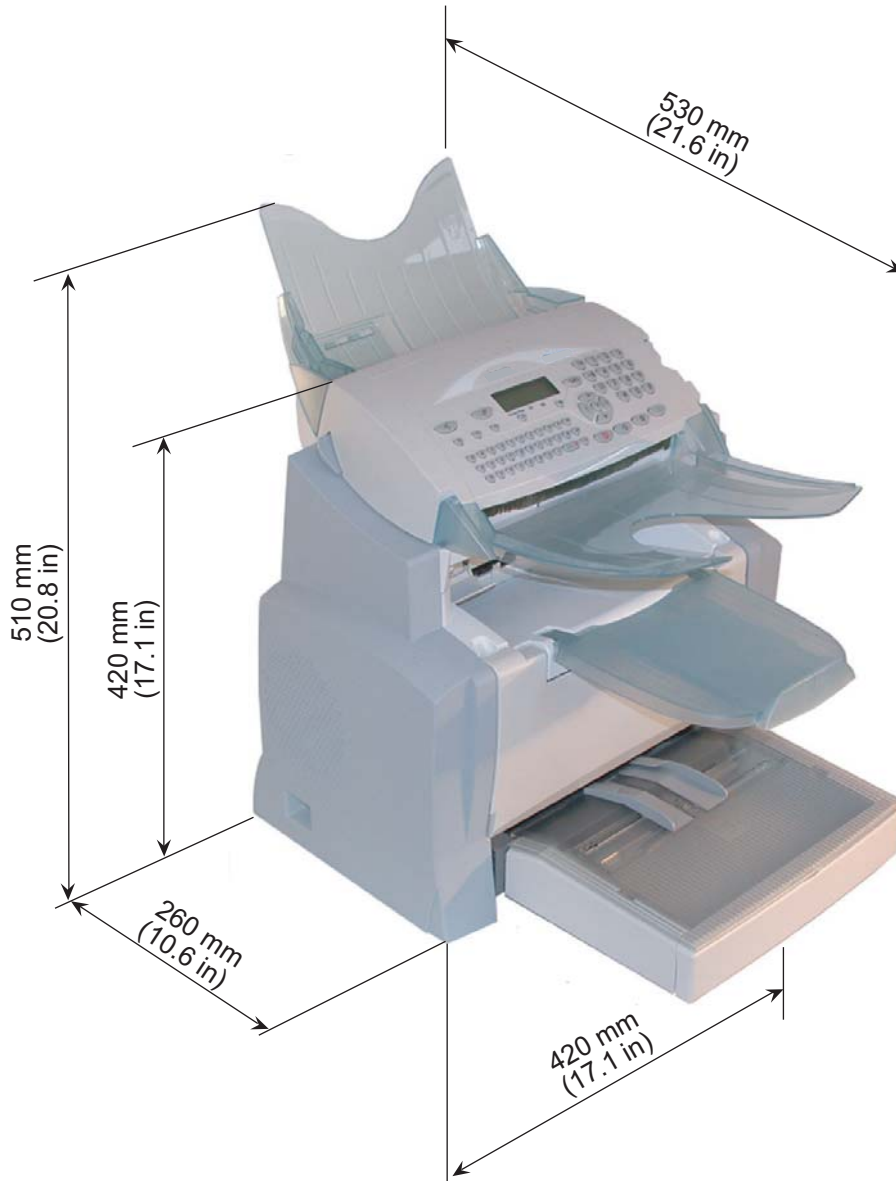


Figure 1

Note: Figure 1 shows the overall dimensions of the machine, optional accessories not included.

Electrical Requirements

Power

Single-phase AC supply with ground, in conformance with the information on the label on the back of the machine.

Note: *The power input of the machine conforms to the over voltage safety level.*

Note: *The machine cannot be connected to an IT type power supply.*

Telephone line

The telephone line is equipped with a standardized telephone connector and should be connected to the switched telephone network (private exchange (PABX) or public exchange).

Note: *The telephone line input conforms to the TNV-3 safety level*

Environmental Conditions

When selecting a location for the machine, the following points should be taken into account:

- The telephone socket should be located no more than 2 meters(6.5 feet) from a telephone socket.
- A standard single-phase power socket with ground (rated in conformance with the information on the label on the back of the fax) should be located at no more than 2 meters(6.5 feet)
- For easy access to the machine, leave a space of about 10 cm(3.9 inches) at the sides and the back. Also leave sufficient space in front of the machine.
- Do not install the machine in direct sunlight, near heating radiators or near air conditioning outlets.
- The room should be adequately ventilated.
- Avoid locations where frequent vibrations occur.
- Avoid locations where water or other products might be splashed on the machine.
- The machine should not be installed directly on the floor.
- Place the machine on a flat horizontal support.

Connections

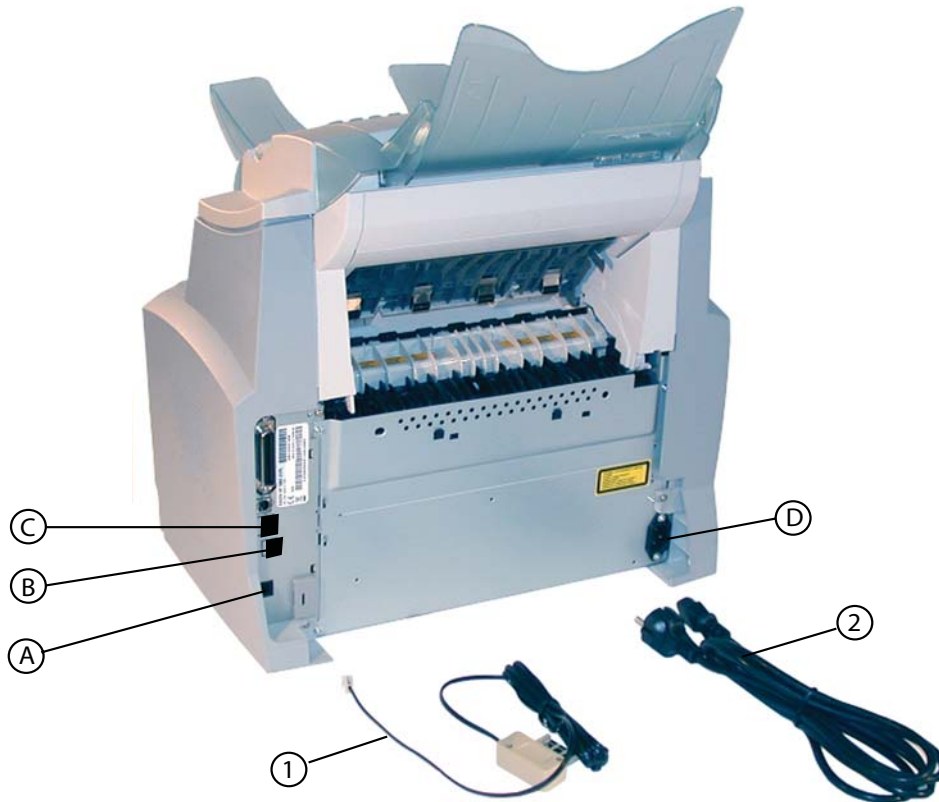


Figure 2

Connecting the telephone line and LAN

- Plug one end of the telephone lead (1) into socket (A) of the machine and the other end into the telephone wall socket (the types of connector may vary depending on the country).
- If the machine is equipped with a LAN connection (depending on the model), plug one end of the LAN cable (supplied by your network administrator) into socket (B) of the machine and the other end into the local area network socket allocated to your fax.

Powering up the machine

WARNING:

Refer to the safety regulations in the Introduction

- Plug one end of the power cord (2) into the power socket (D) of the machine and the other end into the wall socket (the types of connector may vary depending on the country).
- Set the on/off switch to the <I> position (On). After a few seconds, as soon as the warm-up of the machine is finished, the date and the time are displayed.

Connecting the PC

- Connect one end of the PC cable to the PC connector (C) located at the back of your machine.
- Connect the other end of the PC cable to the USB port of your PC.

Paper Supply

Installing the paper tray

- Using the left and right tabs of the printer as a guide, carefully push in the tray until it stops (as shown in the Figure 3).



Figure 3

- Put the tray cover in place.

Installing an additional paper tray (option)

Refer to the User Guide.

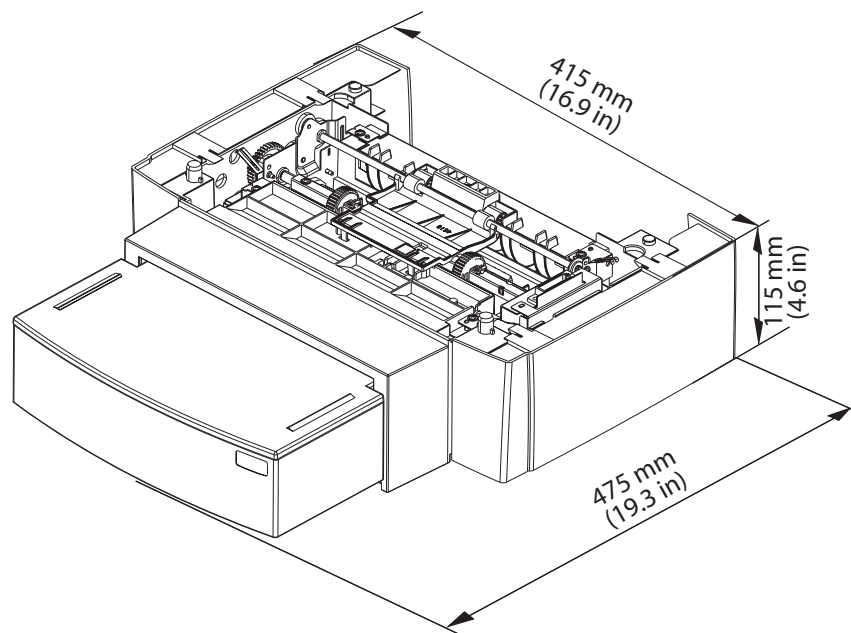


Figure 4

Installing the Trays

Document input tray

Install the tray by inserting the two tabs in the corresponding openings at the back of the machine.



Figure 5

Document output tray

Install the tray by inserting the two tabs in the corresponding openings at the front near the top of the machine.



Figure 6

Output Tray

With both hands, slightly bend the centre part of the tray upwards in order to insert its tabs into the notches located on the upper part of the printer.



Figure 7

Installing the Consumables

Refer to the User Guide.

GP 4 Start-Up and Software Configuration

A few seconds after switching on, as soon as the warm-up of the printer is finished, the date and the time are displayed.

Note: *When the machine is switched on for the first time, the TEST IN PROGRESS message is displayed for several minutes.*

User Parameters

Refer to the User Guide.

Installing Parameters

The purpose of these parameters is to configure the machine to specific user requirements and to the telecommunication standards of the country where the machine is to be installed.

At delivery, each machine is programmed with the factory test configurations. The installer can obtain a printed listing of these parameters (key sequence **MENU 5, 4, OK**).

Note: *It is advisable to keep a paper copy of the list of these parameters at delivery.*

Only service personnel are authorised to access the parameters.

The machine is equipped with a set of logic blocks referred to as SOS (Soft Switches). Each block consists of 8 bits called bit 1 to 8. Each bit can take a value of either 0 or 1. On the display, a block (from bit 1 to bit 8) is read from right to left. When a configuration is first selected, the blinking cursor is always placed on bit 8 (the bit at the left).

When the display shows the date and the time, you can access the softswitch settings by means of the key sequence:

MENU * #

The description of these parameters can be found below. They are modified in the same manner as all other parameters.

List of Configurations (SW)

Soft-switch 1: Ringing and automatic printing.

Table 1: Ringing and automatic printing

Bit	Default Value	Naming
1	1	Reserved
2	0	Reserved
3	0	SOS-DURPAUSE: Long/short pause while dialing Values: # 0 (Short 2sec.) or 1 (Long 6sec.)
4	0	Reserved
5	0	Reserved
6	1	SOS-IMPAUTO: Automatic log print Values: 0 (No) or 1 (Yes)
7	0	SOS-IMPT30: Automatic printing of T30 trace after comm error. Values: # 0 (No)1 (Yes)
8	0	SOS-IMPTRA: Trace printing/PC download enable Values: # 0 (No)1 (Yes)

Note: When bit 8 of SOS 1 is set to 1, a protocol report can be printed by pressing the * key. Also, an internal test pattern can be printed by pressing the # key.

Soft-switch 2: Scanner/Printer engine configuration

Table 2: Scanner/Printer engine configuration

Bit	Default Value	Naming
1	0	Reserved
2	0	Reserved
3	0	Keyboard beep on/off Values: # 0 (Beep on)1 (no beep)
4	1	Reserved
5	0	Reserved
6	0	Reserved
7	0	SOS-COPLOC: Restriction on local copies Values: # 0 (No)1 (Yes)
8	0	SOS-TIMKONIKA: Timed memorizing of photocopier resolution/contrast/settings Values: # 0 enabled1 disabled

Soft-switch 3: Line configuration**Table 3: Line configuration**

Bit	Default Value	Naming
1	1	SOS-NIVEMI: Transmission level
2	0	Values: 00 = 0 dBm
3	0	01 = -1 dBm
4	1	... # 06 = -6 dBm ... 0F = -15 dBm
5	0	Reserved
6	0	SOS-SEUILREC: Reception threshold 1 (Attenuation) Values: # 0 (-43 dB) 1 (-47 dB)
7	0	SOS - EPTV29: Use Echo Protect Tone with V29 Values: #0: (No) 1: (Yes)
8	0	SOS - ECHO: Echo cancelling Values: #0: (No) 1: (Yes)

Soft-switch 4: Fax protocol configuration**Table 4: Fax protocol configuration**

Bit	Default Value	Naming
1	1	SOS-MODPRIV: Communication in private mode Values: 0 (No) # 1 (Yes)
2	0	SOS-DIS-COURT: Restricted DIS size Values: # 0 (long DIS (complete)) 1 (Short DIS)
3	0	SOS-TCF: TCF accept criterion Values: # 0 (Normal) refused if there has not been 1 continuous second. 1 (Special) 1 discontinuous second in the TCF, then accepted systematically at 2 400 b/s
4	0	SOS-RTN: Page accept criterion Values: # 0 (10 percent)
5	0	1 (15 percent) 2 (20 percent) 3 (no check)
6	1	SOS-DISINF: Unlimited DIS length Values: 0 (No) # 1 (Yes)
7	0	SOS-LGINF: Maximum length of scan, printing, communication Values: # 0 (1 meters) 1 (3 meters)
8	1	SOS-ECM: Restricted ECM Values: 0 (No) # 1 (Yes)

Soft-switch 5: Voice/Loudspeaker configuration**Table 5: Voice/Loudspeaker configuration**

Bit	Default Value	Naming
1	1	Reserved
2	0	Reserved
3	0	Reserved
4	0	Reserved

Table 5: Voice/Loudspeaker configuration

Bit	Default Value	Naming
5	0	SOS-HP: Line monitoring during fax comm. Values: # 0 (No)1 (Yes)
6	1	Reserved
7	1	Reserved
8	0	Reserved

Soft-switch 6: Line adjustment

Table 6: Line adjustment

Bit	Default Value	Naming
1	0	Reserved
2	0	Reserved
3	0	Reserved
4	0	Reserved
5	0	Reserved
6	0	Reserved
7	0	Reserved
8	0	SOS-TSTDCOM: Driver test functions Values: # 0 (No)1 (Yes)

Soft-switch 7: Reserved

Table 7: Reserved

Bit	Default Value	Naming
1	1	Reserved
2	1	Reserved
3	1	Reserved
4	0	Reserved
5	0	Reserved
6	0	Reserved
7	0	Reserved
8	1	Reserved

Soft-switch 8: Remote readout/internal answering machine/modem

Table 8: Remote readout/internal answering machine/modem

Bit	Default Value	Naming
1	0	SOS-TLR: Remote readout enable (ATTENTION!) Values: # 0 (No remote readout) 1 (Remote readout enabled)
2	1	Reserved
3	1	Reserved
4	0	Reserved
5	1	Reserved
6	1	Reserved
7	0	Reserved
8	1	Reserved

Soft-switch 9: Approval and communication applications**Table 9: Approval and communication applications**

Bit	Default Value	Naming
1	0	Reserved
2	0	Reserved
3	0	Reserved
4	1	SOS-REPERR: Redialing from page fault Values: 0 (No) # 1 (Yes)
5	1	SOS-NOTREMIS: Printing of first page on transmission report Values: 0 (No) # 1 (Yes)
6	1	SOS-GRILLAGE: Burn phone numbers Values: # 0 (No) 1 (Yes)
7	1	SOS-LIGNE5S: Lines of 5 sec.during reception Values: # 0 (Length of lines not limited to 5 sec./line) 1 (Maximum length of a line: 5 seconds)
8	1	SOS-AGRE-FRA: French approval functions Values: # 0 (No)1 (Yes)

Soft-switch 10: Communications: Locks/Miscellaneous**Table 10: Communications: Locks/Miscellaneous**

Bit	Default Value	Naming
1	0	SOS-AFFVIT: Communication rate display Values: # 0 (No) the page number is displayed 1 (Yes) the comm. rate is displayed.
2	1	SOS-BTYPNUM: Access to impulse/DTMF parameter Values: 0 (Yes) Reserved # 1 (No)
3	0	Reserved
4	1	Reserved
5	1	SOS-TLRFAX: Remote readout by fax (ATTENTION!!!) Values: # 0 (Remote readout to Quadrige in transparent mode) 1 (Remote readout by fax)
6	0	Reserved
7	0	SOS-SONREA: Access to redialing parameters (screen /printer) Values: # 0 (No access)1 (With access)
8	0	Reserved

Soft-switch 11: Retransmissions/Logs**Table 11: Retransmission/Logs**

Bit	Default Value	Naming
1	0	Reserved
2	0	Reserved
3	0	Reserved
4	0	Reserved
5	1	Reserved
6	1	Reserved
7	0	Reserved
8	1	Reserved

Soft-switch 12: Reserved

Table 12: Reserved

Bit	Default Value	Naming
1	1	Reserved
2	0	Reserved
3	0	Reserved
4	1	Reserved
5	1	Reserved
6	0	Reserved
7	0	Reserved
8	0	Reserved

Soft-switch 13: Internet

Table 13: Internet

Bit	Default Value	Naming
1	0	SOS-BRIDEMAIL: Restricted text e-mail reception Values: # 0 (No) 1 (Yes)
2	1	SOS-ACKNORECNET: Send "message not received" reply on reception of corrupted messages Values: 0 (No) # 1 (Yes)
3	1	SOS-EFFMSGNOK: Delete corrupted messages Values: 0 (No) # 1 (Yes)
4	1	SOS-PROMONET: Auto directory enrichment (Internet promotion) Values: 0 (No automatic enrichment of directory) #1 (automatic enrichment of directory enabled)
5	0	SOS-VIDEMBOX: Delete first message in the mailbox Values: # 0 (No) 1 (Systematically delete first document)
6	0	SOS-VIDEALLMBOX: Delete entire mailbox Values: # 0 (No) 1 (Systematically empty mailbox)
7	0	Reserved
8	1	SOS-PJTXT: Text attachment processing Values: 0 (No)

Soft-switch 14: Internet

Table 14: Internet

Bit	Default Value	Naming
1	0	SOS-CODNET: Document encoding type for Internet Comm
2	0	Values: # 00 (MH encoding) 01 (MR encoding) 10 (MMR encoding)
3	0	SOS-BRIDINET: Internet functional restrictions Values: # 0 (No restriction) 1 (Internet functions restricted (no access to the menu))
4	1	SOS-CHAP: CHAP restrictions, password encoding Values: 0 (CHAP not used) # 1 (Use CHAP)

