Transmittal Page

Product	Title	Part Number
Phaser 3124 Phaser 3125	Service Manual	708P88624
Status Launch		Date September 2006

XEROX®

Service Manual

708P88624

PHASER 3124
PHASER 3125

Service Documentation

708P88624

September 2006

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NOTICE

While every care has been taken in the preparation of this manual, no liability will be accepted by Xerox Europe arising out of any inaccuracies or omissions.

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Introduction

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Service Manual Formats

Table 1: Service Manual Formats

Part number	Format
708P88624	Hardcopy
708P88623	PDF on CD

Introduction

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 Warning

1. Only to be serviced by appropriately qualified service engineers.

High voltages and lasers inside this product are dangerous. This machine should only be serviced by a suitably trained and qualified service engineer.

2. Use only Xerox replacement parts

There are no user serviceable parts inside the machine. Do not make any unauthorized changes or additions to the machine, these could cause the machine to malfunction and create electric shock or fire hazards.

3. Laser Safety Statement

The machine is certified in the U.S. to conform to the requirements of DHHS 21 CFR, chapter 1 Subchapter J for Class 1(1) laser products, and elsewhere, it is certified as a Class I laser product conforming to the requirements of IEC 825. Class I laser products are not considered to be hazardous. The laser system and machine are designed so there is never any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.

WARNING

Avoid exposure to laser beam. Invisible laser radiation.

Caution for safety

Toxic material

This product contains toxic materials that could cause illness if ingested.

1. Please keep toner cartridges away from children. Toner contained in the print cartridge may be harmful. If swallowed, contact a doctor immediately.

Electric Shock and Fire Safety Precautions

Failure to follow the following instructions could cause electric shock or potentially cause a fire.

1. Use only the correct voltage, failure to do so could damage the machine and potentially cause a fire or electric shock.
2. Use only the power cable supplied with the machine. Use of an incorrectly specified cable could cause the cable to overheat and potentially cause a fire.
3. Do not overload the power socket, this could lead to overheating of the cables inside the wall and could lead to a fire.
4. Do not allow water or other liquids to spill into the machine, this can cause electric shock. Do not allow paper clips, pins or other foreign objects to fall into the machine these, could cause a short circuit leading to an electric shock or fire hazard.

5. Never touch the plugs on either end of the power cable with wet hands. This can cause an electric shock. When servicing the machine, remove the power plug from the wall socket.
6. Use caution when inserting or removing the power connector. The power connector must be inserted completely otherwise a poor contact could cause overheating and possibly lead to a fire. When removing the power connector grip it firmly and pull.
7. Take care of the power cable. Do not allow it to become twisted, bent sharply round corners or otherwise damaged. Do not place objects on top of the power cable. If the power cable is damaged, it could overheat and cause a fire or exposed cables could cause an electric shock. Replace a damaged power cable immediately, do not reuse or repair the damaged cable. Some chemicals can corrode the coating on the power cable, weaken the cover or exposing cables causing fire and shock risks.
8. Ensure that the power sockets and plugs are not cracked or broken in any way. Any such defects should be repaired immediately. Take care not to cut or damage the power cable or plugs when moving the machine.
9. Use caution during thunder or lightning storms. Xerox recommend that this machine be disconnected from the power source when such weather conditions are expected. Do not touch the machine or the power cord if it is still connected to the wall socket in these weather conditions.
10. Avoid damp or dusty areas, install the machine in a clean well ventilated location. Do not position the machine near a humidifier. Damp and dust build up inside the machine can lead to overheating and cause a fire.
11. Do not position the machine in direct sunlight. This will cause the temperature inside the machine to rise possibly leading to the machine failing to work properly and in extreme conditions could lead to a fire.
12. Disconnect the machine from the power supply immediately if it emits any strange odour, smoke or strange noises. If this precaution is ignored, the machine could overheat and a fire may occur.
13. Do not insert any metal objects into the machine through the ventilator fan or other part of the casing, it could make contact with a high voltage conductor inside the machine and cause an electric shock.

Handling Precautions

The following instructions are for your own personal safety, to avoid injury and so as not to damage the machine

1. Ensure the machine is installed on a level surface, capable of supporting its weight. Failure to do so could cause the machine to tip or fall.
2. The machine contains many rollers, gears and fans. Take great care to ensure that you do not catch your fingers, hair or clothing in any of these rotating devices.
3. Do not place any small metal objects, containers of water, chemicals or other liquids close to the machine which if spilled could get into the machine and cause damage or a shock or fire hazard.
4. Do not install the machine in areas with high dust or moisture levels, beside on open window or close to a humidifier or heater. Damage could be caused to the machine in such areas.
5. Do not place candles, burning cigarettes, etc. on the machine, these could cause a fire.

Assembly / Disassembly Precautions

Replace parts carefully, always use Xerox parts. Take care to note the exact location of parts and also cable routing before dismantling any part of the machine. Ensure all parts and cables are replaced correctly.

Please carry out the following procedures before dismantling the machine or replacing any parts.

1. Check the contents of the machine memory and make a note of any user settings. These will be erased if the mainboard is replaced.
2. Ensure that power is disconnected before servicing or replacing any electrical parts.
3. Disconnect printer interface cables and power cables.
4. Be sure to remove the print cartridge before you disassemble any parts.
5. Only use approved spare parts. Ensure that part number, product name, any voltage, current or temperature rating are correct.
6. When removing or re-fitting any parts do not use excessive force, especially when fitting screws into plastic.
7. Take care not to drop any small parts into the machine.
8. Handling of the OPC Drum

   - The OPC Drum can be irreparably damaged if exposed to light.