Table 14: Internet

Bit	Default Value	Naming
5	0	SOS-DNS: Restricted dynamic DNS, static DNS only Values: # 0 (No dynamic DNS server addresses) 1 (Fixed DNS server addresses)
6	0	SOS-REEMINFINI: Unlimited transmission/reception (Internet relay transmission) Values: # 0 (No) 1 (Yes)
7	0	Reserved
8	0	SOS-T2CMP1: Save Internet passwords on i2c card Values: # 0 (No) 1 (Yes)

Soft-switch 15: Internet**Table 15: Internet**

Bit	Default Value	Naming
1	1	SOS-CMPHPPP: PPP header compression: address/control field Values: 0 (No Compression) # 1 (Compression enabled)
2	1	SOS-AUTHENT: PPP authentication Values: 0 (No authentication) # 1 (With authentication)
3	1	SOS-CMPHPPP2: PPP header compression: protocol field Values: 0 (No compression) 1 (compression enabled)
4	0	SOS-REPSMTP: Wait for 2 packets after HELO command in SMTP Values: # 0 (Normal, wait for single rely packet) 1 (Wait for a second packet if the first one is empty)
5	0	Reserved
6	0	Reserved
7	0	Reserved
8	1	Reserved

Soft-switch 16: Internet**Table 16: Internet**

Bit	Default Value	Naming
1	0	SOS-ACKNORECNET2: Send a "message not understood" reply on reception of TIFF attachment Values: # 0 (Send message) 1 (Do not send message)
2	0	SOS-MAILSWIMP: Printout when rerouting mailswitch Values: # 0 (Printout) 1 (No printout)
3	0	Reserved
4	0	Reserved
5	0	SOS-ACTREEM: Enable/disable rerouting Values: # 0 (Rerouting disabled) 1 (Rerouting/transfer enabled)
6	0	SOS-IMP-MAILTXT: Double printout of mail text in translation Values: # 0 (Double impression) 1 (Single printout but unlimited reception impossible)
7	0	Reserved
8	0	Reserved

Soft-switch 17: Internet

Table 17: Internet

Bit	Default Value	Naming
1	1	SOS-LAN-ACTIF: Detection of LAN chip (read-only) Valeurs:0 (No) - Default value for model without LAN fct # 1 (Yes) - Default value for model with LAN fact
2	0	SOS - REPERTOIRE-IMPORT: Enable directory import by e-mail Values: # 0 (Unauthorised) 1 (Authorised)
3	0	Reserved
4	0	Reserved
5	0	SOS-NO-TRT-FCERROR: Retry after modem high speed data detection problem Values:# 0 (Yes) 1 (No)
6	0	Reserved
7	0	SOS-IMP-AVISDEPOT: "Transmission Report" printout
8	0	Values: # 00 (no) 01 (yes) 10 (systematically) 11 (only in case of error)

Soft-switch 18: Coding/UART rate

Table 18: Coding/UART Rate

Bit	Default Value	Naming
1	1	SOS-CODMEM: Stored document encoding type
2	1	Values: 00 (RL encoding) 01 (MH encoding) 10 (MR encoding) #11 (MMR encoding)
3	1	SOS-CODCOM: COM negotiated encoding type
4	1	Values: 01 (MH encoding) 10 (MR encoding) #11 (MMR encoding)
5	0	SOS-VITUART: Baud rate of serial link to modem
6	0	Values: # 00 (115 200 bauds) 01 (57 600 bauds) 10 (38 400 bauds)
7	0	SOS-AFF_VIT_REELLE: Show/hide real communication rates Values: # 0 show reduced rates 1 show real rates
8	0	Reserved

Soft-switch 19: Miscellaneous software functions

Table 19: Miscellaneous software functions

Bit	Default Value	Naming
1	0	Reserved
2	1	Reserved
3	0	SOS-GROUPE: Restriction on groups (or distribution list) Values: # 0 (No groups)1 (Groups accepted)
4	0	SOS-REGULREC: T30 reception control inhibited Values: # 0 (No) 1 (Yes)

Table 19: Miscellaneous software functions

Bit	Default Value	Naming
5	0	Reserved
6	1	SOS-MENUCLAVIER: Hide keyboard menus and force QWERTY keyboard Values: 0 (Shows) # 1 (Hide)
7	1	SOS-ONETOUCH: Enable "One touch" functions Values: # 0 (No) 1 (Yes)
8	0	SOS-TLC: Accept software download via STN Values: # 0 (No) 1 (Yes)

Soft-switch 20: Miscellaneous software function**Table 20: Miscellaneous software functions**

Bit	Default Value	Naming
1	0	Reserved
2	0	Reserved
3	0	Reserved
4	1	Reserved
5	1	Reserved
6	1	Reserved
7	1	Reserved
8	1	Reserved

Soft-switch 21: T4 Decoder/Debug**Table 21: Decoder/Debug**

Bit	Default Value	Naming
1	1	SOS-TRAITLIGERR: T4 decoding line copying mode Values: 0 (For each line with an error) # 1 (Only once, then destroy)
2	0	Reserved
3	0	Reserved
4	0	Reserved
5	1	SOS-GARBAGE-FLASH: Flash memory garbage collection method Values: 0 (garbage collection when application terminates) # 1 (garbage collection as background task) Attention: Taken into account only after reboot of the CPU
6	0	Reserved
7	0	SOS-DETECT OCCUP: Inhibition of engaged tone detect Values: # 0 (No) 1 (Yes)
8	1	Reserved

Soft-switch 22: Miscellaneous**Table 22: Miscellaneous**

Bit	Default Value	Naming
1	1	SOS-DUREE-2100: Transmission time of the 2100 modified for V34 reception

Table 22: Miscellaneous

Bit	Default Value	Naming
2	1	Values: # 00 (5 seconds) 01 (4.5 seconds) 10 (4 seconds) 11 (3.5 seconds)
3	0	SOS-SORTIMP: Printing at the end of fax or Internet communications Values: # 0 (Printing during comm.)1 (Print after comm.)
4	0	SOS-MTU-TCP: MTU-TCP size restriction for compatibility with ADSL router Values: # 0 (MTU of 1514 octets)1 (MTU of 1466 octets)
5	0	SOS - WEB- ACCES: Access Mode to embedded Web server Values: # 0 (Unprotected access) 1 (Password protected access)
6	1	SOS-AUTO-GDFID: Enable periodic self-identification Values: # 0 (no)1 (Yes)
7	0	SOS-AUTO-GDFSTS: Enable status automatic transmission to the Fax manager Values: # 0 (No)1 (Yes)
8	0	SOS-AUTO-GDFTLR: Enable remote readout automatic transmission to the Fax manager

Soft-switch 23: Miscellaneous

Table 23: Miscellaneous

Bit	Default Value	Naming
1	1	SOS-JBIG: SUPER G3 capability to execute communication with JBIG encoding Values: 0 (No SUPER G3) 1 (negotiated SUPER G3)
2	0	SOS-BRID-LAN: Restriction on LAN function Values: # 0 (No)1 (Yes)
3	0	SOS-FSI-NOCOVER: Inhibition of generation of cover pages Values: # 0 (FSI V6 cover page) 1 (FSI V7 cover page) SAGEM Only
4	1	SOS-COMPACTE-RL: Compacting of run length (for fax server ELLIPSE) Values: # 0 (No compacting)1 (Compacting run length of no length)
5	0	SOS-DEBRIDAGE-JAUGE: Acceptance of smart cards at any moment Values: # 0 (No) 1 (Yes) Return to 0 after removing the card
6	0	SOS-TLCNET: Download software from Internet/intranet Values: # 0 (Download disabled) 1 (Download enabled)
7	0	SOS-POINT-FINAL-SEUL: Final DATA_SMTP point on its own in the TCP frame ("Peltex"problem) Values: # 0 (Disabled)1 (Enabled)
8	1	SOS-PDF: Transmission and reception of PDF document via e-mail. Values: 0 (Disabled) 1 (Enabled)

Soft-switch 24: IEEE Address, SMS**Table 24: IEEE Address, SMS**

Bit	Default Value	Naming
1	0	SOS-AOP-IEEE: Modification of the IEEE address by the AOP Values: # 0 (Modification impossible)1 (Modification possible)
2	0	SOS-FAXSWITCH: Activation of fax switch Values: # 0 (No)1 (Yes)
3	0	SOS-SMS PROTOCOLE: Type of protocol for SMS V23 Values: # 0 (protocol according to the country)1 (Protocol 1)
4	0	SOS-SMSSWITCH: Activation of the SMS SWITCH function Values: # 0 (Disabled)1 (Enabled)
5	0	SOS-SMSSWITCH2: Activation of SMS SWITCH2 the function Values: # 0 (Disabled)1 (Enabled)
6	0	Reserved
7	1	SOS-SMSRECV23: Activation of the SMS V23 reception function Values: # 0 (No SMS V23 reception) 1 (With SMS V23 reception)
8	0	SOS-SMSV23: Activation of the SMS V23 reception function Values: # 0 (SMS V23 enabled)1 (SMS Internet enabled)

Soft-switch 25: SMS**Table 25: SMS**

Bit	Default Value	Naming
1	0	SOS-TIMSMSSWITCH: Waiting time before transmitting a RING after the first buzzer preceding the CLIP # 00 = 2 seconds 01 = 1 x 200 ms 02 = 2 x 200 ms 03 = 3 x 200 ms 04 = 4 x 200 ms 05 = 5 x 200 ms 06 = 6 x 200 ms 0F = 15 x 200 ms
2	0	
3	0	
4	0	
5	0	SOS-NORXSMSTORXFAX: Switch to FAX reception after faulty SMS reception. # 0: Switches to FAX reception 1: No FAX reception
6	0	SOS-TXADTERMINAL: Transmit the terminal address in the server number # 0: No 1: Yes
7	0	SOS-RXADTERMINAL: Receive the terminal address in the server number # 0: No 1: Yes

Table 25: SMS

Bit	Default Value	Naming
8	0	SOS-EXPBITPDF: Export the attached file format field (Image/PDF) when exporting the directory via e-mail. # 0: No 1: Yes ATTENTION: If the directory is exported to a machine which does not support this format, the machine (receiver) will lose its current directory, and won't be able to restore the new one.

Soft-switch 26: Miscellaneous

Table 26: Miscellaneous

Bit	Default Value	Naming
1	0	Display the SMS type #0: No default SMS type menu 1: With SMS type menu
2	0	LOGIN authentication activation #0: LOGIN authentication enabled 1: LOGIN authentication disabled
3	0	With or without dual chip smart card #0: With dual chip smart card->display PUT IN OTHER WAY sync chip detected 1: No dual chip smart card management-> display WRONG CARD if sync chip detected
4	0	Restriction on USB function #0: No 1: Yes
5	0	With or without duplication of on page passage threshold #0: No duplication: NBI_SUP_B (1cm) 1: Duplication: NBI_SUP_B * 2 (2 cm)
6	0	RR/RNR regulation limitation to 4 in T30 #0: No limitation 1: With limitation
7	1	Double alternation optocoupler use #0: Optocoupler mono alternation 1: Optocoupler double alternation
8	0	Restriction of CIS lamp extinction #0: With extinction 1: No extinction

Soft-switch 27: Miscellaneous

Table 27: Miscellaneous

Bit	Default Value	Naming
1	0	Size of remote readout serial number #1000: 8 digits remote readout serial number 1111: 15 digits remote readout serial number (only for EGT for now)
2	0	
3	0	
4	1	

Table 27: Miscellaneous

Bit	Default Value	Naming
5	0	Waiting time before validation of unexpected modulation in comparison with expected modulation. (~/driver/m_lucent/sms_m_dp2v/src/dpmain.c) # 00 = 60 + 0*30 ms = 60 ms 01 = 60 + 1*30 ms = 90 ms 02 = 60 + 2*30 ms = 120 ms 03 = 60 + 3*30 ms = 150 ms 04 = 60 + 4*30 ms = 180 ms 05 = 60 + 5*30 ms = 210 ms 06 = 60 + 6*30 ms = 240 ms 0F = 60 + 15*30 ms = 510 ms
6	0	
7	0	
8	0	

Soft-switch 28: Miscellaneous**Table 28: Miscellaneous**

Bit	Default Value	Naming
1	0	Activation of fax modification for DTS label #0: Missing 1: Present
2	0	Carrier drop in ECP mode for DTS label #0: Missing 1: Present
3	0	Disable the 1 second timer before the hanging up #0: Enabled 1: Disabled
4	0	SMS reception error in manual mode in Austria #0: Modification disabled 1: Modification enabled
5	0	Number of bits at the end of frame #0: 18 mark bits (1-10) 1: 6 mark bits
6	0	Telecom Timers Italy #0: With 1: Without
7	0	Telecom settings Italy #0: With 1: Without
8	0	Recall protection #0: With 1: Without

Soft-switch 29: Miscellaneous**Table 29: Miscellaneous**

Bit	Default Value	Naming
1	0	Numbers of SMS centres menus #0: Present 1: Missing
2	0	Activation of the Notification menu #0: Enabled 1: Disabled

Table 29: Miscellaneous

Bit	Default Value	Naming
3	0	Activation of the validated menu #0: Enabled 1: Disabled
4	0	Force the V29 modulation for 9600 and 7200 rates #0: Enabled 1: Disabled
5	0	Restriction on ECP driver for dumping without menu* D #0: ECP enabled 1: Disabled
6	0	Restriction on Modem presence #0: Modem present 1: Modem missing
7	0	Reserved
8	0	Reserved

Soft-switch 30: Miscellaneous

Table 30: Miscellaneous

Bit	Default Value	Naming
1	0	Reserved
2	0	Reserved
3	0	Reserved
4	0	Reserved
5	0	Reserved
6	0	Reserved
7	0	Reserved
8	0	Reserved

GP 5 Software Download

The machine software can be updated by means of a link to a PC.

Download Via PC Link

Use the Firmware Download Tool provided on the CD in the product training kit.

GP 6 Remote Readout

Note: Before and after each service on a machine equipped with the Remote Readout option, perform a manual transmission of the Remote Readout parameters to the Service center, if the state of the machine allows it.

All machines are equipped with the Remote Readout option (locked).

The option is unlocked by the installer or maintenance technician during the initial installation or during the next service call following the subscription of the contract.

When servicing these machines, it is very important to proceed with care, because the remote readout parameters are verified by the service centre in order to detect any anomalies, such as moving the machine, withdrawal, unintentional modification of the parameters, attempted fraud, etc.

At each automatic transmission, the Remote Readout parameters are transmitted in the night to the service centre. A report of the transmission of these parameters is printed.

Enabling the Remote Readout

The remote readout is enabled by means of a softswitch: bit 1 of SOS 8. The parameters can then be set by means of the hidden menu (key sequence MENU, *, 6). The essential parameters that trigger a remote readout are the interval in days and the page thresholds. Once the parameters have been entered, they can be consulted by means of the key sequence MENU, 8, 6, 1 and printed by means of the key sequence MENU, 8, 6, 2.

The transmission mode of the remote readout can be selected by means of another softswitch, bit 5 of SOS 10, which can be set to 1 for conventional fax transmission and 0 for transparent mode.

Trigger Criteria

The remote readout can be triggered by two types of criteria: “day” or “threshold”.

- The “day” criterion is based on the “interval in days” parameter entered in the remote readout menu, accessed by the key sequence MENU, *, 6. This parameter represents the interval at the end of which a remote readout is transmitted. If the parameter has been set to 30, a remote readout will be transmitted every 30 days. This parameter cannot exceed 365 days. A transmission using the day criterion allows the server centre to regularly monitor its installed base of machines and to detect any anomalies that may occur. The remote readout using the day criterion can be disabled by entering an interval of zero.
- The “threshold” criterion is based on the page thresholds entered in the remote readout menu accessed by the key sequence MENU, *, 6. When a consumables counter drops below the corresponding threshold, the remote readout is triggered. For instance, if the toner threshold is set to 1500 pages, a remote readout will be transmitted when the toner counter drops below 1500, or in other words, when the remaining toner allows no more than 1500 pages to be printed.

These counters cannot be read directly, however, they can be calculated easily by means of the percentages displayed in the advanced functions menu (key sequence MENU, 8, 6), relative to the initial number of pages for the consumable (as shown in the remote readout report). If, for instance, the initial number of pages for the consumable is 8000 and the threshold is set to 2000

pages, the remote readout will be triggered when the corresponding percentage drops below 25%.

The remote readout using the threshold criterion can be triggered only once per consumable. Once the remote readout has been transmitted, the criterion will no longer be tested until the consumable has been replaced.

The transmissions triggered by the two criteria (thresholds and day) are independent of each other. i.e: as soon as one of the criteria is met, the transmission is triggered, irrespective of the state of the other parameters. The transmission is immediate.

It is also possible to force a transmission manually by means of the advanced functions menu (key sequence MENU, 8, 6, 3).

Initial Consumables

On a new machine, the consumables are activated by reading an initial smart card. The consumables present in the machine at that time are referred to as the initial consumables. In this case, regardless of the thresholds entered in the advanced functions menu (key sequence MENU, *, 6), for each consumable the first remote readout will be triggered on the base of a threshold criterion of 1000 pages. After this, when the consumable has been replaced and after reading the smart card, the machine switches to the standard remote readout mode as described earlier.

Description of the Transmitted Data

Format of transmitted data in transparent mode.

When a criterion is met, a transmission in transparent mode is generated (the softswitch SOS 10 bit 5 must have been set to 0).

The structure of the transmitted file is of the type TLV (Type - Length - Value).

The transmitted data are defined below, with for each item: its identifier (TLV "type"), its format (numerical or character string) and its origin (entered by the operator or generated by the software).

These parameters, which are also present in the transmission report, will be described further on.

Table 1: Description Of The Transmitted Data

Field	Type	Char/Num	Manual Entry
TVERS_TLR	0x00	char	No
TNO_23MIL	0x01	char*	Yes
TNO_SERIE	0x02	char*	Yes
TNO_CLIENT	0x03	char*	Yes
TNO_VERSION	0x04	char*	No
TINDICATIF	0x05	char*	Yes
TIDENTIFIANT	0x06	char*	Yes
TNO_SERVEUR	0x08	char*	Yes
TCAUSE_EMIS	0x09	uchar	No
TNOMRESP	0x10	char[15]	Yes
TSOCIETE	0x11	char[15]	Yes

Table 1: Description Of The Transmitted Data

Field	Type	Char/Num	Manual Entry
TADRESSEL1	0x12	char[30]	Yes
TADRESSEL2	0x13	char[30]	Yes
TADRESSEL3	0x14	char[30]	Yes
TCODEPOSTAL	0x15	char[15]	Yes
TVILLE	0x16	char[30]	Yes
TPAYS	0x17	char[15]	Yes
TLANGUE	0x18	char[15]	Yes
TTELEPHONE	0x19	char[30]	Yes
TDATE_EMIS	0x21	char*	No
T_CPT_PAGES	0x40	long	No
T_CRIT_JOURS	0x42	long	Yes
T_CPT_PAGES_JOURS	0x43	long	No
T_DATE_SEUIL_JOURS	0x45	char*	No
T_INIT_NOIR	0x46	long	No
T_CPT_NOIR	0x47	long	No
T_SEUIL_NOIR	0x48	long	Yes
T_DATE_SEUIL_NOIR	0x49	char*	No
T_DATE_CHG_NOIR	0x4a	char*	No
T_INIT_OPC	0x5a	long	No
T_CPT_OPC	0x5b	long	No
T_SEUIL_OPC	0x5c	long	Yes
T_DATE_SEUIL_OPC	0x5d	char*	No
T_DATE_CHG_OPC	0x5e	char*	No
T_INIT_FOUR	0x64	long	No
T_CPT_FOUR	0x65	long	No
T_SEUIL_FOUR	0x66	long	Yes
T_DATE_SEUIL_FOUR	0x67	char	No
T_DATE_CHG_FOUR	0x68	char	No

The values of the field (TCAUSE_EMIS, reason for transmission) are the following:

Table 2: Values

Field	Values
Manual send	3
Toner	4
Drum	8
Revision	10

The initial values of the page counters for new consumables are:

- 2 000 pages for the toner (T_INIT_NOIR)
- 4 000 pages for the drum (T_INIT_OPC)

Remote Readout Report

For each transmission a remote readout report is printed. It contains all the data that have been transmitted to the server in transparent mode. In the case of a transmission in fax mode, the fax that is received is identical to this report.