   Take care not to expose the OPC Drum either to direct sunlight or to fluorescent or incandescent room lighting. Exposure for as little as 5 minutes can damage the surface’s photoconductive properties and will result in print quality degradation. Take extra care when servicing the machine. Remove the OPC Drum and store it in a black bag or a lightproof container. Take care when refitting covers as light is can be admitted through the OPC area and can damage the OPC Drum.

   - Take care not to scratch the green surface of the OPC Drum Unit.

   If the green surface of the Drum Cartridge is scratched or touched, the print quality will be compromised.
9. Remove dust and foreign matter.

Releasing Plastic Latches

Many of the parts are held in place with plastic latches. The latches break easily; release them carefully.
To remove such parts, pull the hook of the latch away from the part to which it is latched.

Figure 1

Disregarding this warning may cause bodily injury

1. The fuser unit works at a high temperature. Use caution when working on the machine. Wait for the fuser to cool down before disassembly.
2. Do not put fingers or hair into the rotating parts (paper feeding entrance, motor, fan, etc.). Doing so may cause injury.
3. When you move the machine.
   This machine weighs 8.7kg (19.2lbs). Use safe lifting and handling techniques. Back injury could be caused if you do not lift carefully.
4. Ensure the machine is installed safely.
   The machine weighs 8.7kg (19.2lbs), ensure the machine is installed on a level surface, capable of supporting its weight. Failure to do so could cause the machine to tip or fall possibly causing personal injury or damaging the machine.
5. Do not install the machine on a sloping or unstable surface. After installation, double check that the machine is stable.

ESD Precautions

Certain semiconductor devices can be easily damaged by static electricity. Such components are commonly called “Electrostatically Sensitive (ES) Devices”, or ESDs. Examples of typical ESDs are: integrated circuits, some field effect transistors, and semiconductor “chip” components.

The techniques outlined below should be followed to help reduce the incidence of component damage caused by static electricity.

CAUTION

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

1. Immediately before handling a semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, employ a commercially available wrist strap device, which should be removed for your personal safety reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ESDs, place the assembly on a conductive surface, such as aluminium or copper foil, or conductive foam, to prevent electrostatic charge buildup in the vicinity of the assembly.
3. Use only a grounded tip soldering iron to solder or desolder ESDs.
4. Use only an “anti-static” solder removal device. Some solder removal devices not classified as “anti-static” can generate electrical charges sufficient to damage ESDs.
5. Do not use Freon-propelled chemicals. When sprayed, these can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective packaging until immediately before installing it. Most replacement ESDs are packaged with all leads shorted together by conductive foam, aluminium foil, or a comparable conductive material.
7. Immediately before removing the protective shorting material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.
8. Maintain continuous electrical contact between the ESD and the assembly into which it will be installed, until completely plugged or soldered into the circuit.
9. Minimize bodily motions when handling unpackaged replacement ESDs. Normal motions, such as the brushing together of clothing fabric and lifting one’s foot from a carpeted floor, can generate static electricity sufficient to damage an ESD.

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.

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 of 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 of 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.

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 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.
- Mark off any hardware/software options and modifications installed and/or enabled in the Service Log book.
- 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.
- Remove and destroy any copies of test patterns.
- Complete the machine service log book, refer to GP 12 Service Log.
- Ensure the machine and service area are clean before leaving the customer premises.
- Provide customer training if required.

2. Status Indicator RAPs

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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.

Basic Check List

1. Check the power.

- Do the motors or other components initialize (listen for the main motor, fan and LSU, PL 1 sounds)?
  --> If not or there are none of the normal startup sounds, check the cable, switch, SMPS and/or HVPS, PL 1.
  --> Does the wall socket work?

2. Check the online LED

- Refer to Table 1.

Table 1: LED Status Description

LED	Status		Description
Error	Red	On	• A paper jam has occurred. Refer to clearing paper jams, GP 6. • The front cover or exit cover is open, PL 1. Close the relevant cover/covers. • The paper tray, PL 1 is empty. Load paper in the tray. • The printer has stopped printing due to a major system error. • The toner cartridge, PL 1 is not installed. Install the toner cartridge.
		Blinking	• An error has occurred and the printer is waiting for the error to be cleared. When the problem is cleared, the printer resumes • printing. • The toner cartridge, PL 1 is depleting. Order a new toner cartridge. The print quality can be temporarily improved by redistributing the toner. • The toner cartridge, PL 1 is exhausted. Install a new toner cartridge. • The toner cartridge, PL 1 has expired. Install a new toner cartridge. • Refer to RAP 8.
Online	Green	On	• The printer is in power save mode. • The printer is online and ready to receive data from the computer.
		Blinking	• If the LED is blinking slowly, the printer is currently receiving data from the computer. • If the LED is blinking quickly, the machine is currently printing.

- Does the LED come on?
  --> If not, check the power cable, switch, SMPS and/or HVPS, PL 1.
  --> Does the wall socket work?
  --> Check the main PBA and cable harness, PL 1.
  --> Check for paper jams, refer to GP 6.

3. Check the paper path

- Is there a paper jam?
  --> Remove any paper fragments caught in the paper path, refer to GP 6.
- Paper jam occurs repeatedly at a specific point in the paper path
  --> Dismantle the machine and carefully inspect the region where the jam occurs.
  Check if paper fragments are caught in the fuser, PL 3

4. Print a test page.

- Try printing a test page from a computer.
  --> If there is an error, check cables and driver installation.

5. Check the print quality.

- Is there a print quality problem?
  --> Go to Section 3, Image Quality.

6. Check consumables (toner etc.).

- Using the online key, print a demo page, GP 3.
  --> Expected life of various consumable parts, compare this with the figures printed and install new parts as required, GP 4. If necessary, install a new toner cartridge, PL 1.

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 SMPS and/or HVPS, PL 1.
  Check the fuses on the SMPS and/or HVPS, PL 1.

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 of 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 dirt surfaces should be cleaned. If necessary, install new rollers.

2 JAM 0 RAP

WARNING

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Description

Paper is not fed from the cassette tray.
Jam 0 occurs when paper feeds into the machine.

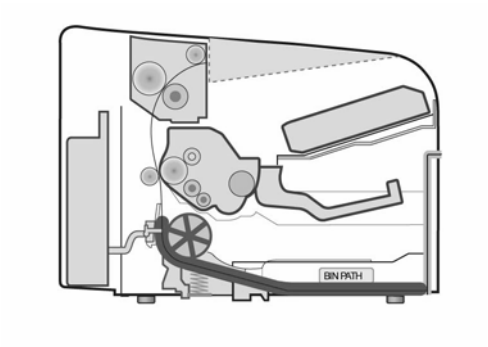


Figure 1

Check and Cause	Solution
1. Clear any paper jams in the machine.	1. Refer to clearing paper jams, GP 6.
2. Check the surface of the pick-up assembly, PL 4 for contamination or damage.	2. Clean the pick-up assembly, PL 4 using a soft cloth dampened with IPA (Isopropyl Alcohol) or water.
3. The main motor, PL 5 may be defective.	3. If the main motor is not working, refer to RAP 14.
4. The solenoid, PL 4 is faulty.	4.Check and install a new solenoid if necessary, PL 4.
5. If paper feeds into the printer and Jam 0 occurs, check the feed sensor. ***Note:*** *The feed sensor is mounted on the SMPS, PL 1.*	5. Check and install new parts as necessary: • SMPS, PL 1 • Main PBA, PL 1

3 JAM 1 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

Paper is jammed in front of or inside the fuser.
Paper is jammed in the exit roller and fuser after passing through the feed sensor actuator.

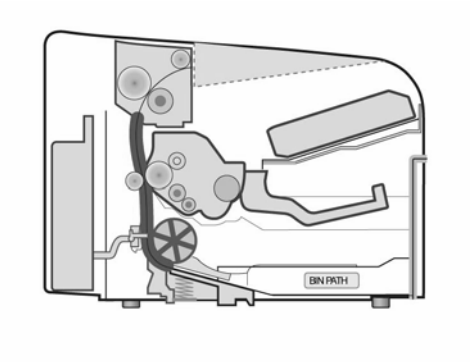


Figure 2

Check and Cause	Solution
1. Clear any paper jams in the machine.	1. Refer to clearing paper jams, GP 6.
2. Paper is jammed in the exit roller and the fuser, PL 3, after passing through the feed sensor actuator, PL 4, the feed sensor actuator may be defective.	2. Check and install new parts as necessary: • Feed sensor actuator, PL 4 • Feed sensor ***Note:*** *The feed sensor is mounted on the SMPS, PL 1.*
3.Paper is jammed in front of, or inside the fuser, PL 3. The feed sensor is defective. ***Note:*** *The feed sensor is mounted on the SMPS, PL 1.*	2. Check and install new parts as necessary: • Feed sensor actuator, PL 4 • Feed sensor ***Note:*** *The feed sensor is mounted on the SMPS, PL 1.*

4 JAM 2 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

Paper is jammed in front of or inside the fuser.
Paper is jammed in the discharge roller and in the fuser after passing through the feed sensor actuator.

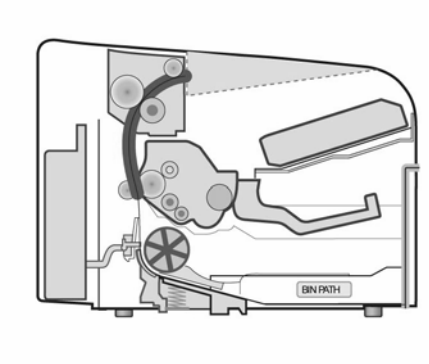


Figure 3

Check and Cause	Solution
1. Clear any paper jams in the machine.	1. Refer to clearing paper jams, GP 6.
2. A ‘Concertina’ jam occurs.	2. Disassemble the fuser, REP 9 and clean the surface of the rollers with IPA (Isopropyl Alcohol) or water. Clean the contamination between the heat roller and thermistor, PL 3.
3. If paper is completely fed out of the machine but Jam 2 occurs, the feed sensor is defective. ***Note:*** *The feed sensor is mounted on the SMPS, PL 1.*	3. Check and install new parts as necessary: • Feed sensor actuator, PL 4 • SMPS, PL 1
4. If the paper is rolled up in the fuser, PL 3: • The surface of the stripper fingers, PL 3 are contaminated. • The heat roller and pressure roller, PL 3 are contaminated.	4. Disassemble the fuser, refer to REP 7. Clean the surface of the pressure roller, heat roller, and stripper fingers, PL 3. Install new parts as necessary: • Heat roller, PL 3 • Pressure roller, PL 3 • Fuser unit, PL 3