The report uses the presentation shown below:

*** METERING SUCE PARAMETERS ***

Date : 28-09-06 10:17

GENERAL INFORMATION

```

CODE 25xxxxxx :
Serial number :
Client account Nb :
Release Nb : u2.03d
Fax number :
SID :
Server System :
Name of the manager :
company :
Address :
Post Code :
City :
Country :
Language :
Telephone :

```

MANAGEMENT INFORMATIONS

```

Printer status : Number of pages = 1306

Day interval : Day interval = 0
Last remote maint. on the 28/09/06 10:10
- Number of pages = 0

Toner : Estimated number of pages : 2000 Page threshold : 0
Last remote maint. on the 28/09/06 10:10 (0 page(s))
Last replacement on the 00/00/00 00:00

Drum : Estimated number of pages : 4000 Page threshold : 0
Last remote maint. on the 28/09/06 10:10 (0 page(s))
Last replacement on the 00/00/00 00:00

Revision : Estimated number of pages : 50000 Page threshold : 0
Last remote maint. on the 28/09/06 10:10 (0 page(s))
Last replacement on the 00/00/00 00:00

```

Description of the Parameters

The different fields shown in the report are described below.

General Information

- Code 23xxxxx (TNO_23MIL): The 23M of the module managed by the server, entered by the installer.
- Serial number (TNO_SERIE): The identification of the terminal, entered by the installer.
- Client account number (TNO_CLIENT): The identification of the contract, entered by the installer.
- Release number (TNO_VERSION): Generated automatically (software version).

- Fax number (TINDICATIF): The machine number, entered by the installer.
- SID (TIDENTIFIANT): The machine name, entered by the installer.
- Server system (TNO_SERVEUR): The phone number of the server centre or of the fax, entered by the installer.
- System administrator (TNOMRESP): The name of the person responsible for the terminal, entered by the installer.
- Name of company (TSOCIETE): The name of the company who owns the terminal, entered by the installer.
- Address of company (TADRESSEL1, TADRESSEL2 and TADRESSEL3): Postal address of the terminal, entered by the installer.
- Zip or postal code (TCODEPOSTAL): Postal code entered by the installer.
- City (TVILLE): City/Town name entered by the installer.
- Country (TPAYS): Country name entered by the installer.
- Language (TLANGUE): Language entered by the installer.
- Telephone number (TTELEPHONE): Telephone number entered by the installer.

Printer Status

- Number of pages (T_CPT_PAGES): The cumulative total number of pages printed since the installation of the machine.

Interval in Days

- Day interval (T_CRIT_JOURS): The trigger interval using the day criterion (0 if the criterion is not active), entered by the installer.
- Last remote maintenance (T_DATE_SEUIL_JOURS): Date of the last remote readout triggered by the day criterion.
- Number of pages (T_CPT_PAGES_JOURS): Value of the cumulative number of pages printed at the date of the previous remote readout triggered by the day criterion (or 0 if there has not been any previous remote readout).

Toner

- Estimated number of pages (T_INIT_NOIR): theoretical capacity of the cartridge estimated in average pages.
- Page threshold (T_SEUIL_NOIR): trigger level (expressed as the number of pages remaining to be printed) for the transmission of a remote readout triggered by the toner threshold criterion, entered by the installer.
- Last remote maintenance (T_DATE_SEUIL_NOIR): date of the last remote readout triggered by the toner threshold criterion, or installation date if there has not been any previous remote readout.
- Pages (T_CPT_NOIR): theoretical number of pages remaining to be printed at the instant of the triggering of the previous remote readout by the toner threshold criterion (or 0 if there has not been any previous remote readout).
- Last replacement (T_DATE_CHG_NOIR): date of the last replacement of the toner cartridge.

Drum

- Estimated number of pages (T_INIT_OPC): theoretical capacity of the drum estimated in average pages.

- Page threshold (T_SEUIL_OPC): trigger level (expressed as the number of pages remaining to be printed) for the transmission of a remote readout triggered by the drum threshold criterion, entered by the installer.
- Last remote maintenance (T_DATE_SEUIL_OPC): date of the last remote readout triggered by the drum threshold criterion, or installation date if there has not been any previous remote readout.
- Pages (T_CPT_OPC): number of pages remaining to be printed at the instant of the triggering of the previous remote readout by the drum threshold criterion (or 0 if there has not been any previous remote readout).
- Last replacement (T_DATE_CHG_OPC): date of the last replacement of the drum.

Revision

- Estimated number of pages (T_INIT_FOUR): Number of pages estimated before the next revision.
- Page threshold (T_SEUIL_FOUR): entered by the installer, valeur de déclenchement (en nombre de pages restant à imprimer) pour l'émission d'une télérélevé sur critère seuil révision.
- Last remote maintenance (T_DATE_SEUIL_FOUR): date of the last remote readout triggered by the drum threshold criterion, or installation date if there has not been any previous remote readout.
- Pages (T_CPT_FOUR): number of pages remaining to be printed at the instant of the triggering of the previous remote readout by the drum threshold criterion (or 0 if there has not been any previous remote readout).
- Last replacement (T_DATE_CHG_FOUR): date of the last replacement of the drum.

Transmission Data

- Readout reason (TCAUSE_EMIS): reason for the remote readout transmission;
- Readout date (TDATE_EMIS): date of the transmission of the remote readout.

Reminders

- Every machine is equipped with a copy counter, implemented in EEPROM memory on the CPU board. This counter is used in particular by the Remote Readout function. It can be consulted by the user. This counter cannot be modified. It is stored indefinitely.
- Before any corrective service call on the machine that risks modifying the installation parameters or the value of the counter (replacement of the CPU board or installation of new software), a manual Remote Readout transmission should be performed, if the state of the machine allows it. If this transmission is not possible for any reason, print out the Remote Readout parameters or display the copy counter and note these values on the service call report.

GP 7 Saving Data on the Directory Card

The control panel is equipped with a reader that can read and write on smart cards in I2C format (“directory card”).

The printer consumables usage is stored in EEPROM memory (on the CPU board) and can be viewed on the UI **MENU 8 6** (in percent) regarding the number of pages initial values.

The printer counters are saved in EEPROM memory too (on the CPU board). These absolute counters show the global use of the machine regardless of consumables: number of printed pages, number of scanned pages, number of transmitted/received pages.

They can be viewed on the UI **MENU 8.2** and printed with **MENU * 1** (parameters printout)

The directory cards can be used to save the entire directory (with the e-mail addresses) and optionally the technical parameters.

- Archiving/restoring of the directory only: MENU 16.
- Archiving of the directory and the parameters: MENU * 5.
- Restoring of the directory and the parameters: MENU * 9.

Simplified List of the Parameters Saved on a Directory Card

General parameters

- Softswitches.
- Fax number of the machine.
- Serial Number of the machine.
- Index number of the rerouting address list.
- Reduced-tariff hours for transmission.
- Dialing prefix.
- Passwords for keyboard and direct dialing locks.
- Standby mode programming + technical parameters 76 / 90 / 91 / 92 / 93 see the User Guide.

Scan/Print parameters

- Default scan mode.
- Number of copies to print.
- CIS/Scanner/printer settings.
- Management modes of the paper trays.
- Enabling of fax answering machine mode.

Fax Communication parameters

- Type of STN network.
- Transmission mode.
- Transmission report printout mode.
- Fax transmission/reception rate.
- Number of rings.
- Header (LIC) transmission and printing.

Internet/LAN communication parameters

- Data rate.

- Internet provider.
- Time period of connection to the internet.
- Fixed times for internet access.
- Prohibited time period for periodic connection.
- Internet connection/transmission modes.
- Internet rerouting mode.
- LAN configuration mode (manual/automatic).
- Internet provider connection/mail service/servers/authentication parameters des providersinternet.
- LAN mail service/server/authentication parameters.
- If a machine is to be cloned, record the bios names of both machines.

GP 8 Packaging and Transport of the Machine

When you need to transport the machine, always use the original packing material. If you do not pack the machine correctly, you risk invalidating the warranty.

1. Set the power switch of the machine to “O” (Off).
2. Disconnect the power cord from the wall socket, then disconnect all cables connected to the machine. Remove all the document and paper trays, including the paper tray. If your machine has the optional second paper tray installed, remove it and keep it.
3. Pack the document and paper trays in their original plastic bags and packing boxes. Pack the machine in its original styrofoam and place it in the original packing box together with the accessories (trays, documentation, etc.).
4. Seal the packing box with adhesive tape.

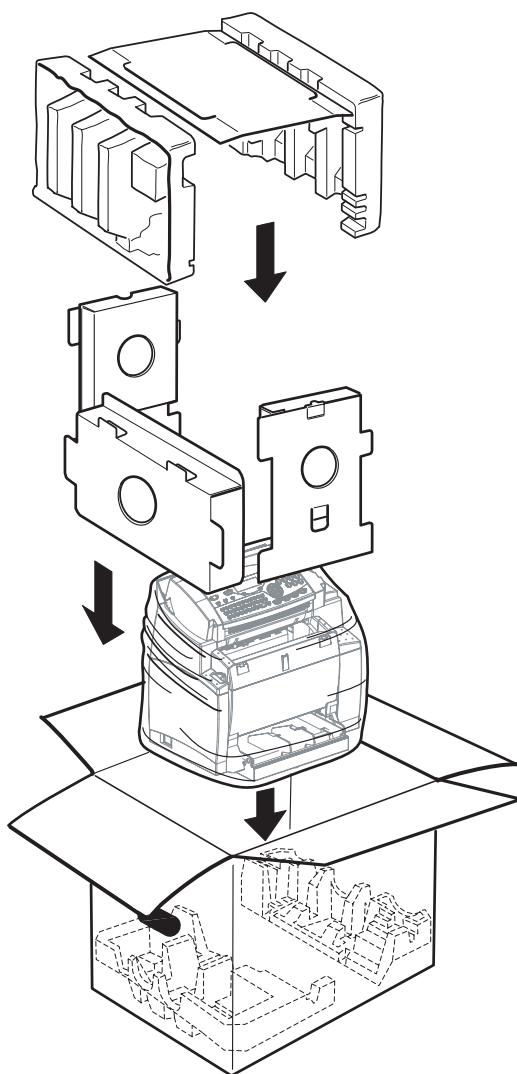


Figure 1

GP 9 Functions of the Service Provider

Initializing and Erasing the Memories

First set the installation parameter Configuration bit 8 to 1.

- Reset to default configuration (factory configuration) of all parameters (user and installer(or technical)):

CAUTION

This procedure will erase the network enablement option. If this is done on a network enabled machine, a new network option will have to be purchased.

- Erase directory:

- Erase logs:

- Erase printer counters:

- Erase consumables counters using menu 85:

CAUTION

This procedure will erase options GDF, FSI and kit LAN.

Note: *To see the initialization message, switch the machine off, then on.*

- Re-initialize the flash memory data (complete erase): open the scanner cover, then:

- Erase mailboxes (internal) only:

- Erase all, including the e-mail addresses stored in the directory, except for the other data in the directory. Reset to default configuration (combination of functions 0, 2, 6, 8):

(MENU) (#) 7

- Erase all documents in memory (documents to be transmitted, received documents and deposited documents):

CAUTION

This procedure will erase the network enablement option. If this is done on a network enabled machine, a new network option will have to be purchased.

(MENU) (#) 8

- Complete reset of the machine (combination of functions 0, 1, 2, 6, 8):

(MENU) (#) 9

- Erase first element of printing queue:

(MENU) (*) 1

- Re-initialize the remote readout counter:

(MENU) (#) K

Other Functions

For these functions, bit 8 of configuration 1 of the installation parameters must first have been set to 1.

- Printout of all parameters (including installation and technical parameters):

(MENU) (*) 1

- Switch to forced standby mode, independently of the clock:

(MENU) (*) 2

- Switch to “software download by phone” mode:

(MENU) (*) 3

- Switch to “software download by PC link” mode:

(MENU) (*) 4

For this function, bit 8 of configuration 1 of the installation parameters must first have been set to 1.

- Save the directory and the parameters on a smart card via the smart card reader:



- Save the directory via STN:



- Accept directory download via STN:



- Restore directory and parameters from a smart card via the smart card reader:



- Start feeder scanner calibration:



Note: Refer to GP 21 for more information regarding scanner calibration.

- Display main software version:



- Display modem type:



- Display boot software version:



- Enter serial number:



- Display LAN rate:



- Manually reboot the machine (with SOS 1 bit 8 set to 1):

- Display PCL/SG Script fonts checksum:

- Retransmission of faxes to print to rerouting mail:

- Activation of dump RAM server:

- Accept soft download via internet or Intranet:

GP 10 Paper Path

- The machine adopts the 1-way paper feeding system by means of the main paper tray (capable of holding up to 150 sheets of paper).
- The paper taken up and fed in by the paper feed roll is transported through the machine by the BTR, fuser roller, and exit rolls and fed out of the machine face down onto the exit tray.

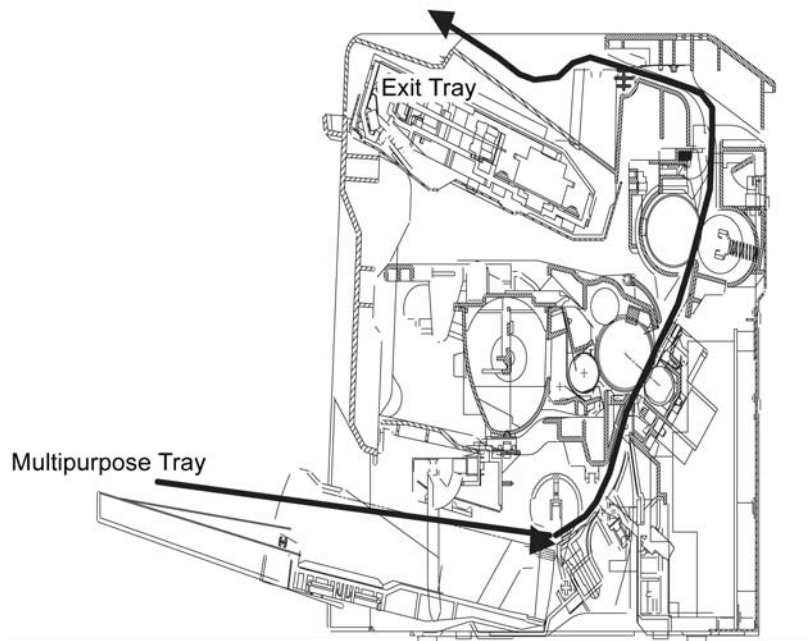


Figure 1

GP 11 Paper Feed Section

Main Paper Tray

Paper feed mechanism

- When the paper feed solenoid is energized, the drive from the main motor is transmitted to the paper feed roll through the paper feed clutch, turning the paper feed roll.
- At the same time, the paper feed cam turns so as to raise the paper lifting plate. Then the top sheet of paper loaded in the tray is taken up and fed into the machine.
- The actual length of paper is detected based on the period of time through which the paper feed switch remains actuated (or through which the paper moves past the switch) and the system speed. It is then determined whether or not the actual length matches the paper length specified on the controller

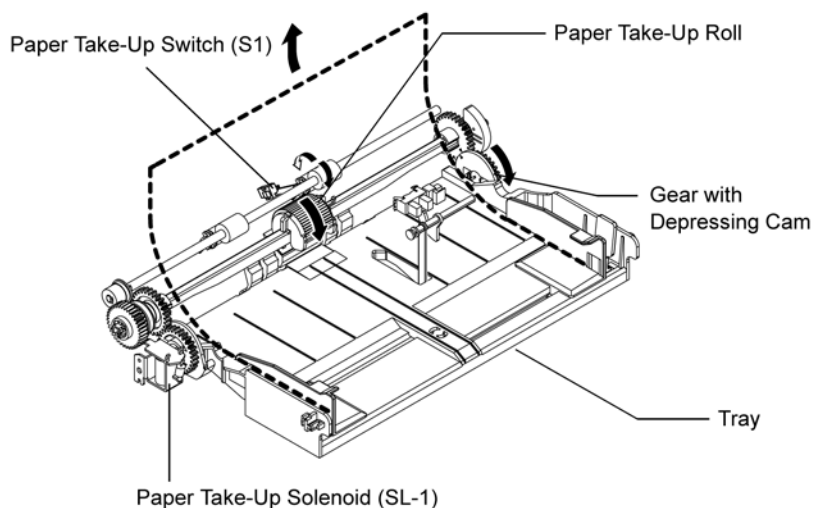


Figure 1

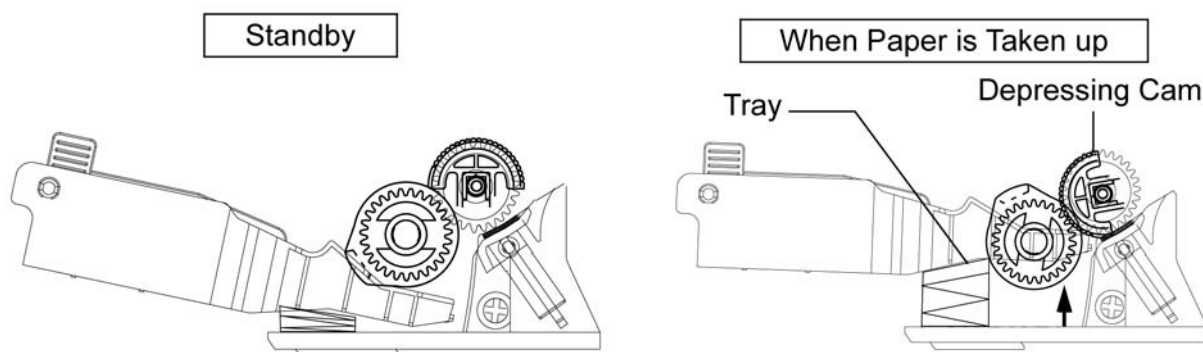


Figure 2

Multi feed preventive mechanism

A fixed retard pad is used to prevent the second and subsequent sheets of paper from being taken up and fed in with the first one.

Paper empty detection

- There is a paper empty sensor provided on the upper portion of the main paper tray. It detects paper loaded in the tray.
- When there is a paper stack loaded in the tray, the actuator is raised to block the paper empty sensor.
- When paper runs out, the actuator drops into the hole in the tray, unblocking the paper empty sensor.

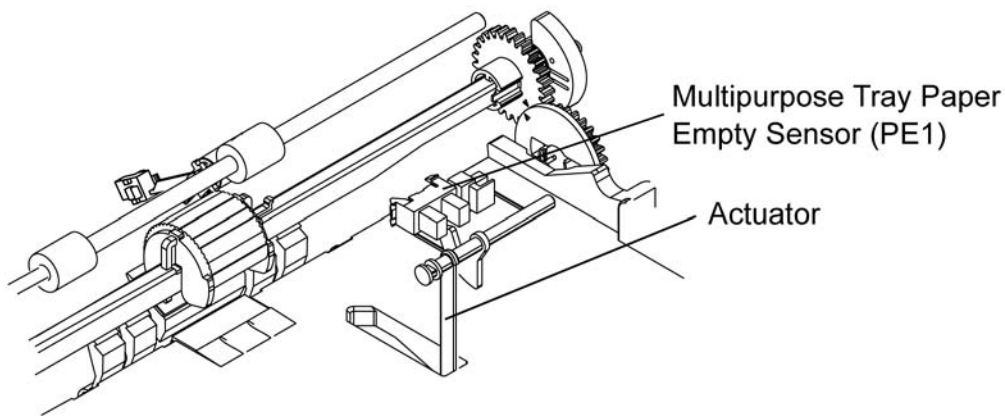


Figure 3

Paper feed retry function

- To reduce the number of paper misfeeds as a result of a paper feed failure, a paper feed retry sequence is carried if the paper feed switch is not actuated and deactuated within a predetermined period of time.
- This function is provided for paper feed from any printer paper tray.