5 Multi-feeding 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

Multiple sheets of paper are fed at once

Check and Cause	Solution
1. Clear any paper jams in the machine.	1. Refer to clearing paper jams, GP 6.
2. Paper is out of specification.	2. Use paper within specification, refer to the User Guide. Recommend the use of good quality ‘long grain’ paper.
3. Friction pad, PL 4 is contaminated with foreign matter (oil, etc.)	3. Clean using a soft cloth which is dampened with IPA (Isopropyl Alcohol) or water. Install a new paper path unit, PL 4 if necessary.
4. The solenoid, PL 4 may be defective.	4.Check and install new parts as necessary: • Solenoid, PL 4 • Main PBA, PL 1

6 Fuser 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

Paper is jammed in the fuser.

Check and Cause	Solution
1. Clear any paper jams in the machine.	1. Refer to clearing paper jams, GP 6.
2. Contamination of the pressure roller or heat roller, PL 3.	2. Disassemble the fuser, REP 13. Clean the surface of the rollers with IPA (Isopropyl Alcohol) or water.
3. Damaged stripper fingers, PL 3.	3. If there is a dark background on the document, refer to IQ 8. Check the stripper fingers, PL 3. Install a new fuser, PL 3 if necessary.

7 Toner Cartridge 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

Paper is jammed in the toner cartridge.

Check and Cause	Solution
1. Clear any paper jams in the machine.	1. Refer to clearing paper jams, GP 6.
2. Paper is out of specification.	2. Use paper within specification and refer to the User Guide. Recommend the use of good quality ‘long grain’ paper.

8 LED blinking fault RAP

8A Fuser error

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 the LEDs on the operator panel are blinking.

Check and Cause	Solution
1. The fuser gear, PL 3 has melted	1. Refer to RAP 9.
2.The thermistor, PL 3 is damaged	2. Check and install a new thermistor, PL 3 if necessary.
3. The halogen lamp, PL 3 may be defective.	3.Check and install a new halogen lamp, PL 3 if necessary.
4.The thermostat, PL 3 is damaged.	4. Check and install new parts as necessary: • Thermostat, PL 3 • Fuser assembly, PL 1

8B Scan error

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

1. All LED’s on the OPE panel are blinking.

Check and Cause	Solution
1. The LSU may be defective, PL 1.	1. Check and install a new LSU, PL 1 if necessary.

9 Melting Fuser Gear 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 fuser gear has melted. .

Check and Cause	Solution
1. Problem caused due to an overheated machine.	1. Check and install new parts as necessary: • Halogen lamp, PL 3 • Fuser assembly, PL 3 • Main PBA, PL 1

10 Paper Empty RAP

10A False indication error

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 lamp on the operator panel is ON even when paper is loaded in the cassette.

Check and Cause	Solution
1. The paper empty sensor actuator is damaged or bent, PL 2.	1. Check and install a new paper empty sensor actuator, PL 2 if necessary.
2. The main PBA, PL 1 may be defective.	2. Check and install a new main PBA, PL 1 if necessary.

10B No indication error

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 lamp on the operator panel does not come ON when the paper cassette is empty.

Check and Cause	Solution
1. The paper sensor actuator is damaged or bent, PL 2.	1. Check and install a new paper sensor actuator, PL 2 if necessary.
2. The main PBA, PL 1 may be defective.	2. Check and install a new main PBA, PL 1 if necessary.

11 Cover open RAP

11A False indication error

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 ERROR lamp is ON, even when the front cover or exit cover is closed.

Check and Cause	Solution
1. The exit cover, PL 1 and/or front cover assembly, PL 1 may be damaged.	1. Check the following parts as necessary: • Exit cover, PL 1 • Front cover, PL 1 • Exit cover open switch. • Front cover open switch. ***Note:*** *The exit cover open switch is mounted on the SMPS, PL 1 while the front cover open switch is mounted on the HVPS, PL 1.* Check and install new parts as necessary: • SMPS, PL 1 • HVPS, PL 1

11B No indication error

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 ERROR lamp does not come ON even when the front cover or exit cover is open

Check and Cause	Solution
1.Check the front cover open switch and exit cover open switch. ***Note:*** *The front cover open switch is mounted on the HVPS, PL 1 while the exit cover open switch is mounted on the SMPS, PL 1.*	1. Check and install new parts as necessary: • SMPS, PL 1 • HVPS, PL 1

12 Faulty motor 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 main motor is not working during printing. Therefore, paper does not feed into the printer, resulting 'Jam 0'.

Check and Cause	Solution
1. The main motor, PL 5 may be defective.	1.Check and install new parts as necessary: • Main drive assembly, PL 5. • Main PBA, PL 1.

13 No Power 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

LED's on the operator panel fail to come ON when the printer is turned ON.

Check and Cause	Solution
1.Check the following parts: • Power supply cord, PL 1. • SMPS, PL 1	1.Install a new SMPS, PL 1 if necessary.
2. Check the LED. ***Note:*** *The LED is mounted on the HVPS, PL 1.*	2. Check and install new parts as necessary: • HVPS, PL 1 • Main PBA, PL 1

14 Bad Software Environment RAP

14A The Printer is not working(1)

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

Printer does not work when the power is turned ON.