GP 12 Drum Charge

Overview

- The drum is charged with static electricity before laser exposure.
- The drum charge brush and the pre-charge film are used for charging.
- Since the drum charge brush and the pre-charge film directly deposit charge on the drum, they produce little ozone. Further the charging voltage is low and the deposited charge is even and stable across the surface of the drum.
- The pre-charge film supplies a preliminary charge to the drum prior to charging by the drum charge brush, thereby increasing charging efficiency.

Construction

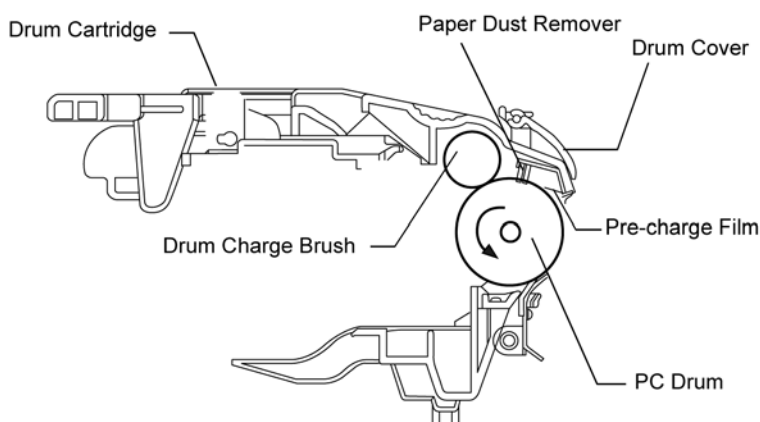


Figure 1

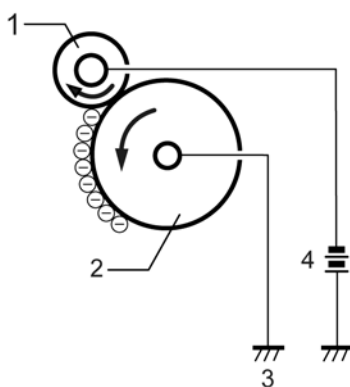


Figure 2

1. Drum Charge Brush.
2. PC Drum.
3. Ground.
4. Drum Charge Brush Voltage.

GP 13 ROS Unit

Construction

- The laser beam light emitted from the print head is used to scan the image as driven by the polygon motor.

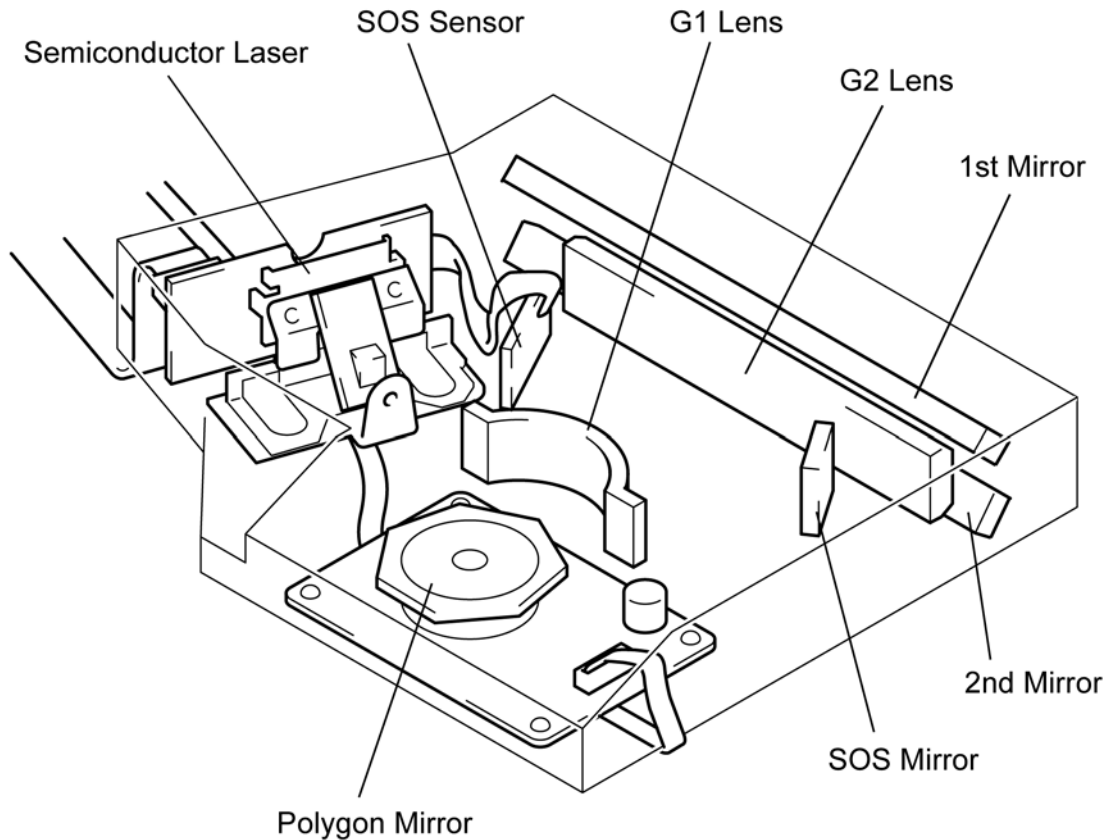


Figure 1

Laser Exposure Process

- The laser beam light emitted from the ROS is used to create an electrostatic latent image on the surface of the drum.
- The following control is provided to correctly time image printing:

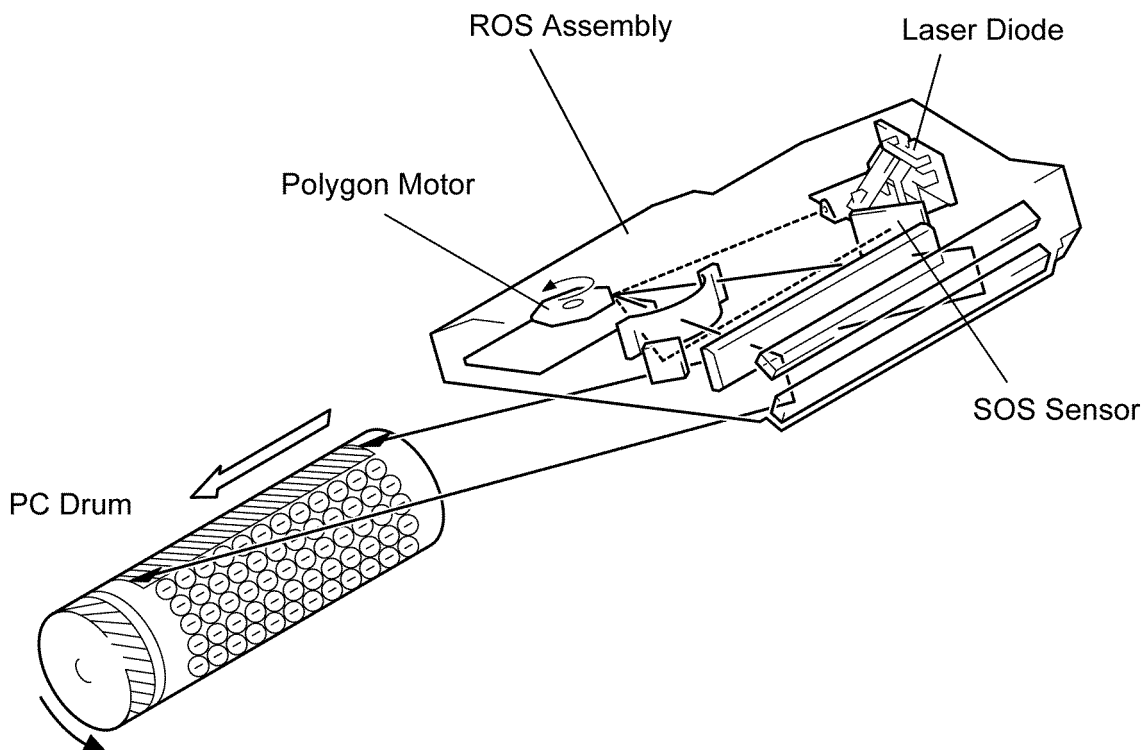
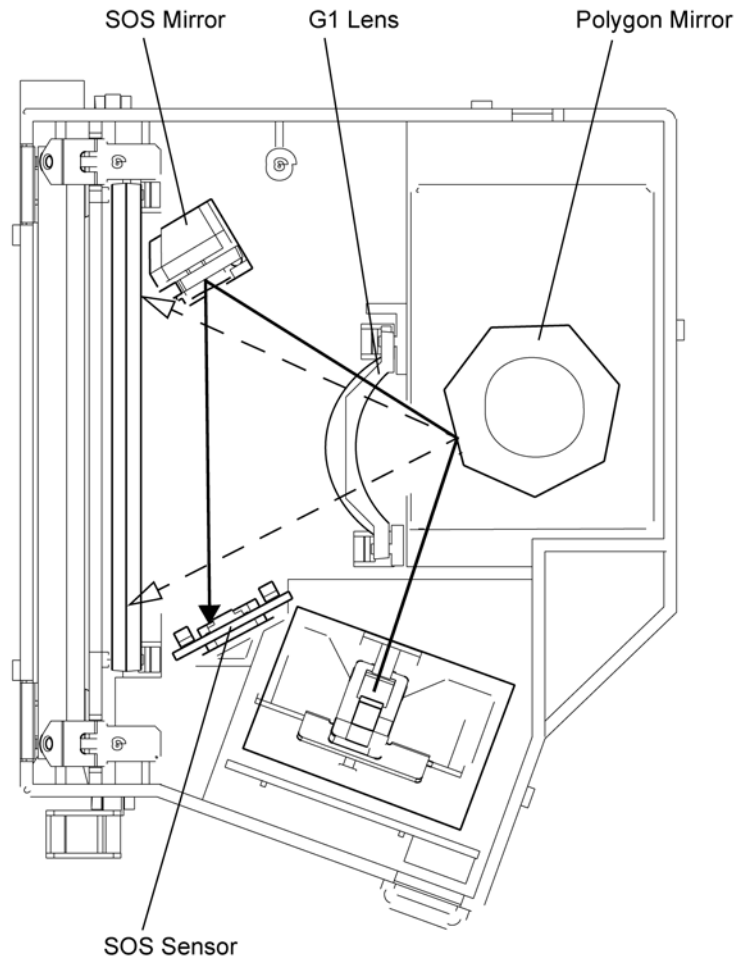


Figure 2

- When the printer receives a PRINT signal, the polygon motor and the main motor start rotating and the paper is taken up and fed into the printer.
- The printing is started when the CPU sends a VIDEO signal to the ROS a given period of time after the leading edge of the paper actuates the paper feed switch (TOD signal).
- The print start position for the 2nd line is defined by delaying the time, at which the VIDEO signal is to be transmitted.
- The start of scan sensor provided in the ROS ensures that the laser beam is emitted at the same timing for all lines in the main scanning direction.

Laser Emission Timing

- When a READY signal is detected a given period of time after the print command has been issued, the CPU outputs a laser ON signal.
- The laser ON signal causes a laser beam to be emitted and the laser beam travels to the polygon mirror, G1 lens, and the SOS mirror to eventually hit the SOS sensor, which generates an SOS signal.
- The SOS signal determines the laser emission timing for each line in the main scanning direction.

**Figure 3**

Laser Emission Area

Main scanning direction

- The print start position is determined by the main scanning print start signal (/HSYNC) output from the CPU and the width of the paper.
- The laser emission area is determined by the paper size. Areas with a width of 4 mm on both edges are not, however, printed.

Sub-scanning direction

- The print start position is determined by the sub-scanning print start signal (/TOD) output from the CPU and the length of the paper.
- The laser emission area is determined by the paper size. Areas with a width of 4 mm on both the leading and trailing edges are not, however, printed.

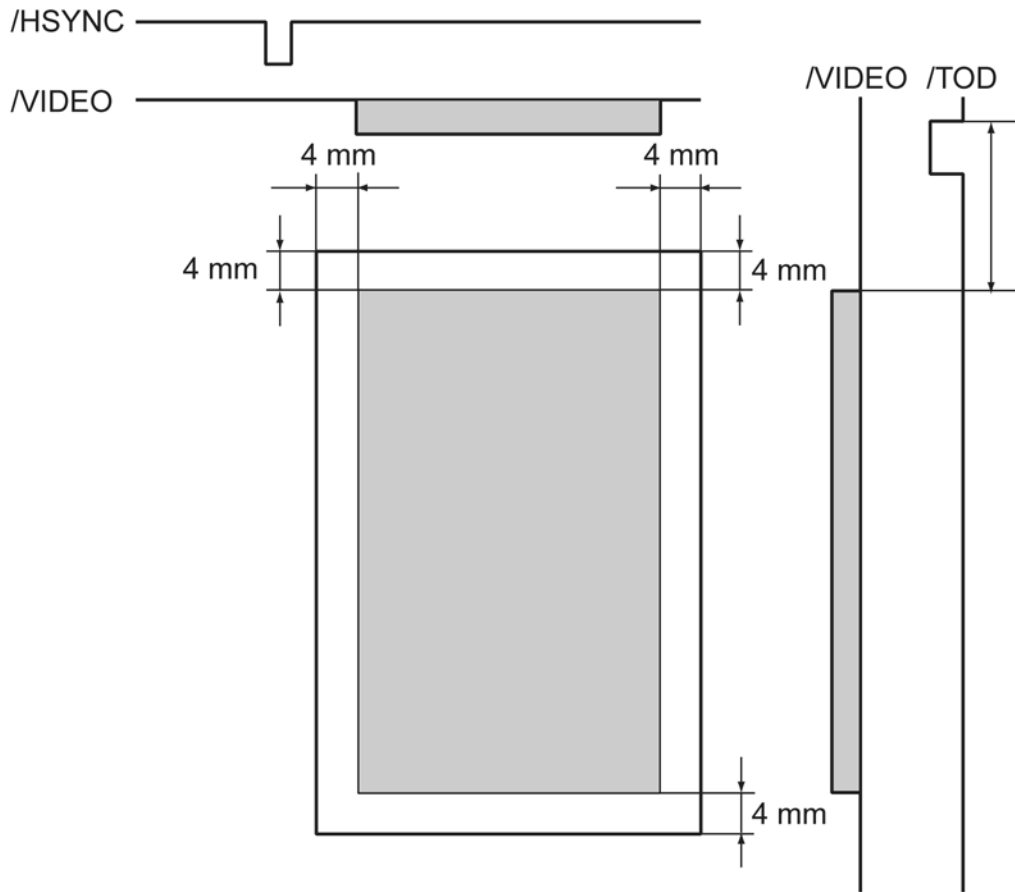


Figure 1

Cooling of the Machine Interior

The Fuser Fan is used to discharge heat generated from the ROS out of the machine, thereby preventing the ROS from overheating.

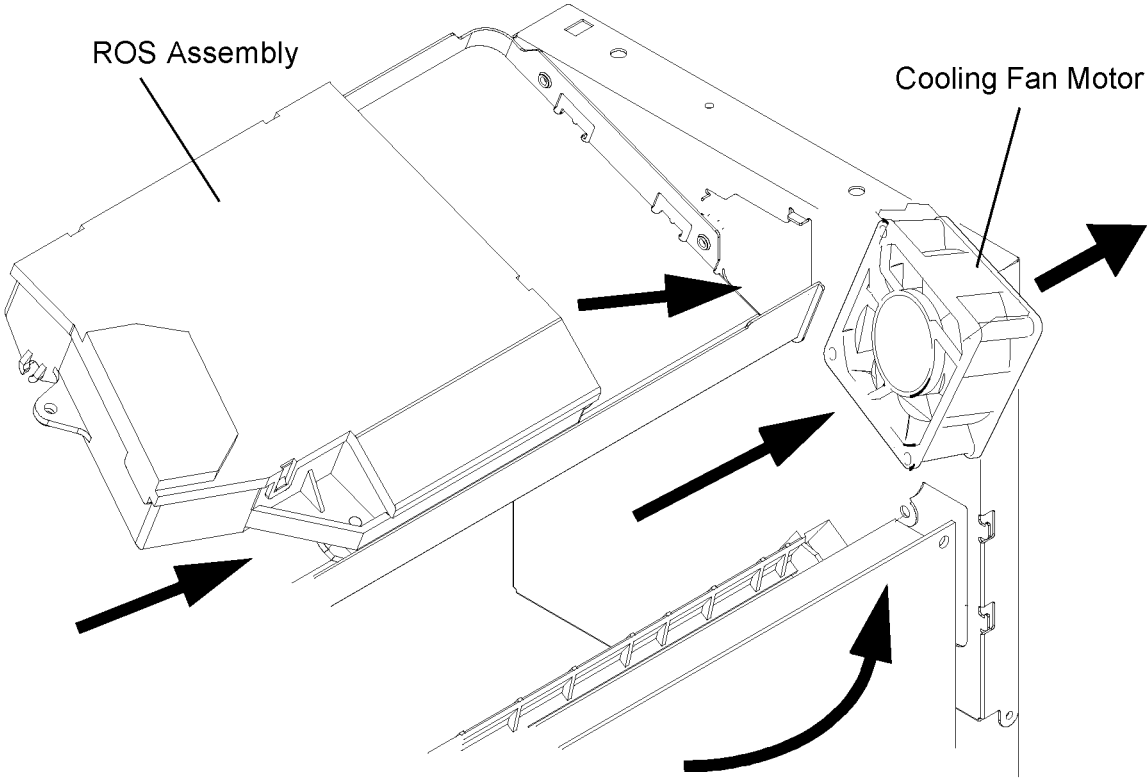


Figure 1

GP 14 Imaging Cartridge Section

Overview

- This machine adopts the single-component FMT, or Fine Micro Toning, developing system.
- The toner agitating screw conveys toner in the toner cartridge onto the toner supply roller.
- The toner supply roller transports the toner to the sleeve roller. The resin sleeve of the sleeve roller carries the toner onto the drum to form a toner image on the latent image formed on the surface of the drum.
- The illustration below shows the construction of the toner cartridge and the developing unit.

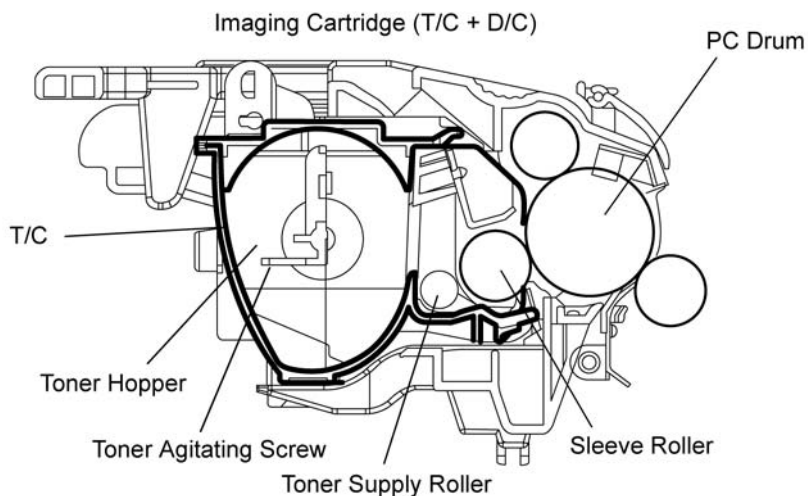


Figure 1

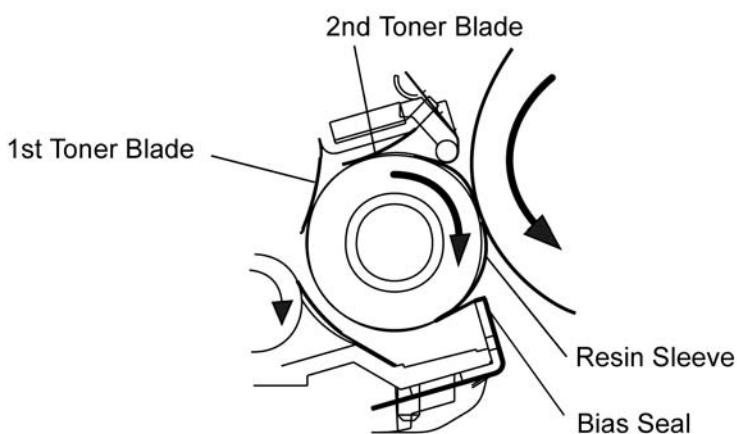


Figure 2

- The imaging cartridge consists of a T/C (Toner Cartridge) and a D/C (Drum Cartridge) (see the illustration below).

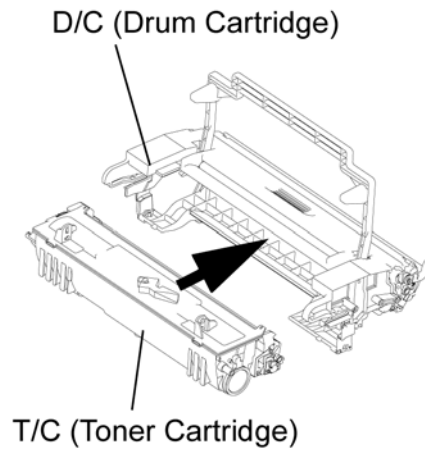


Figure 3

Imaging Cartridge

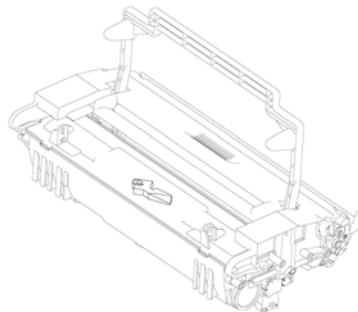


Figure 4

Drum

- The Drum used in this printer is the organic photoconductor (OPC) type.
- The drum consists of two layers - Charge Transport Layer (CTL) and the Charge Generating Layer (CGL) - applied to an aluminium alloy base (cylinder).

Handling precautions

The Drum of this type exhibits light fatigue after being exposed to light for a long time, which results in its sensitivity being changed. Therefore, always wrap the drum in the drum cloth or a soft cloth immediately after it has been removed from the printer. Use utmost care to prevent the surface of the Drum from being dirtied.

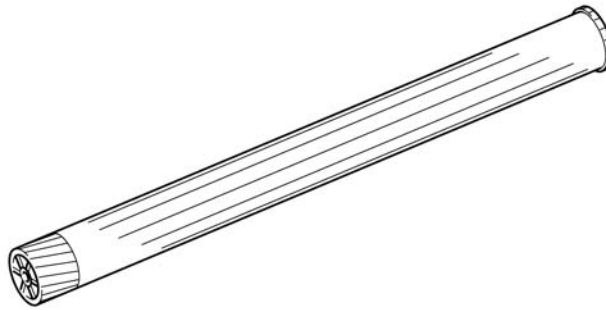


Figure 5

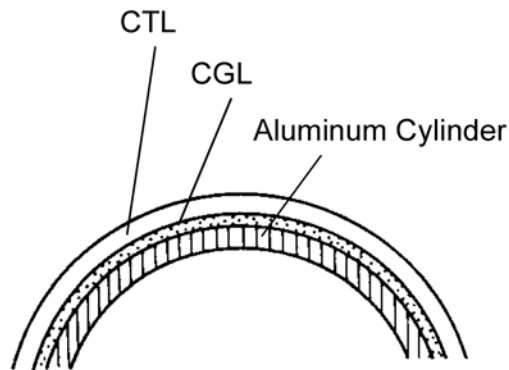
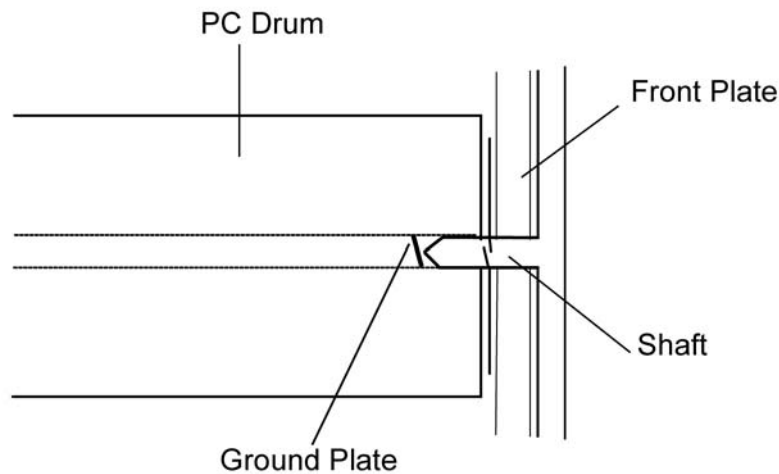


Figure 6

Grounding of the drum

The ground contact point (Ground Plate) for the drum is located inside the drum at its front side. It is, at all times, in contact with the shaft of the front plate of the imaging cartridge. When the imaging cartridge is loaded in the printer, the set pin of the front plate of the imaging cartridge contacts a side plate on the printer side, thereby providing grounding. The potential on the surface of the drum exposed to the laser beam is then grounded through the ground plate, shaft, and set pin to the frame of the printer.

**Figure 7**

Development System

- The toner agitating screw conveys toner in the toner cartridge onto the toner supply roller.
- The toner supply roller transports the toner to the sleeve roller.
- The 1st toner blade located above the sleeve roller spreads a thin, even coat of toner over the sleeve roller.
- A negative charge is applied to the 2nd toner blade, which negatively charges the toner.
- The sleeve roller is negatively charged, which retains the toner there on.
- The toner transfers to the area on the surface of the drum that has been exposed to the laser beam.
- The Bias Seal on the underside of the sleeve roller separates toner, which has not been attracted onto the surface of the drum, from the sleeve roller. The same bias as that applied to the sleeve roller is applied to this Bias Seal, thereby preventing toner from falling.
- The developing bias automatically adjusts the print image density over a range of seven steps through feedback control. A bias voltage, reversed from the developing bias, is applied before a print command is issued, before predrive, and during predrive, to prevent toner from transferring to the surface of the drum.

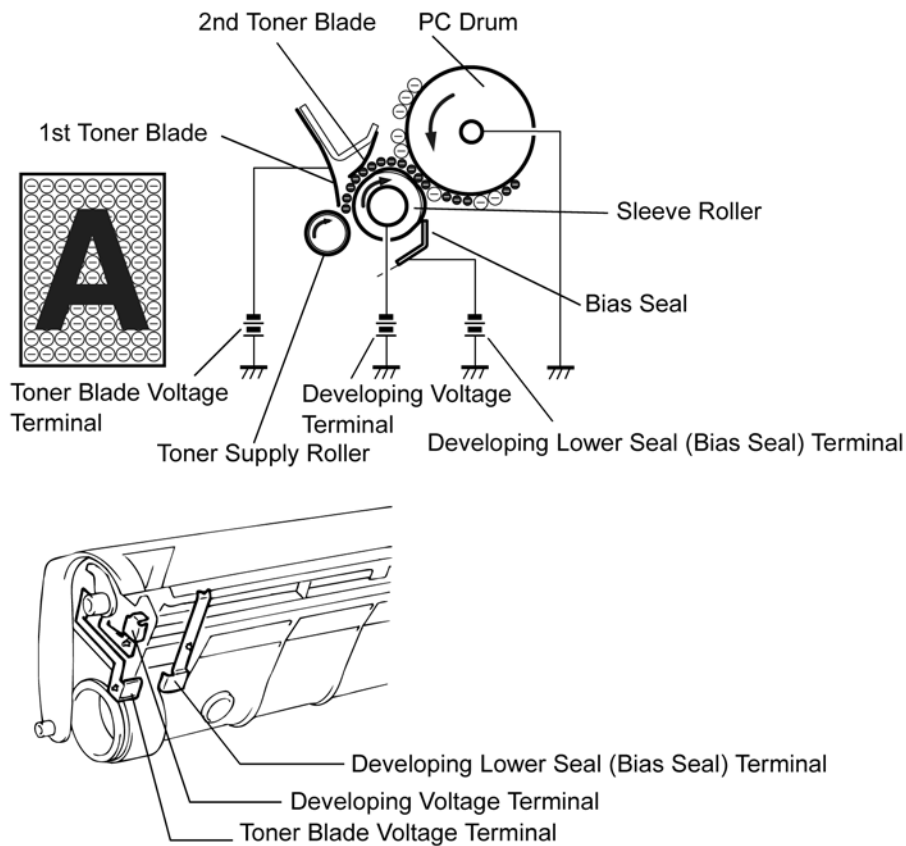


Figure 8

Detection of Toner Cartridge

Installation detection:

- The IC chip (CSIC) built into the toner cartridge detects that the imaging cartridge is installed correctly when the power switch is turned ON, and the front door is opened and closed. The detection is made electrically

Detection of a new toner cartridge

- The IC chip (CSIC) built into the toner cartridge detects a new toner cartridge only when it is first installed.

Toner near empty and empty detection

- The built-in CSIC board counts the amount of toner still available for use in the toner cartridge.
- The counter counts down when the amount of toner equivalent to Letter(A4), B/W 5% is consumed and the corresponding data is stored in the CSIC board.
- A toner near empty condition and a toner empty condition are detected when the counter reads the corresponding predetermined count.

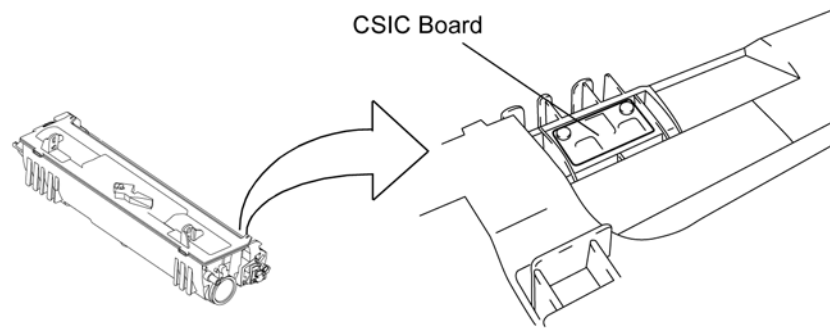


Figure 9

GP 15 Image Transfer

Overview

- The toner image formed on the surface of the PC Drum during the developing process is transferred onto the paper.
- This printer adopts the roller image transfer system, in which the image transfer roller is used to transfer the image onto the paper.
- In the roller image transfer system, the paper is pinched between the PC Drum and the image transfer roller at all times during the print cycle. This results in a very little amount of ozone being produced and there is a little chance of a double transferred image occurring.
- To clean the image transfer roller, reverse bias is applied to the image transfer roller.
- The cleaning sequence is carried out when the printer is started, a print command is issued, a print cycle is completed, and when the printer is started after a misfeed has been cleared.
- There is the charge neutralizing needle installed for neutralizing the paper after image transfer.

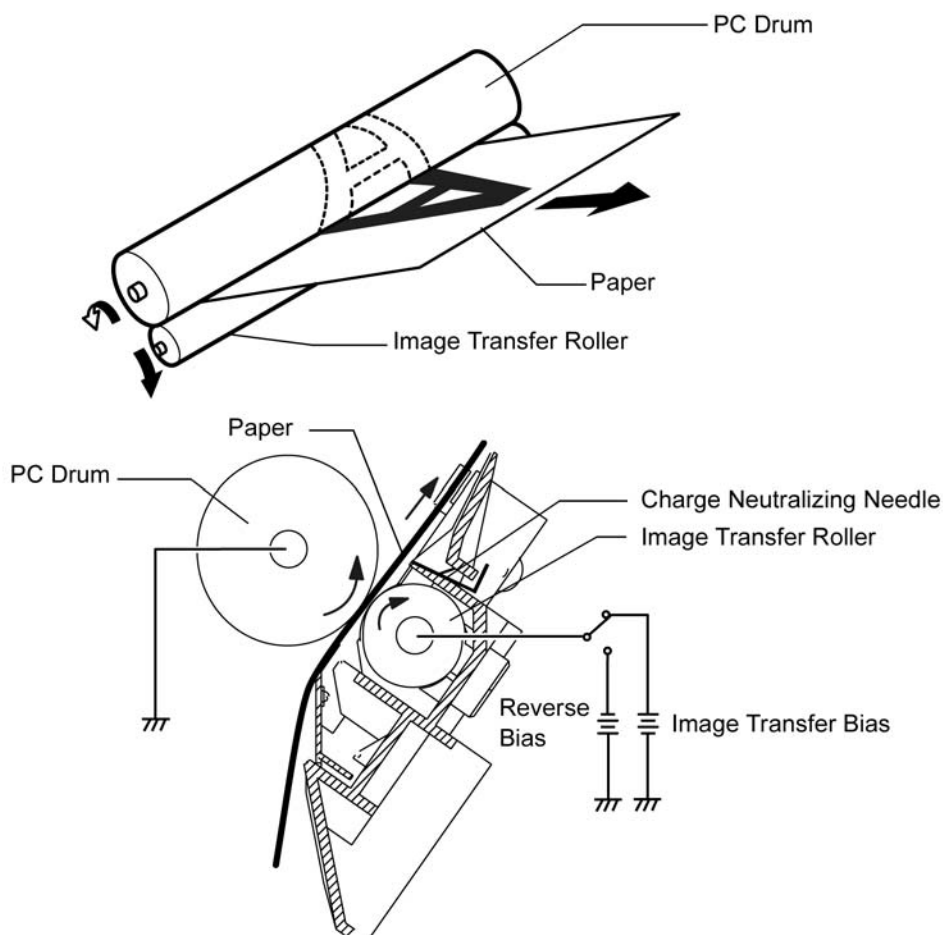


Figure 1

GP 16 Fuser Assembly

Overview

- The toner image transferred onto the paper is securely fixed to the paper.
- A heated roller system is used as the fusing system. The paper, to which the toner image has been transferred, is fed between the fusing roll heated by the heat roll lamp and the pressure roll. This permanently fuses the toner image to the paper.

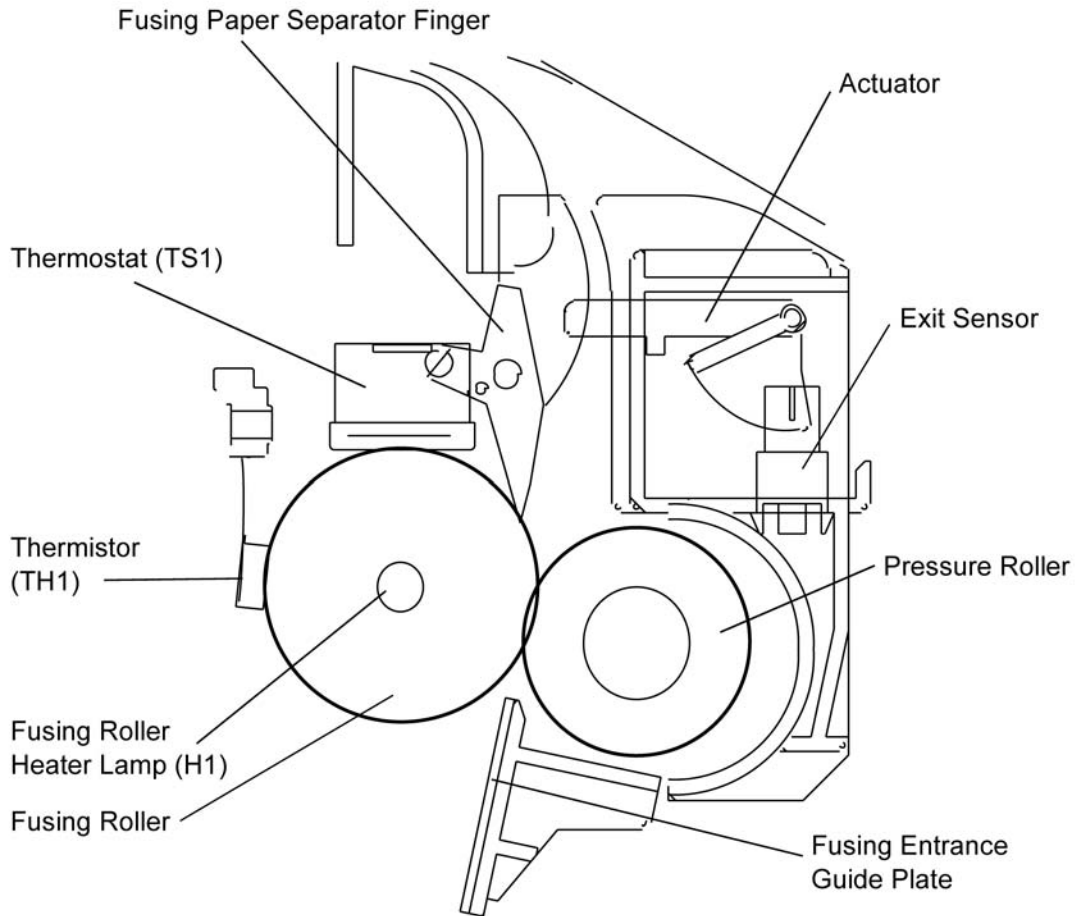


Figure 1

Fuser Assembly Temperature Control

Temperature change

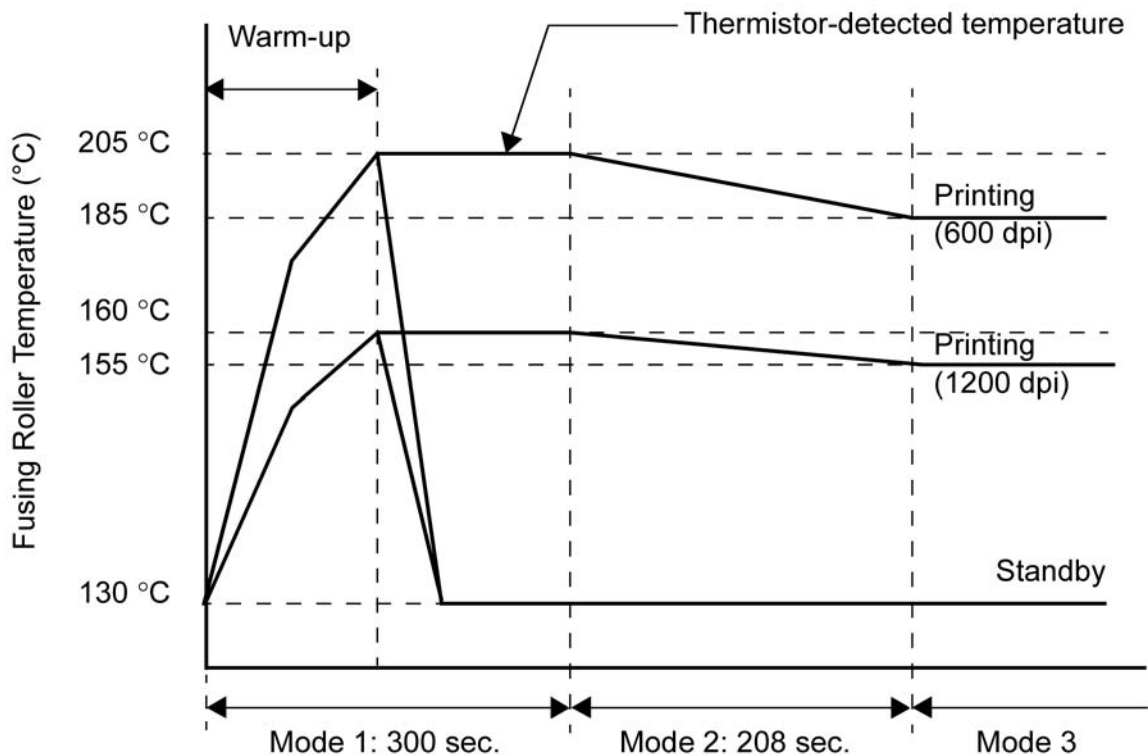


Figure 2

Table 1: Thermistor-Detected Temperature at Start of Temperature Control

		Less than 50°C (122°F)	50°C to 130°C (122°F to 266°F)	More than 130°C (266°F)
Mode before Tempera- ture Control	Power OFF	Mode 1	Mode 2	Mode 3
	Mode 1		Mode 1	
	Mode 2		Mode 2	Mode 3
	Mode 3			

Temperature control

- During a warm-up cycle, the fuser temperature is increased to a predetermined level.
- The warm-up control is performed when the power is turned ON, the front door is opened and closed, and the pause mode is cancelled.
- During the standby state, the fuser temperature is kept lower (130°C) than during printing so as to economize on power consumption.