Check and Cause	Solution
1.Print a demo page, GP 3	1. If the print is successful, the printer is not faulty.
2. Check that the printer cable is directly connected to the machine.	2. If you have other devices that need to share the printer port, try temporarily disconnecting these devices and perhaps even uninstalling their drivers to ensure the machine works by itself. If you are using a USB hub, try connecting directly to the back of the PC instead.
3. Printing fails due to errors in the OS.	3. Check the connection between the PC and printer port. • If using windows, check if the printer drivers are correctly installed • Check the print setup of the program. If printing fails for a particular program: • Reinstall the drivers. • Check the CMOS settings. Ensure the port is set to ECP. • Check the address of IRQ 7 and 378
4. Check the following parts are properly installed: • Printer cable, PL 1 • Toner cartridge, PL 1	4. Check and install the following parts as necessary: • Printer cable, PL 1 • Toner cartridge, PL 1

14B The printer is not working(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.

Description

After receiving the print command there is no response at all or the print speed is low due to wrong setup of the environment rather than malfunction of the machine itself

Check and Cause	Solution
1. Ensure you have sufficient free hard disk space for temporary work files created during printing.	1. The message ‘insufficient printer memory’ means there is a hard disk space problem on the PC, rather than a printer RAM problem. Inform the customer to secure more space on the hard disk.
2. Printing error occurs even if there is enough space in the hard disk.	2. The connection of the cable and printer port is not correct. Check the cable is properly connected and the parallel port in CMOS is set up correctly.
3. Set up the parallel port settings in CMOS setup.	3.Select ECP or SPP.
4. Reboot the system to print.	4. If the regular font is not printing, the cable or the printer driver may be defective. Turn the PC and printer off, and reboot the system to print again. If not solved, double-click the printer in my computer. If the regular fonts are not printed this time install a new cable.

15 Abnormal Printing

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

Printing does not work even after replacing the cable.
Machine does not work at all or strange fonts are printed.

Check and Cause	Solution
1. Set up the parallel port settings in CMOS setup.	1. Select SPP (Normal) or ECP LPT Port.
2. Printer Driver Error.	2.Ensure that the correct driver is loaded. Use the driver supplied on the CD or down-loaded from Xerox.com. DO NOT use the Microsoft driver supplied with the Windows operating system. If the machine is a GDI printer ensure that ALL OTHER GDI drivers are uninstalled as Windows allows only 1 type of driver to be loaded.
3. Error message “insufficient memory”. (The printing job sometimes stops due to insufficient virtual memory, this is caused by insufficient space on the PC hard disk.)	3. Inform the customer to secure more space on the hard disk.

16 Spool Error 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

Insufficient disk space to spool the document.

Check and Cause	Solution
1. Insufficient space of the hard disk in the directory assigned for the basic spool.	1. Ask the customer to delete the unnecessary files to provide more space to start printing job.
2. The previous printing error is not resolved.	2. There may be files from previous failed print jobs on the hard disk with the name in the form '*.jnl'. Delete these files and Reboot Windows to restart the machine.
3. There may be conflict with other drivers or programs.	3. Ask the customer to shut down all other programs except the current one, if possible.
4. When an application program or the printer driver is damaged.	4. Uninstall the print driver. Re-install the latest driver available at Xerox.com.
5. When some files related to OS are damaged or virus infected.	5. After rebooting the computer ask the customer to check for viruses, restore the damaged files and reinstall the application program which is not working properly.
6. Insufficient memory.	6. Ask the customer to add memory to the PC.

How to delete the data in the spool manager.

In the spool manager, the installed drivers and the list of the documents waiting to be printed are shown.

- Select the document to be deleted and check delete in the menu.
- If the job you are deleting is the current job, when you delete the job data that has already been transferred to the machine's memory will still be printed. If there is a problem with the machine (out of toner, off-line, out of paper etc.) the job may take a long time to delete as it must wait for a time out.

Page intentionally blank

3. Image Quality

Page intentionally blank

IQ 1 Vertical black lines and bands

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 on the print.
Dark black vertical band occurs on the print.

	Checks and Causes	Solutions
	1. The transfer roller, PL 4 is deformed.	1. Install a new transfer roller, PL 4.
	2. The developer roller or doctor blade inside the toner cartridge, PL 1 is damaged.	2. Install a new toner cartridge, PL 1.
	3. The surface of the charge roller in the toner cartridge, PL 1 is scratched.	3. Install a new toner cartridge, PL 1.

IQ 2 Vertical white line

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 vertical voids in the image.

	Checks and Causes	Solutions
	1. Foreign matter on the edge of the toner cartridge window, PL 1.	1. Clean the exposure window on the toner cartridge, PL 1.
	2. Contamination of the LSU mirrors, PL 1.	2. Clean the LSU window with recommended cleaner (IPA) and a clean cotton swab. If necessary, install a new LSU, PL 1.
	3. Check for sharp edges in the paper path that may correspond to the position of the voids.	3. Open the front cover, PL 1 and clean inside the frame assembly, PL 2
	4. Check the life of the toner cartridge, GP 4.	4. If the toner cartridge has expired, install a new one, PL 1.
	5. Foreign matter or toner particles present between the developer roller and blade in the toner cartridge, PL 1.	5. Install a new toner cartridge, PL 1.
	6. If the fuser, PL 3 is defective, voids occur periodically at the top of a black image.	6. Check and install a new fuser if necessary, PL 3.