- The temperature control mode selected when temperature control is resumed (when the power is turned ON, the front door is opened and closed, or the pause mode is cancelled) is determined by the mode set before the interruption and the fuser temperature.
- In the pause (low power consumption) mode, the fusing roll heat lamp is turned OFF to reduce power consumption.

Temperature control mode

During a print cycle, the fuser temperature is regulated in accordance with the elapsed time since the completion of the warm-up cycle.

- **Mode 1**
Mode 1 lasts for 5 min. If, however, mode 1 is interrupted in mid-operation and the thermistor temperature is 50°C (122°F) or more, the timer count before the interruption continues. When mode 1 is completed, mode 2 starts.
- **Mode 2**
Mode 2 lasts for 208 sec. During this period, the fuser temperature is gradually decreased and, when it is decreased to the fuser temperature of mode 3, mode 2 is terminated and mode 3 is started.
- **Mode 3**
Mode 3 continues until the temperature control is interrupted (as by opening and closing the Front Door, etc.).

Fuser temperature in each mode

		Mode 1	Mode 2	Mode 3
600 dpi	Plain Paper	205°C (401°F)	205°C-185°C(401°C to 365°F)	185°C (365°F)
	Thick paper, envelope, post-card	205°C-215°C (401°F to 419°F)		
	OHP transparencies	195°C (383°F)	195°C-185°C (383°F to 365°F)	185°C (365°F)
1200 dpi	Plain paper	160°C (320°F)	160°C-155°C (320°F to 311°F)	155°C (311°F)
	Thick paper, envelope, post-card	165°C-170°C (329°F to 338°F)		
	OHP transparencies	155°C (311°F)	155°C-150°C (311°F to 302°F)	150°C (302°F)

GP 17 Paper Exit

Paper Exit Mechanism

- The paper exit mechanism transports the fused paper onto the exit roll.
- The exit sensor detects not only a paper misfeed but also an open upper cover.

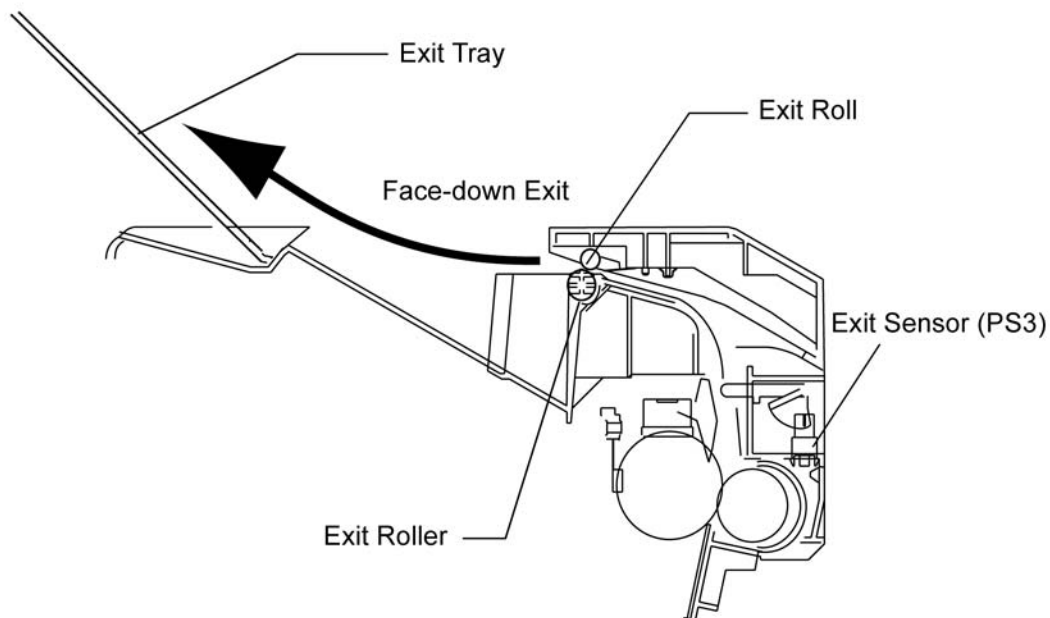


Figure 1

GP 18 Functioning

The equipment is a Group 3 multifunction fax functioning in accordance with the UIT-T T.30 recommendation.

It consists of a laser printer, a CIS (Contact Image Sensor) color sheet feeder scanner, a control panel with a 64-key alphanumerical keyboard and an LCD screen with 2 lines of 16 characters.

Its main functions are:

- Fax transmission and reception on the switched telephone network using the V34 protocol (max. 33.6 kbits/s) and the V17 protocol (max. 14.4 kbits/s)
- SMS (Short Message Service) transmission.
- Internet e-mail transmission and reception on the switched telephone network using the V90 protocol.
- Photocopying.
- Local printer and scanner, via a USB interface.
- Network printer and scanner, via a local area network (LAN).
- E-mail transmission and reception on the local area network.

Note: *The machine does not have any facilities for managing an external telephone answering machine connected on the same line (with a stackable plug). More generally, it is not designed to function with any telephone equipment connected in parallel on the same phone line. It is preferable to use a dedicated phone line for the fax. This allows the user to leave the fax permanently in service and to receive communications without user intervention. The fax is equipped with a standard telephone plug for connection to the switched telephone network. The electronics of the machine consist of a control panel board and a CPU board. For the printer, refer to the printer section. Electrical power is supplied by the printer.*

Note: *The ECP and LAN interfaces conform to the SELV (Safety Extra-Low Voltage, very low safety voltage) safety level. The phone line input conforms to the TNV-3 safety level.*

Before performing any service on the CPU board, disconnect the phone lead. Before performing any service on the CPU electronic circuit board, it is also preferable to:

- Set the power switch to the OFF position.
- Disconnect all external interconnect leads (LAN, ECP).
- Unplug the power cord.

GP 19 Operating Sequence

Print Start Sequence

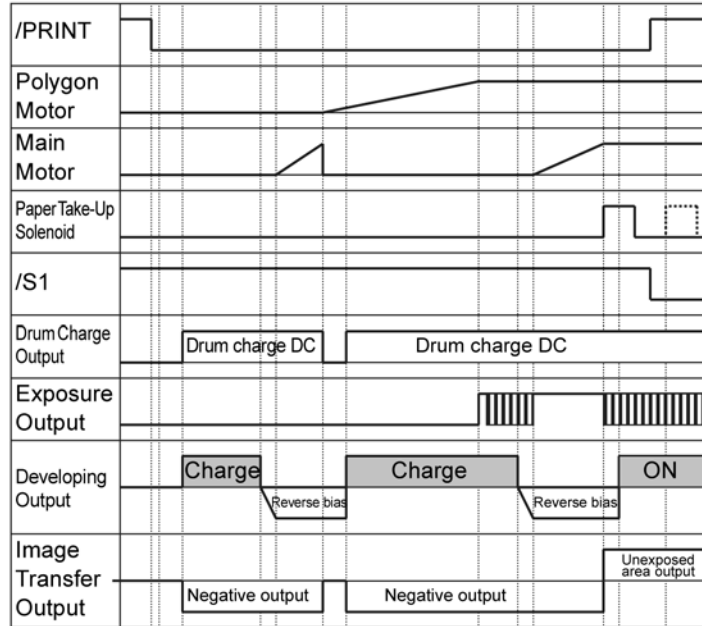


Figure 1

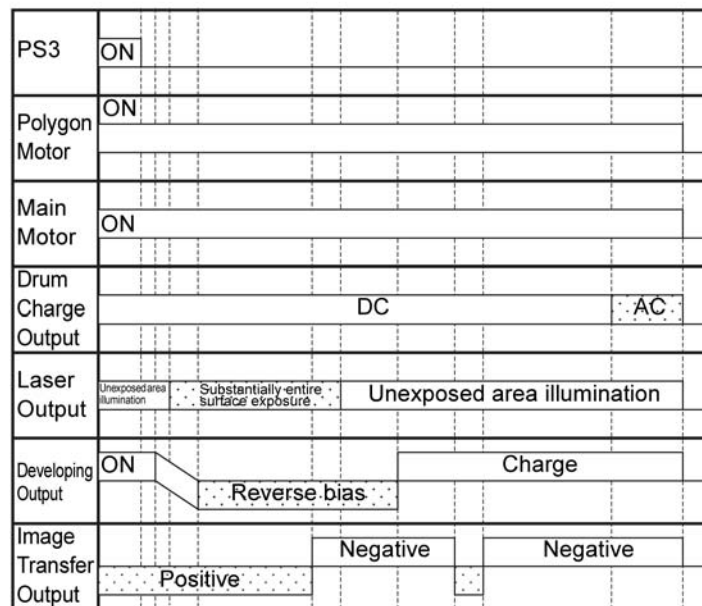


Figure 2

GP 20 Scanning and Communication Error Codes

The communication error codes appear in the logs and in the transmission reports.

General Codes

Code 01 - Busy or no fax tone

This code appears after 6 failed attempts. You will have to restart the transmission at a later time.

Code 03 - Stopped by operator

Communication stopped by the operator by pressing the key.

Code 04 - Programmed number invalid

Invalid single-key or quick-dial number: check the number (for example, a delayed transmission has been programmed with a single key and the number corresponding to this key has been deleted).

Code 05 - Scanning fault

A fault has occurred at the location of the document to be transmitted. For example, the sheet is jammed.

Code 06 - Printer not available

A fault has occurred on the machine: out of paper, paper jam or cover open. This fault code only appears if the "reception without paper" parameter is set to **WITHOUT PAPER**.

Code 07 - Disconnect

The communication has been cut (bad connection).

Code 08 - Quality

This code generally indicates line quality problems. The document that you have transmitted has not been received correctly. Contact your correspondent to check whether it is necessary to re-transmit the document. The interference may have occurred in an unimportant area of the document.

Code 0A - No document to recover

You have attempted to recover a document from a correspondent, but the latter has not prepared (stored), the document or the password that was entered is wrong.

Code 0B - Wrong number of pages

There is a difference between the number of pages indicated when the document was prepared for transmission and the number of pages actually transmitted: check the number of pages of the document.

Code 0C - Received document faulty

Ask the correspondent who calls you to check the length of his document (it is too long to be received in its entirety).

Code 0D - Document transmission fault

Ask the correspondent who calls you to retransmit his document.

Code 13 - Memory full

Your fax can no longer receive incoming documents because the memory is full: there are too many documents that have been received but not yet printed, or there are too many documents waiting to be transmitted.

Print the received documents, and delete or transmit in immediate mode the documents waiting to be transmitted.

To print the documents, press M, 3, 8, 1 then OK.

Code 14 - Memory full

Received document memory saturated. Restore the printer to working order.

Print the received documents, press M, 3, 8, 1 then OK.

Code 15 - Mailbox number x unknown

You want to deposit a document in a mailbox of a correspondent, but the mailbox with this number does not exist with this correspondent.

Code 16 - List number x not retransmitted

You have requested the retransmission of a document by a remote fax, but the latter has not programmed the requested list of recipients.

Code 17 - Mailbox number x unknown

You want to recover a document from a mailbox of a correspondent but the mailbox with this number does not exist with this correspondent.

Code 18 - Retransmission impossible

You have requested the retransmission of a document by a fax that does not have a retransmit function.

Code 19 - Stopped by correspondent

Communication stopped by your correspondent (for example, a fax attempts to recover a document from your fax, while there is no document waiting for this correspondent).

Code 1A - Disconnect

Transmission has not started: the phone line is too noisy.

Code 1B - Document transmission fault

In the case of a transmission: restart the transmission.

In the case of a reception: ask your correspondent to retransmit his document.

Internet Codes

Codes 40 and 41 - No reply from provider

The modem cannot connect to the service provider. If this is a systems error, verify the phone number of the service provider and (if applicable) the dialing prefix associated with the machine.

Code 42 - Connection to service provider impossible

The service provider refuses the connection. The service is momentarily not available. If this is a systems error, verify the Internet connection parameters (connection identifier, connection password or subscription validity).

Code 43 - Connection to SMPT server impossible

Impossible to connect to the SMPT server to send mail. The service is momentarily not available. If this is a systematic error, verify the Internet e-mail and server settings.

Code 44 - Connection to POP3 server impossible

Impossible to connect to the POP3 server to receive mail. The service is momentarily not available. If this is a systematic error, verify the internet, e-mail and server settings.

Code 45 - Provider disconnect

The service has become momentarily unavailable. Try to connect again later.

Code 46 - SMPT server disconnect

Disconnect of the SMPT server to send mail, or mailbox full. The service has become momentarily unavailable. Try to connect again later.

Code 47 - POP3 server disconnect

Disconnect of the POP3 server to receive mail. The service has become momentarily unavailable. Try to connect again later.

Code 48 - Internet disconnect

The service has become momentarily unavailable. Try to connect again later.

Code 49 - Internet connection impossible

Verify the phone number and (if applicable) the dialing prefix associated with the machine. To verify the internet parameters, print them out by entering the key sequence MENU, 9, 4, 5 followed by the OK key.

Code 50 - Server Error

Verify the parameters SMS server number or a communication error occurred during data transfer.

GP 21 Video Check

First calibrate the scanner. To do so, use the following procedure:

1. Place a blank sheet of paper in the document input tray.
2. Enter the key sequence MENU, *, a, and validate by pressing OK.
3. Wait until the machine restarts.
4. Make some copies with the CIS and check that the quality of the copies is satisfactory.
5. In the case of a scanner problem, repeat the calibration procedure above.
6. In the case of a printer problem (the result remains unsatisfactory after scanner calibration):
 - a. Print the logs to check the printer component of the machine.
 - b. Check the consumable.
7. To further evaluate the image quality, run a dark dusting.
8. Ensure that SOS1, Bit 8 is set to 1.
9. Press the # key to print the shading pattern, then check for any defects.

GP 22 Machine Components Layout

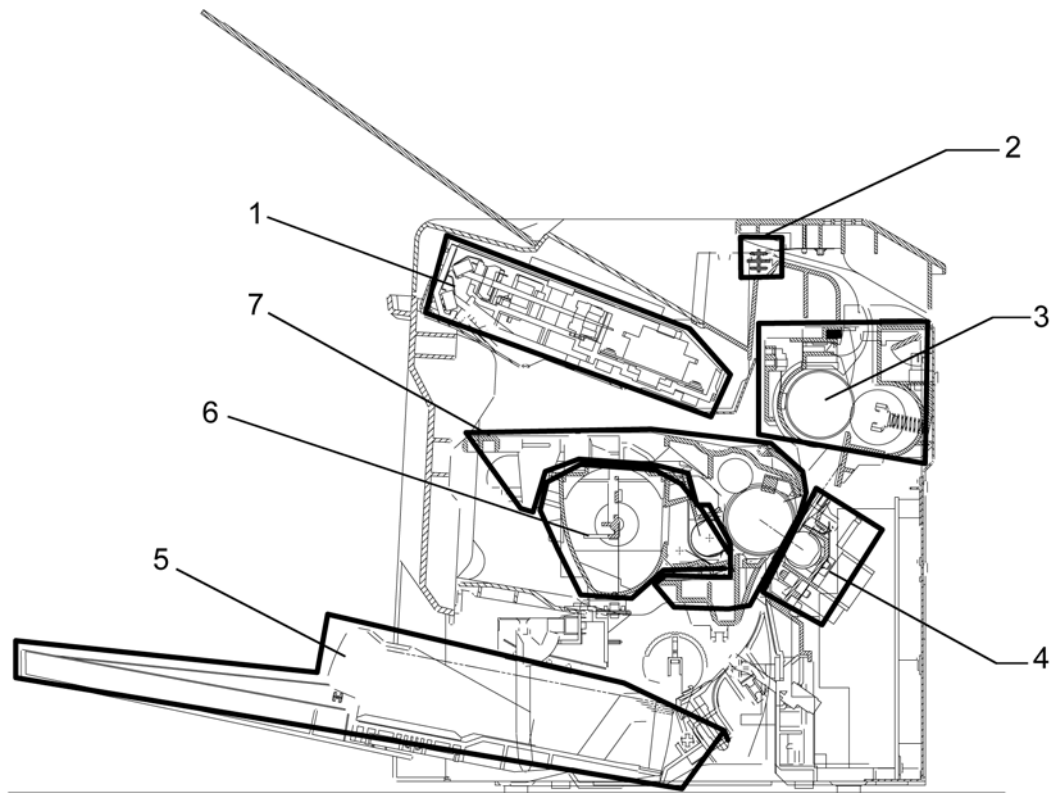


Figure 1

1. ROS Assembly
2. Exit Roller
3. Fusing Unit
4. Image Transfer Section
5. Multipurpose (MP) Tray
6. Toner Cartridge
7. Drum Cartridge

GP 23 Service Log

XEROX		ADF	OPTICS	FUSER	XERO	PAPER FEED	MISC
Serial Number	Account Data						Installed Tag
Date	Meter						Adjustment
1	CSE						
Problem	Subsystem	PLEASE PRINT					
2							
Problem	Subsystem						
3							
Problem	Subsystem						
4							
Problem	Subsystem						
5							
Problem	Subsystem						

7. Wiring Data

Control Panel Board	3
CPU Board	5
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WD 3 Connection Diagram (3 of 5)	16
WD 4 Connection Diagram (4 of 5)	17
WD 5 Connection Diagram (5 of 5)	18

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Control Panel Board

The control panel board manages the keyboard and the LCD screen by means of a micro controller, which communicates with the CPU via a synchronous serial link.

The LCD screen is equipped with its own driver using COG (Chip On Glass) technology.

On this board are also installed:

- The scanner sensors.
- The external connector for the smart card and the internal connector for the loudspeaker. These latter elements being managed by the CPU.