IQ 3 Horizontal black band

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

Dark or blurry horizontal stripes on print periodically.

	Checks and Causes	Solutions
	1. Bad contacts between the voltage terminals and toner cartridge, PL 1	1. Clean the terminals, PL 1. Ensure all toner and dust particles are removed.
	2. The developer rollers in the toner cartridge may be stained.	2. Clean all the toner cartridge gears, PL 1. If the problem still persists, install a new toner cartridge, PL 1.

IQ 4 Black/White spots

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

Dark or blurry black spots occur periodically on the print.
White spots occur periodically on the print.

	Checks and Causes	Solutions
	1. If dark or blurry black spots occur periodically, the rollers in the toner cartridge may be contaminated with foreign matter or paper particles. Refer to periodic defective image, IQ 18.	1. If the spots still appear at 37.7mm (1.48 inches) intervals, install a new toner cartridge, PL 1.
	2. If faded areas or voids occur on a black image at intervals of 75.5mm (2.97 inches), the OPC drum surface is damaged.	2. 75.5mm (2.97 inches) repetition: Carefully clean the OPC drum in the toner cartridge, PL 1 with a soft, lint free cloth. If the problem still persists, install a new toner cartridge, PL 1.
	3. If a black image is partially printed, the transfer voltage is defective or the transfer roller's, PL 4 life has expired, refer to GP 4.	3. Open the front cover, PL 1 and clean inside the frame assembly, PL 2. Install a new transfer roller, PL 4 if necessary.

IQ 5 Light image

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.

	Checks and Causes	Solutions
	1. Toner save mode is enabled.	1. Ensure the toner save mode is off by using the software application. Check the printer and driver settings. Clean the toner cartridge, PL 1 if contaminated.
	2. Ambient temperature is below 10°C.	2. Turn the machine on and wait for 30 minutes before using it.
	3. Bad contacts on the toner cartridge caused by contamination.	3. Install a new toner cartridge, PL 1.
	4. Check the HVPS, PL 1.	4. If necessary, install a new HVPS, PL 1.

IQ 6 Dark image or Black Image

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 dark.

	Checks and Causes	Solutions
	1. The terminals, PL 1 may be defective.	1. Clean the terminals, PL 1.
	2. Bad connection between the power supply, PL 1 and HVPS, PL 1.	2. Check the harness that connects the Main PBA to the HVPS. PL 1 Check and install a new HVPS, PL 1 if necessary.

IQ 7 Uneven Density

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 density is uneven.

	Checks and Causes	Solutions
	1. The toner level is uneven in the toner cartridge, PL 1	1. Gently shake the toner cartridge, PL 1.
	2. The transfer roller, PL 4 is uneven.	2. Reinstall the transfer roller, PL 4.

IQ 8 Background

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.

	Checks and Causes	Solutions
	1. Is the print area less than 2%? The printer has not been in use for a long period of time.	1. The toner cartridge is basically designed to print 2,000 sheets with 5% print area.
	2. Is the vertical movement of the transfer roller, PL 4 smooth?	2. Clean the bushings on the transfer roller, PL 4.
	3. Is recycled paper being used?	3. The printer cannot handle recycled paper. See the user guide for paper specifications.
	4. The life of the toner cartridge has expired, refer to GP 4.	4. Install a new toner cartridge, PL 1.
	5. Check the HVPS, PL 1.	5. Clean the terminals, PL 1. If the problem still persists, install a new HVPS, PL 1.

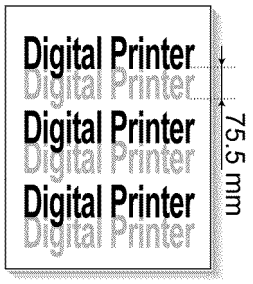
IQ 9 Ghost (1)

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

Ghost occurs at 75.5 mm (3 inches) intervals of the OPC drum on the print.

	Checks and Causes	Solutions
	1. Abnormal low temperature (below 10°C).	1. Turn the printer on and wait for 60 minutes before using the machine.
	2. The life of toner cartridge, PL 1 has expired, refer to GP 4.	2. Install a new toner cartridge, PL 1.
	3. The transfer roller, PL 4 has expired, refer to GP 4.	3. Check and install a new transfer roller, PL 4 if necessary.
	4. Bad contacts due to contamination of the terminals, PL 1 and the toner cartridge contacts, PL 1, caused by toner particles.	4. Clean the following parts: • Toner cartridge contacts, PL 1. • Terminals, PL 1. Install new parts as necessary: • Toner Cartridge, PL 1. • HVPS, PL 1.
	5. Bad contacts due to contamination of the terminals, PL 1 and the HVPS, PL 1, caused by toner particles.	5. Clean the HVPS contact terminals, PL 1. If the problem persists, install a new HVPS, PL 1.

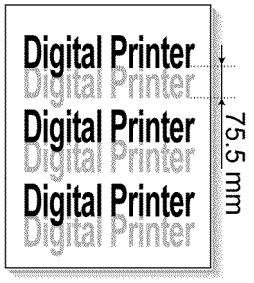
IQ 10 Ghost (2)

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.

Description

Ghost occurs at 75.5 mm (2.97 inches) intervals on the print.
(When printing on card stock or transparencies using bypass tray)

	Checks and Causes	Solutions
	1. When printing on transparencies or card stock, higher transfer voltage is required.	1. Inform the customer to Select 'Thick Mode' from the paper type menu using the software application. It is advisable to return the printer to original mode when finished.