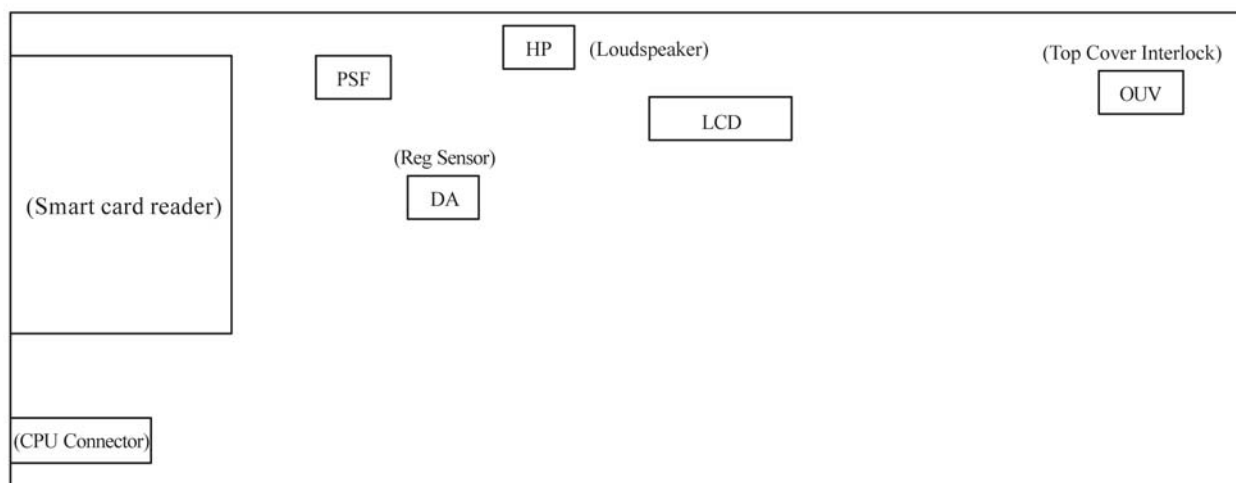


Figure 1

Sensors

- PSF: sheet present, detects the insertion of a sheet to be scanned.
- DA: start of scan, used to position the sheet relative to the CIS.
- OUV: cover open, detects the opening of the scanner cover: the motor is then stopped automatically.

List of connectors

Table 1: List of connectors

Connector	Location ref.	Number of pins	Male/Female	Type
CPU interconnect ("liaison UC")	P4205	22	Female	Elbow, Top contact
Loudspeaker ("HP")	P4201	2	Female	Elbow
LCD	P5001	24	Female	Elbow, bottom contact
Smart card reader	P4002	18	Female	Elbow

- CPU interconnect: connections to the CPU board.

Table 2: Connections to the CPU board

Pin	Signal	Input/Output	Use
1	IOPUCE	I/O	Smart card serial data
2	GND	-	Ground
3	CLKPUCE	I	Smart card clock
4	RSTPUCE	I	Smart card reset
5	CVCC	I	Smart card supply control
6	FERCAP	O	Smart card present detection
7	SELALIM	I	Smart card supply select
8	GND	-	Ground
9	SCLKPUP	I	Control panel micro controller synchronous serial link clock
10	TXPUP	I	Serial data to control panel micro controller
11	RXPUP	O	Serial data to control panel micro controller
12	CSPUP	I	Micro controller chip select
13	VEILLE	O	Not used
14	REVEIL	I	Not used
15	STSC	O	Start of scan sensor
16	PSF	O	Sheet present sensor
17	OUVCAP	O	Cover open sensor
18	P3V3	-	3.3V
19	VALIM	-	5V
20	ALIMCOUPE	-	5V
21	HPM	I	Differential LF signal to loudspeaker
22	HPP	I	Differential LF signal to loudspeaker

CPU Board

The CPU board is based on the Digicolor2 circuit which performs in particular the function of microprocessor.

The executable code is stored in the flash memory.

This flash memory is divided in two zones:

1. A zone reserved for the storage of the code.
2. A zone reserved for the storage of the documents.

The code is loaded from this flash memory into SDRAM, and the microprocessor executes its instructions from the SDRAM.

Before printing, the documents to be printed are stored as bitmaps in SDRAM.

The SDRAM is also used as the working memory for the Digicolor2.

Block Diagram of Electronics Architecture

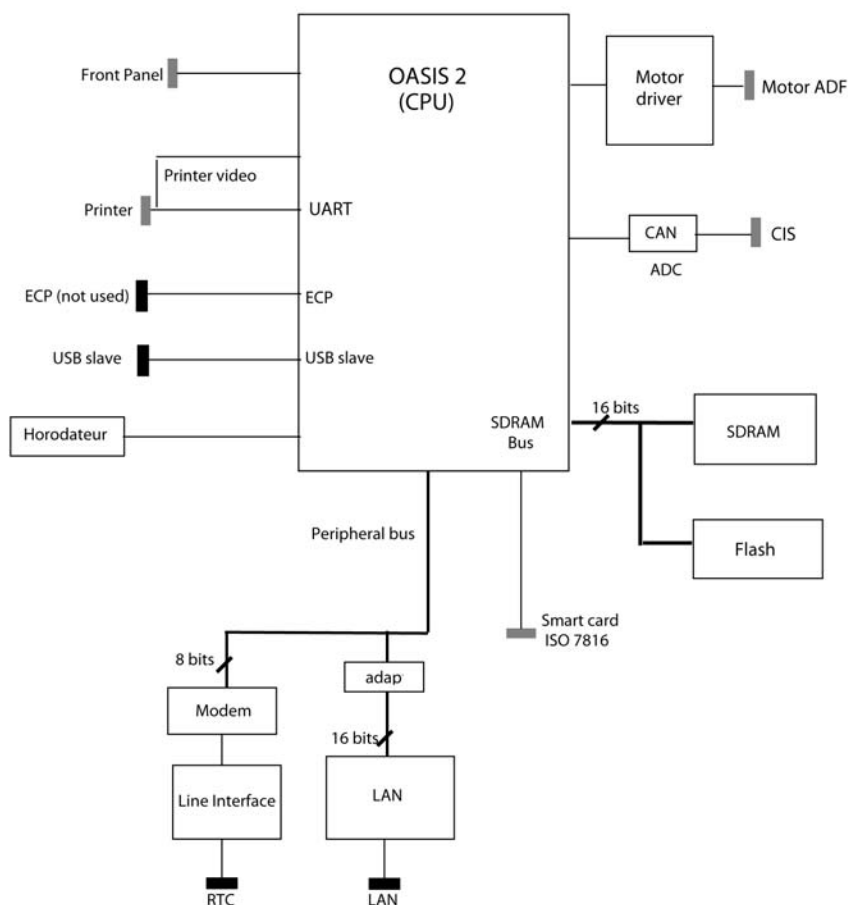


Figure 1 : Block Diagram of Electronic Architecture

List of Connectors

Table 1: List of Connectors

Connector	Location ref.	Number of pins	Male/Female	Type
Printer	P4201	26	Male	Straight
CIS	P4370	12	Female	Elbow, top contact
Control panel	P4100	24	Female	Elbow, top contact
ADF Motor	P4301	5	Female	Elbow
ECP	P4630	36	External, Centronics type	
USB device	P4901	4	External, USB type B	
LAN	P8800	8	External, RJ45	
STN	P4420	6	External, RJ11	

Printer: Connections to the Printer

Table 2: Connections to the Printer

Pin	Signal	Input/Output	Use
1-6-7-8	GND	-	Ground
2	P24V	-	4V Supply
3	GND	-	Ground
4	-	-	Not connected
5	RESETIMP	O	Printer reset
9	HSYNC	I	Horizontal sync (line)
10	linked to 23	-	-
11	READY	I	Printer ready (not used)
12	VSYNC	I	Vertical sync (page)
13	ETBSY	I	Engine status busy
14	RXIMP	I	Printer status (serial data transmitted by printer)
15	TXIMP	O	CPU command (serial data transmitted to printer)
16	CBSY	-	Controller status busy
18	SCLKIMP	O	Serial link clock printer sync
19	VIDEO	O	Printer video
17-20-21	GND	O	Ground
22-25	-	-	Not connected
23	linked to 10	-	
24	P5V	-	5 V supply
26	P5V	-	5 V supply

Control Panel: Connections to the Control Panel Board

Table 3: Connections to the Control Panel Board

Pin	Signal	Input/Output	Use
1	IOPUCE	I/O	Smart card serial data
2	GND	-	Ground
3	CLKPUCE	O	Smart card clock
4	RSTPUCE	O	Smart card reset
5	CVCC	O	Smart card supply control
6	FERCAP	I	Smart card present detection
7	SELALIM	O	Smart card supply select
8	GND	-	Ground
9	SCLKPUP	O	Control panel micro controller synchronous serial link clock
10	TXPUP	O	Serial data to control panel micro controller
11	RXPUP	I	Serial data from control panel micro controller
12	CSPUP	O	Micro controller chip select
13	VEILLE*	I	Not used
14	REVEIL*	O	Not used
15	STSC*	I	Start of scan sensor
16	PSF*	I	Sheet present sensor
17	OUVCAP*	I	Cover open sensor
18	P3V3	-	3.3 V supply
19	VALIM	-	5 V supply
20	ALIMCOUPE	-	5 V supply
21	HPM	O	Differential LF signal to loudspeaker
22	HPP	O	Differential LF signal to loudspeaker

CIS: Connections to the CIS

Table 4: Connection to the CIS

Pin	Signal	Input/Output	Use
1	VIDCIS	I	CIS video
2	CMD RESOL	O	300/600dpi Resolution command
3	VIDEOGND	-	Ground
4	ALIMCIS	-	5V Supply
5	VREFCIS	O	CIS reference voltage
6	SPCIS	O	CIS start pulse (line sync)
7	CLKCIS	O	CIS pixel clock (point sync)
8	ALIMLED	O	LED supply (current)
9	GNDLEDB	O	Blue LED cathode
10	GNDLEDV	O	Green LED cathode
11	GNDLEDR	O	Red LED cathode
12	GND	-	Ground

ECP: Parallel Interface to PC**Table 5: Parallel Interface to PC**

Pin	Signal	Input/Output	Use
1	HOSTCLK	I	Data clock (forward)
2	DATAECP0	I/O	Data bus LSB
3	DATAECP1	I/O	Data bus bit 1
4	DATAECP2	I/O	Data bus bit 2
5	DATAECP3	I/O	Data bus bit 2
6	DATAECP4	I/O	Data bus bit 4
7	DATAECP5	I/O	Data bus bit 5
8	DATAECP6	I/O	Data bus bit 6
9	DATAECP7	I/O	Data bus MSB
10	PRPHCLK	O	Data clock (reverse)
11	PRPHACK	O	Data acknowledgment (forward)
12	ACKRVRS	O	Acknowledgment of reverse request
13	XFLAG	O	Indicates that ECP mode is supported
14	HOSTACK	I	Data acknowledgment (reverse)
32	PRPHREQ	O	Data drive request
31	RVRSREQ	I	Data drive enable
36	ECPACTIVE	O	Mode select
18	ERREUR	-	Proprietary
17-19	GND	-	Ground
20	GND	-	Ground
21	GND	-	Ground
22	GND	-	Ground
23	GND	-	Ground
24	GND	-	Ground
25	GND	-	Ground
26-27-28-29-30	GND	-	Ground
15-33-34-35	-	-	Not Connected

USB: USB Interface**Table 6: USB Interface**

Pin	Signal	Input/Output	Use
1	VBUS_USB	I	Supply from master
2	USBN	I/O	Differential pair
3	USBP	I/O	Differential pair
4	GND	I/O	Ground

LAN: Local Area Network Interface**Table 7: Local Area Network Interface**

Pin	Signal	Input/Output	Use
1	TXP	O	Network transmission differential pair
2	TXN	O	Network transmission differential pair
3	RXP	I	Network reception differential pair
4	NC	-	Not connected
5	NC	-	Not connected
6	RXN	I	Network reception differential pair
7	NC	-	Not connected
8	NC	-	Not connected

STN: Switched Telephone Network Interface**Table 8: Switched Telephone Network Interface**

Pin	Signal	Input/Output	Use
1	NC	-	Not connected
2	R2	I/O	Loopback L1
3	L2	I/O	Telephone line pair
4	L1	I/O	Telephone line pair
5	R1	I/O	Loopback L2
6	NC	-	Not connected

Voltage Checks

Supply Voltages: Connections between power supply board and CPU board

Table 1: Supply Voltages

CPU Board pin	Value	Function
17	+5 V	5 V Supply
18	GND	Ground
19	+5V	5 V Supply
20	+24V	24 V

Note: The power input of the supply is protected by a fuse.

LVPS

+24V and 5V Supply

- The 24V and 5V supply voltages are supplied by the machine.

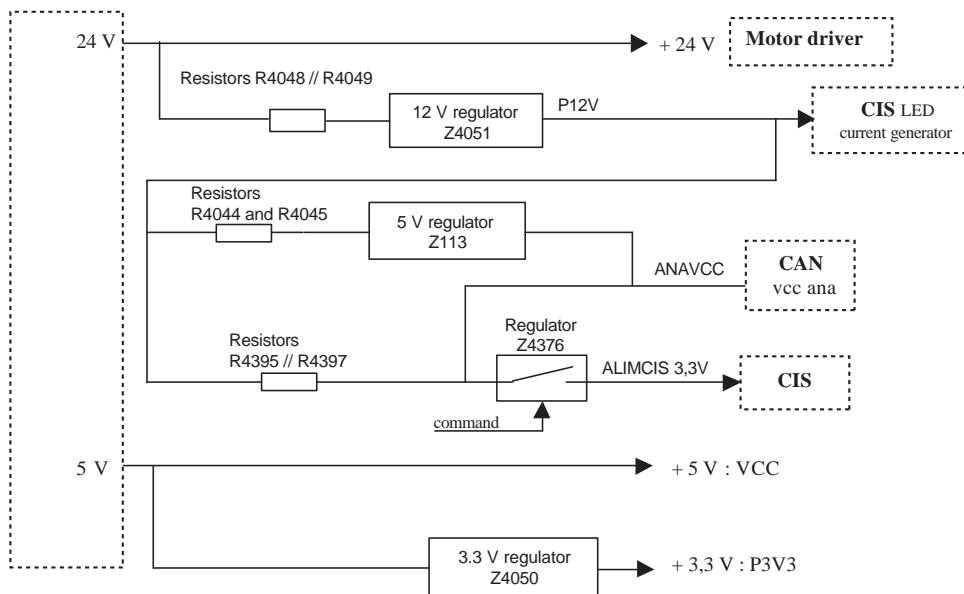


Figure 1 : Supply

Electrical Components Layout

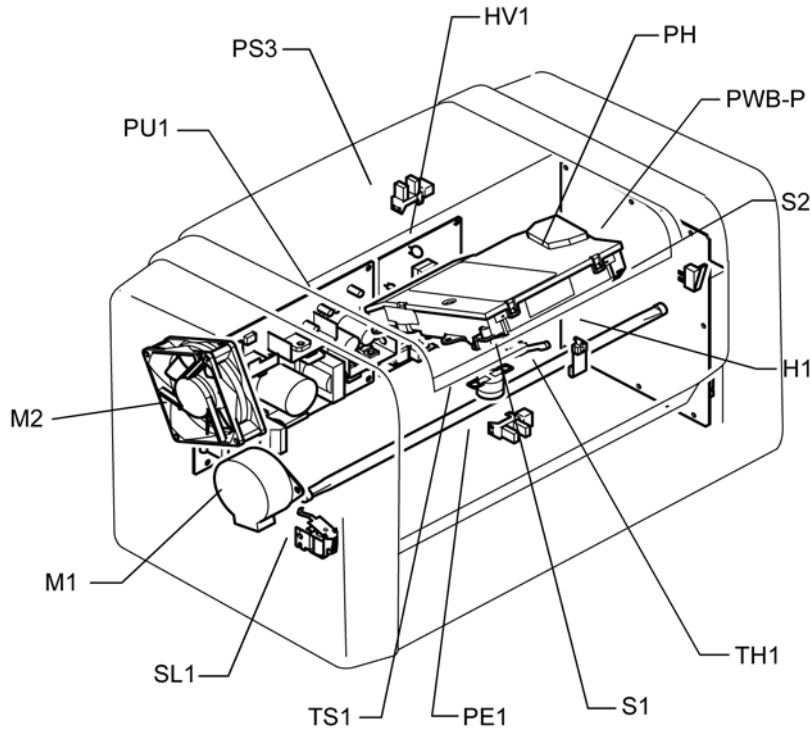


Figure 1

Table 1: Electrical Components Layout

Symbol	Component	Symbol	Component
M1	Main Motor	S2	Interlock
M2	Fuser Fan	PE1	Paper Empty Sensor
H1	Fuser Heat Lamp	PS3	Exit Sensor
TH1	Thermistor	SL-1	Paper Feed Solenoid
TS1	Thermostat	PU-1	LVPS
PH	ROS	HV-1	HVPS
S1	Paper Feed Switch	PWB-P	Main PWB

Main PBA and CPU PJ Locations

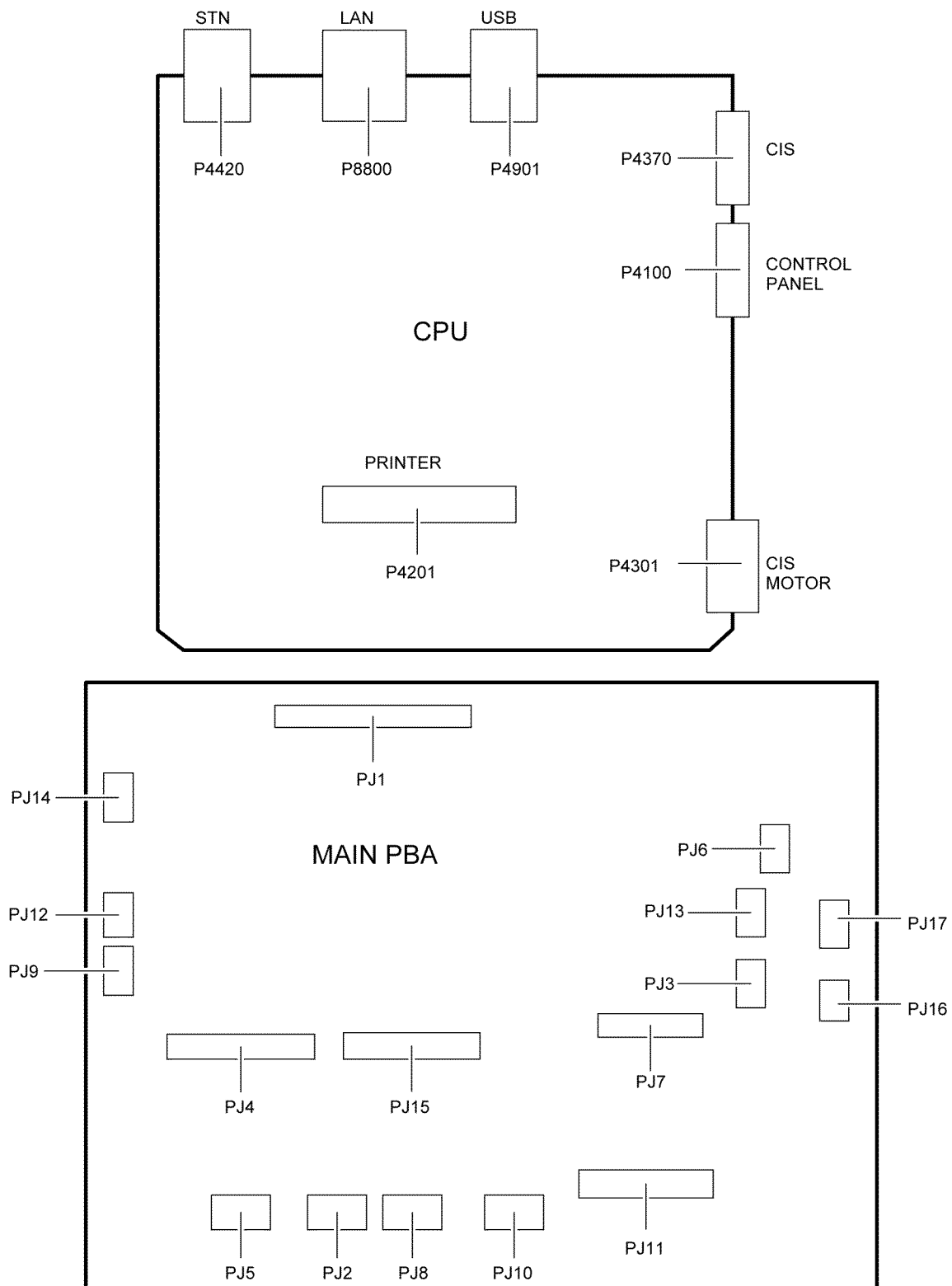


Figure 1

WD 1 Connection Diagram (1 of 5)