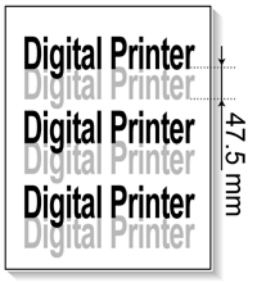
IQ 11 Ghost (3)

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 ghost occurs in the black image printing at 47.5mm (1.9 inches).

	Checks and Causes	Solutions
	1. The terminals, PL 1 are damaged.	1. Clean the terminals, PL 1.
	2. The life of the toner cartridge may have expired, refer to GP 4.	2. Install a new toner cartridge, PL 1 and print a configuration page.

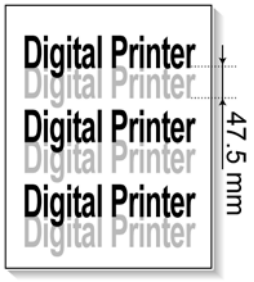
IQ 12 Ghost(4)

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.

Description

Ghost occurs at 47.5mm (1.87 inches) or 63.9mm (2.52 inches) intervals.

	Checks and Causes	Solutions
	1. The temperature of the fuser, PL 3 is abnormally high.	1. Disassemble the fuser, PL 3, REP 7 and remove any toner particles. Ensure to clean any foreign matter between the thermistor and heat roller. **CAUTION** *Take care not to deform the heat roller.*

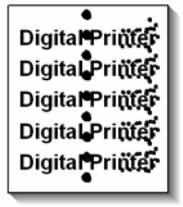
IQ 13 Contamination on the Face of Page

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 background on the face of the printed page is stained.

	Checks and Causes	Solutions
	1. The transfer roller, PL 4 may be contaminated.	1 If the transfer roller is contaminated, run PC Cleaning Mode Print 2 or 3 times. Perform Self-Test 2 or 3 times to remove contamination.
	2. Toner leakage due to a damaged sealed developer in the toner cartridge, PL 1.	2. Install a new toner cartridge, PL 1.

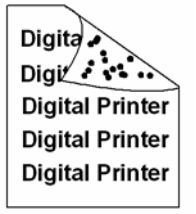
IQ 14 Contamination on the Back of Page.

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 of the page is stained at 47 mm intervals.

	Checks and Causes	Solutions
	1. The transfer roller, PL 4 is contaminated.	1. Check and install a new transfer roller, PL 4 if contaminated severely.
	2. The pressure roller, PL 3 is contaminated.	2. Disassemble the fuser, REP 7 and clean the heat roller and pressure roller, PL 3.Clean the area between the heat roller and Thermistor, PL 3. **CAUTION** *Take care not to deform the heat roller.*

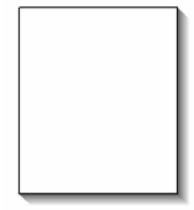
IQ 15 Blank page print out (1)

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

Blank page is printed.

	Checks and Causes	Solutions
	1. Bad ground contacts on the toner cartridge, PL 1.	1. Clean the terminals, PL 1 and the toner cartridge contacts, PL 1.

IQ 16 Blank page print out(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.

Description

One or several blank pages are printed.
When the printer is switched on, several blank pages print.

	Checks and Causes	Solutions
	1. Computer system error.	1. Turn the power off, delete the print job and resend the print job again.
	2. Bad ground contacts on the toner cartridge, PL 1.	2. Clean the terminals, PL 1 and the toner cartridge contacts, PL 1.
	3. Damaged solenoid, PL 4.	3. Check the solenoid, PL 4. Check and install a new main PBA, PL 1 if necessary.

IQ 17 Uneven Vertical Lines

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

Printed vertical lines are not straight.

Check and Cause	Solution
1.Check the LSU, PL 1.	1. Check and install new parts as necessary: • LSU, PL 1 • Main PBA, PL 1

IQ 18 Periodic Defective Image

If a mark or other printing defect occurs at regular intervals on the page it may be caused by a damaged or contaminated roller. Measure the repetition interval and refer to the table below to identify the roller concerned.