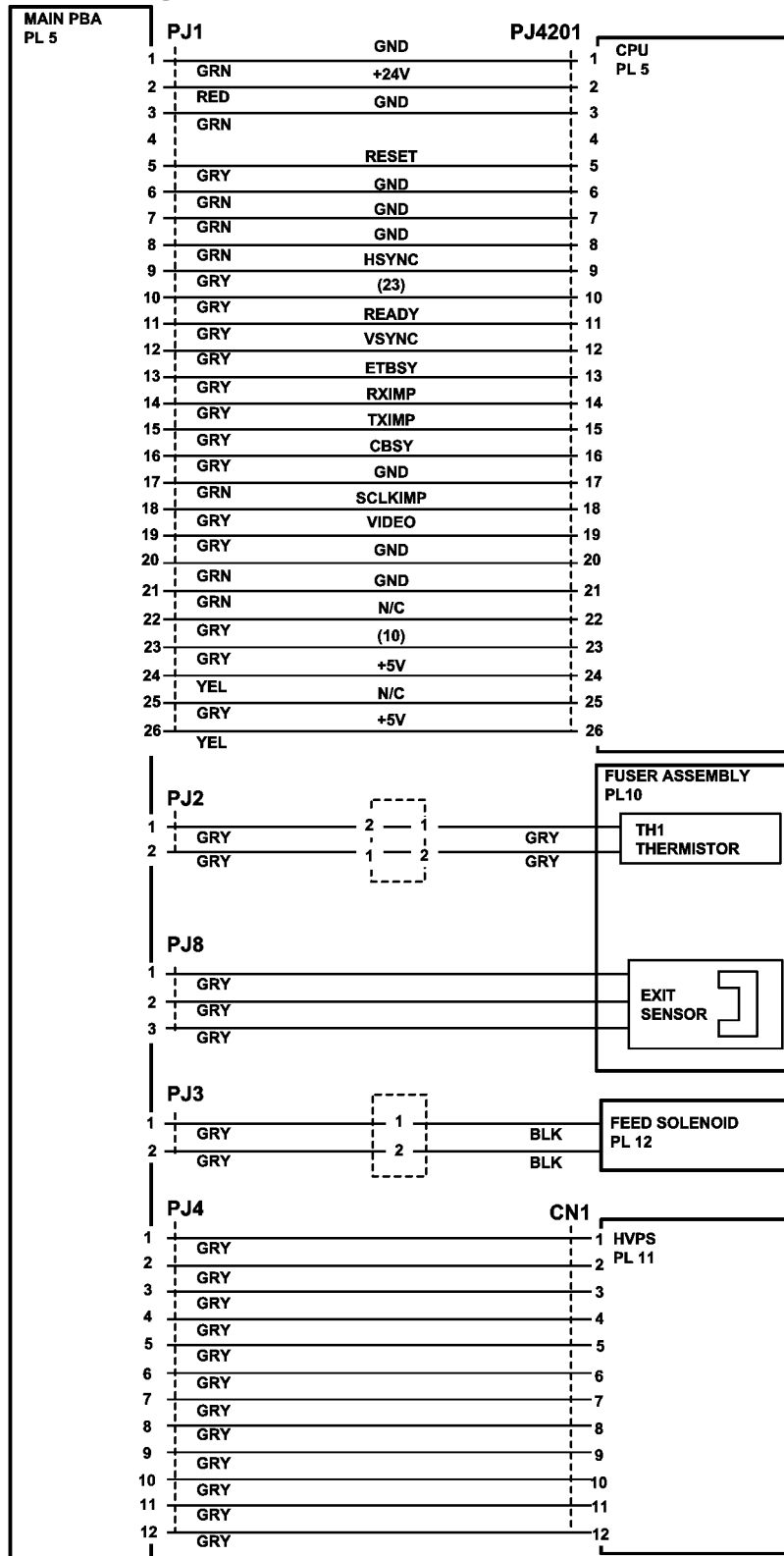


Figure 1

WD 2 Connection Diagram (2 of 5)

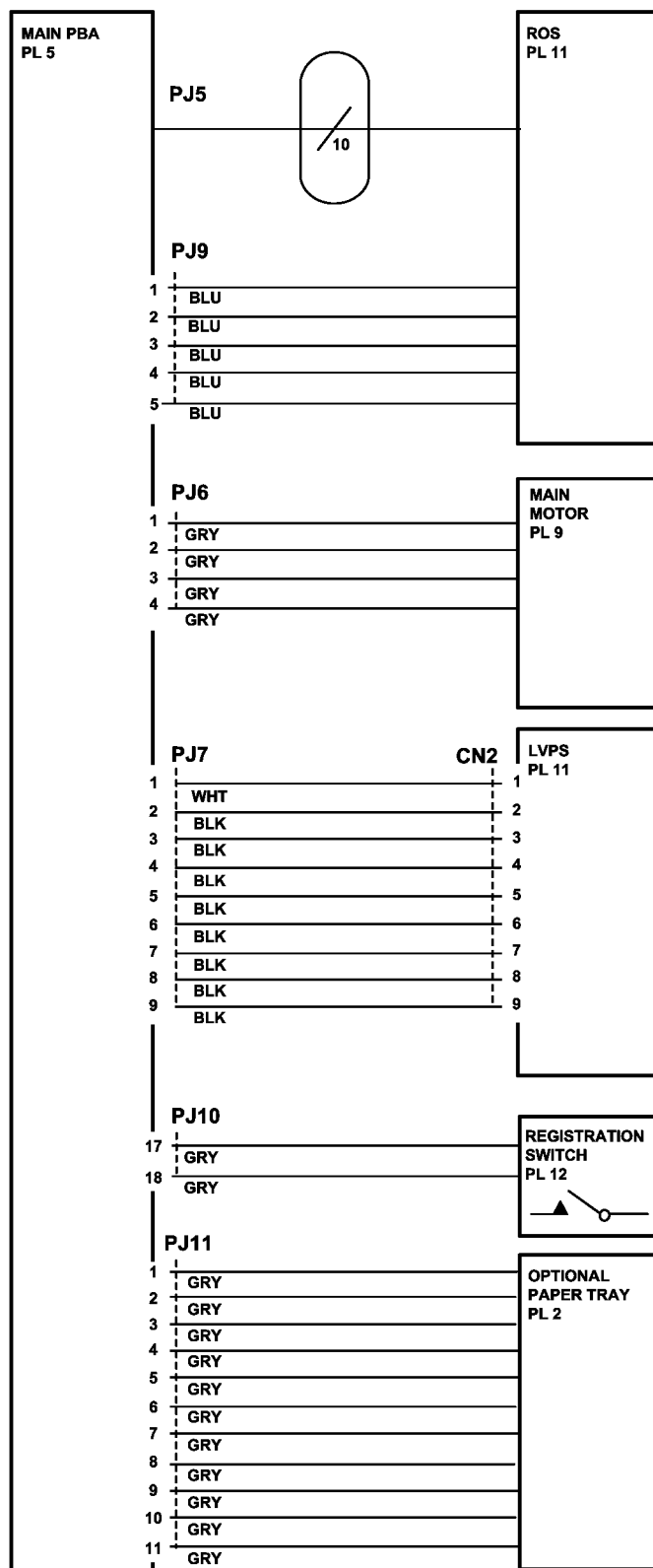


Figure 1

WD 3 Connection Diagram (3 of 5)

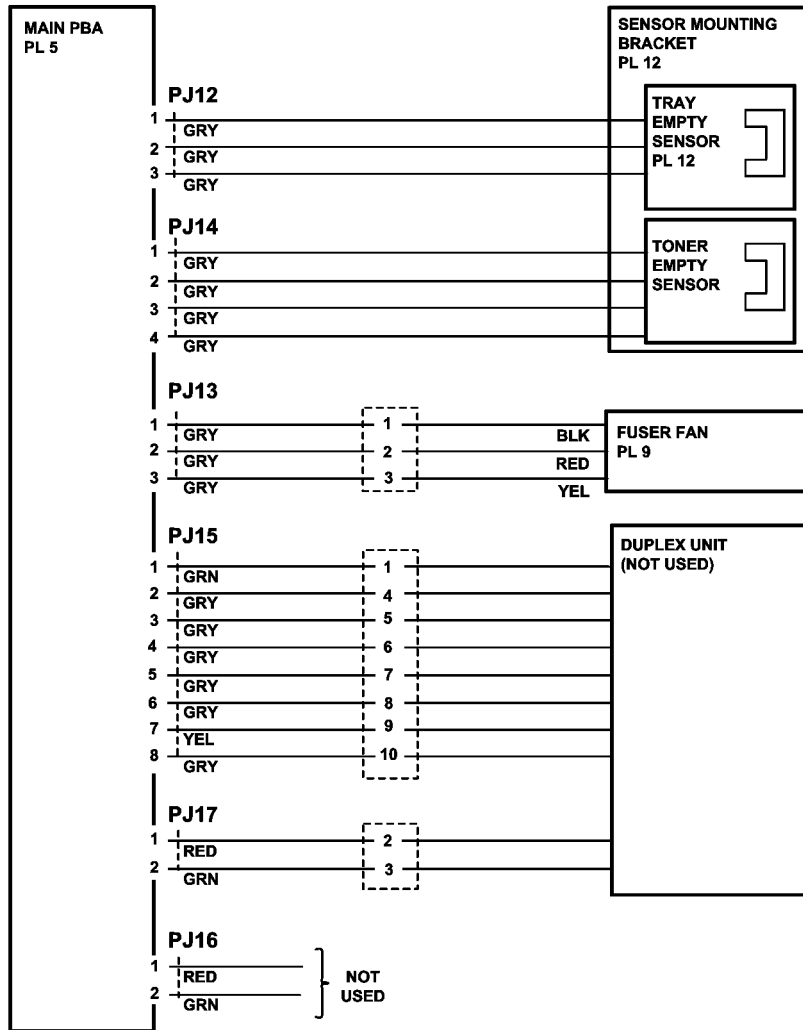


Figure 1

WD 4 Connection Diagram (4 of 5)

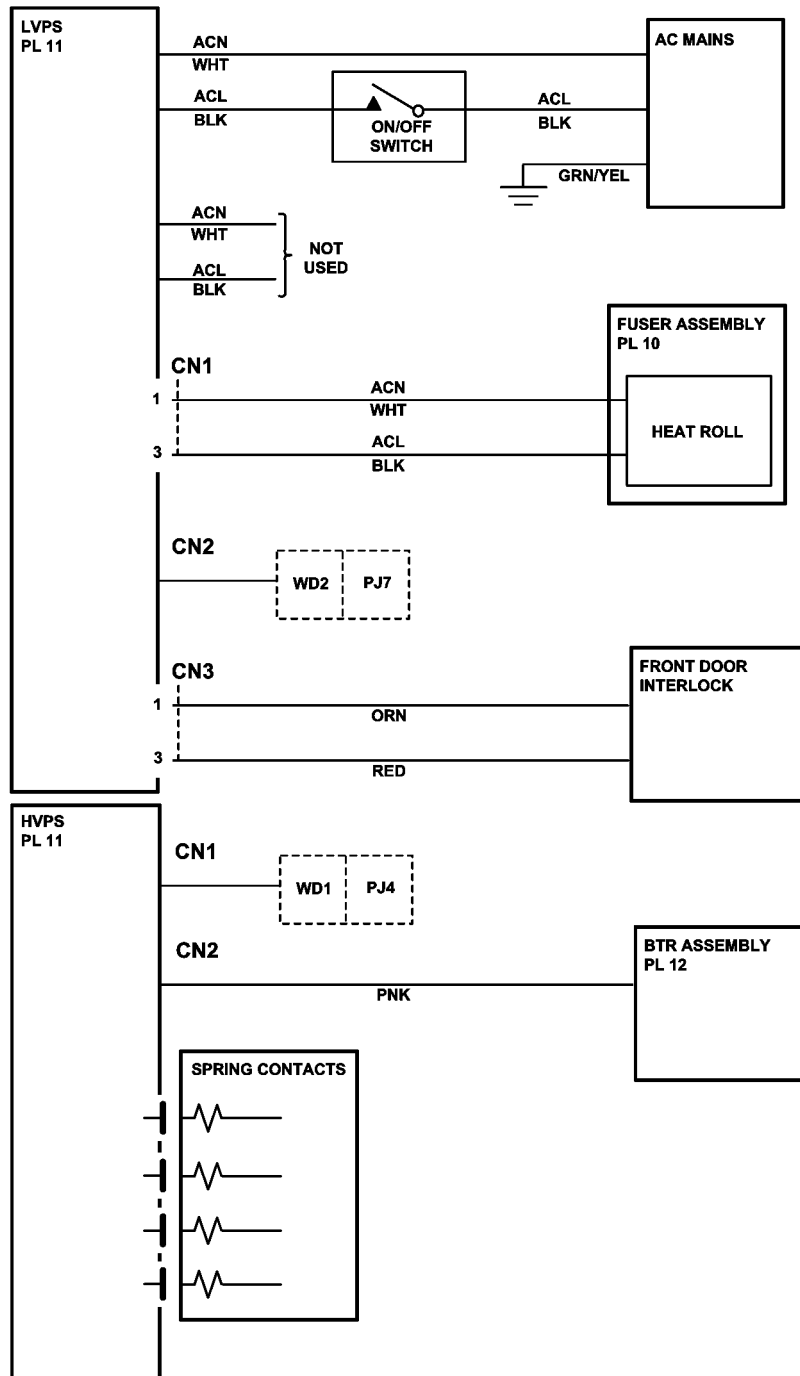


Figure 1

WD 5 Connection Diagram (5 of 5)

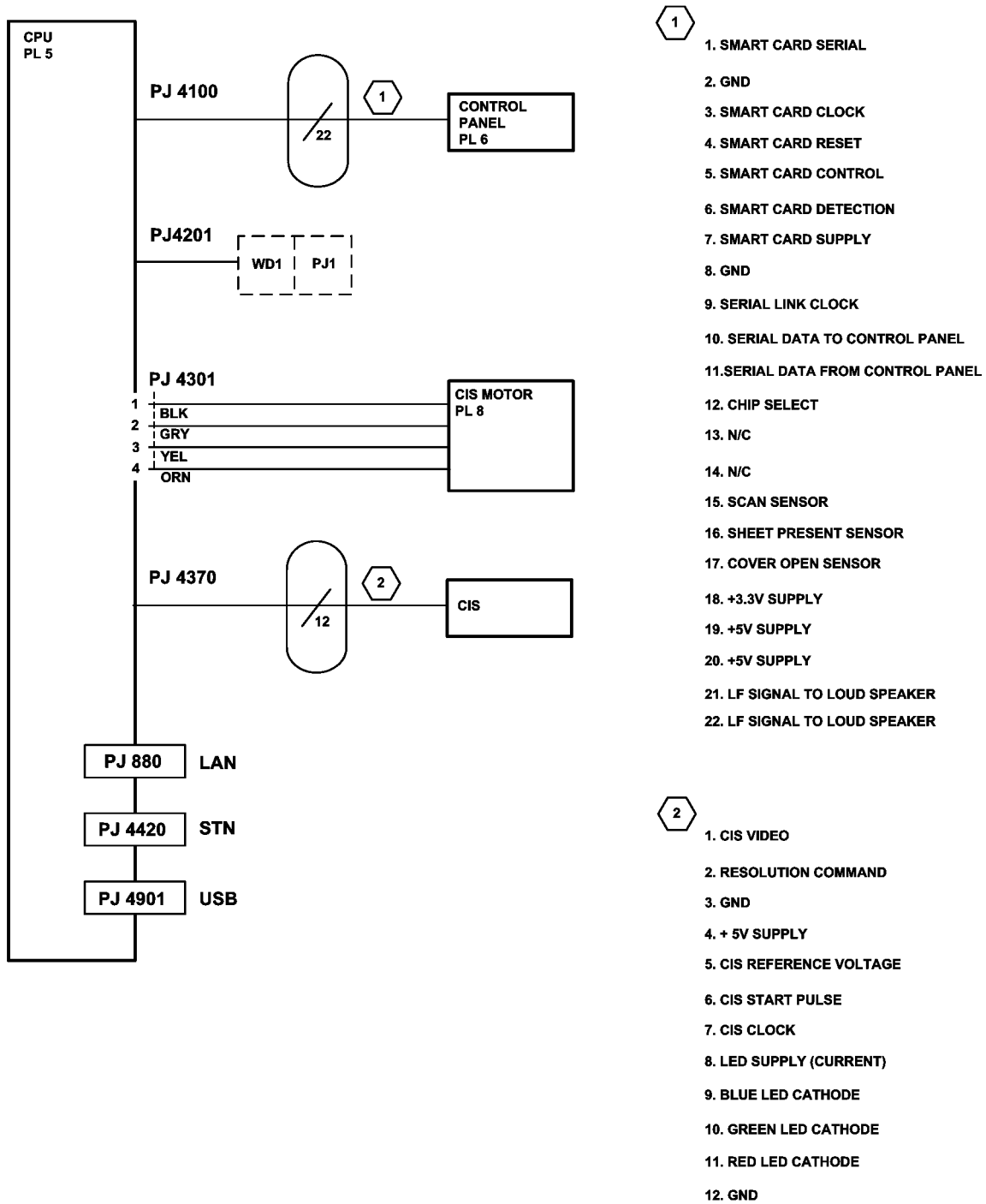


Figure 1

**APPENDIX A: Health & Safety Incident Report Involving a Xerox Product**

Customer Identification		
Customer Name:	Name of Customer Contact Person:	
Address:	E-mail:	Telephone :
		Fax :
Customer Service Engineer Identification		
Name:	Employee :	Pager :
Location:	Phone :	
Details of Incident		
Date Of Incident (mm / dd / yr):		
Description Of Incident: (Check all that apply) <input type="checkbox"/> Excessive Smoke Describe quantity and duration of smoke: <input type="checkbox"/> Fire with open flames seen <input type="checkbox"/> Electric shock to operator or service representative <input type="checkbox"/> Physical injury/illness to operator or service representative Describe: <input type="checkbox"/> Other Describe:		
Any damage to customer property? No <input type="checkbox"/> Yes <input type="checkbox"/> Describe:		
Did external emergency response provider(s) such as fire department, ambulance, and etc. respond? No <input type="checkbox"/> Yes <input type="checkbox"/> Identify: (ie, source, names of individuals)		
Apparent cause of incident (identify part that is suspect to be responsible for the incident)		
Preliminary actions taken to mitigate incident:		



Product Description		
Model No. or Product name:		
Product Serial :	Serial Number(s) of Accessory (ies):	
Installation Date:	Total Copy Meter:	
Date of last service maintenance:		
List damaged and affected part(s) of the machine by description and part number:		
<u>Description</u>	<u>Part Number</u>	
Location of product and affected part(s):		
Individual Providing Notification		
Name:	Title:	Telephone Number:
Organization:	E-Mail:	
Mailing Address:	Date Report Submitted:	

Instructions: E-mail or fax this completed form to EH&S:

For incidents in **Xerox Europe** and **Developing Markets East**
(Middle East, Africa, India, China, and Hong Kong)
please **e-mail:** Elaine.Grange@gbr.xerox.com or **fax:** +44 (0) 1707 35 3914 [intelnet 8*668 3914]

Note: - If you fax this form, please also send original by internal mail

For incidents in **North America** and **Developing Markets West**
(Brazil, Mexico, Latin American North and Latin American South)
please **e-mail:** Doris.bush@usa.xerox.com or fax 585-422-6449 [Intelnet 8*222-6449]