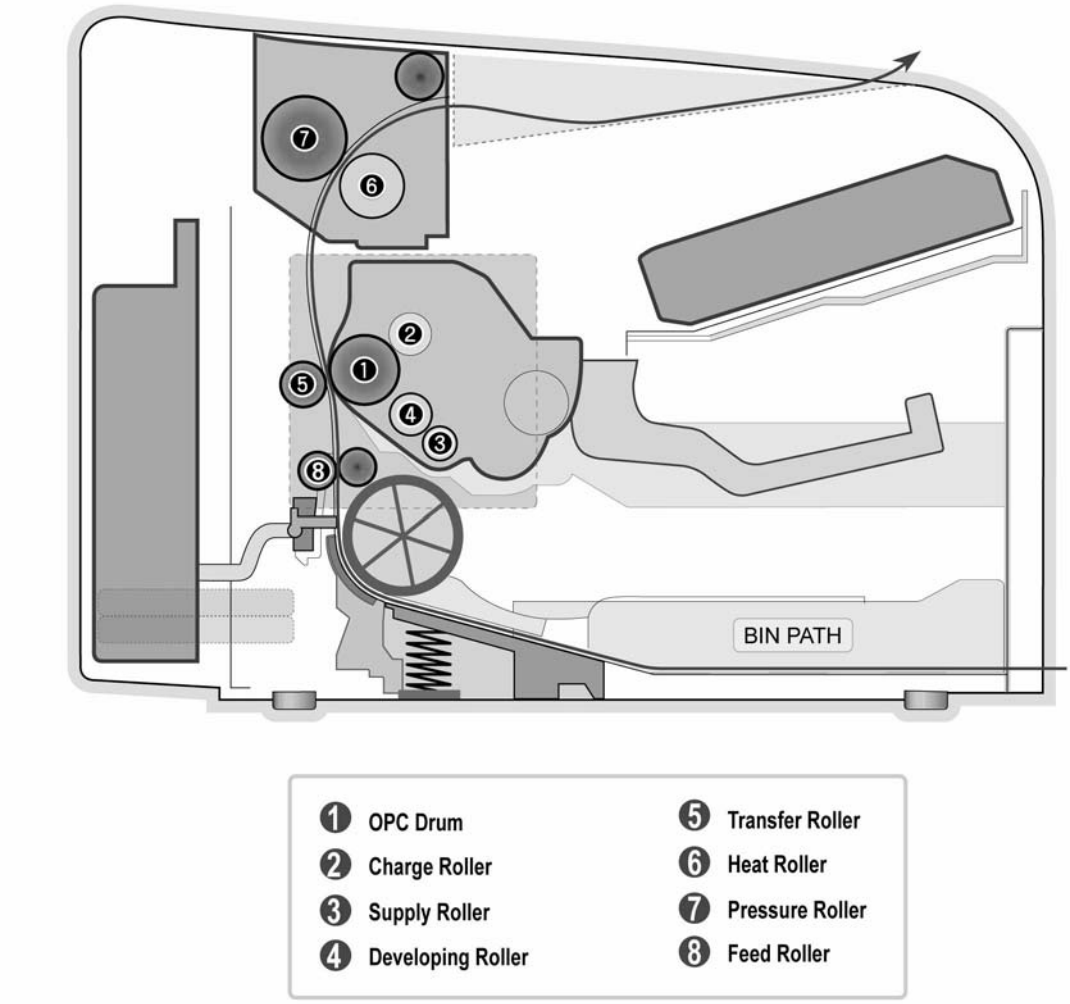


Table 1: Periodic Defective Image

No	Roller	Defective Image	Typical Defect
1	OPC Drum	75.5mm (2.97 inches)	White spots on a black image or vice versa
2	Charge Roller	37.7mm (1.48 inches)	Black spots
3	Supply Roller	47.5mm (1.87 inches)	Light or dark horizontal image bands
4	Developing Roller	35.2mm (1.39 inches)	Horizontal image bands
5	Transfer Roller	46.2mm (1.82 inches)	Ghost image
6	Heat Roller	77.7mm (3.06 inches)	Black spots or ghost image
7	Pressure Roller	75.4mm (2.97 inches)	Black spots on the back page
8	Feed Roller	57mm (2.24 inches)	Black spots

4. Repairs/Adjustments

Page intentionally blank

REP 1 Front Cover Assembly

Parts list on PL 1

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. Open the front cover, Figure 1.

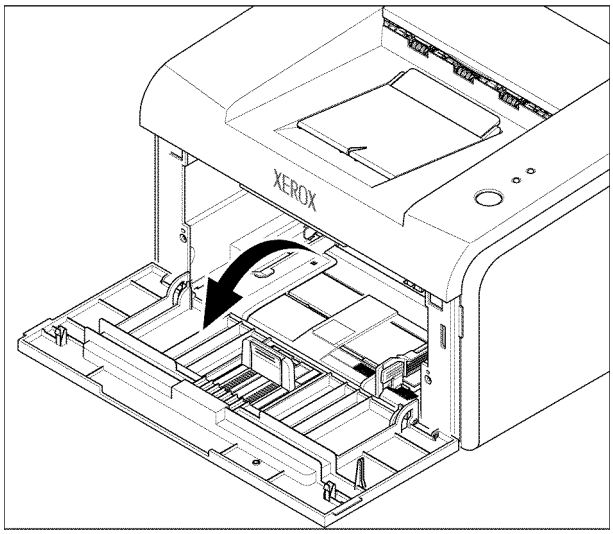


Figure 1

2. Gently flex the right hinge of the front cover in the direction of the arrow, then remove the front cover, Figure 2.

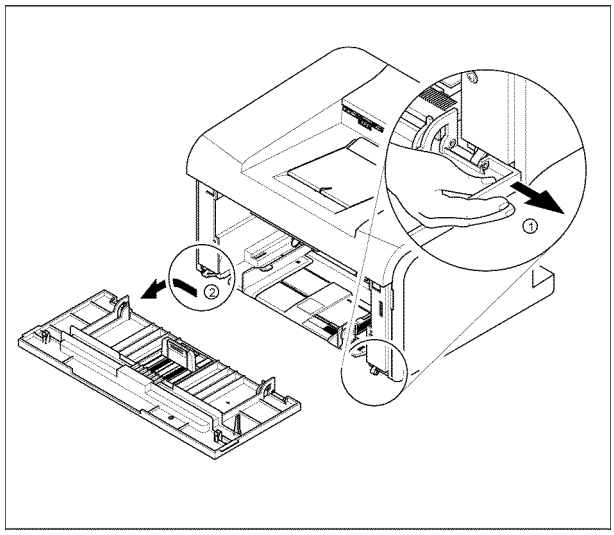


Figure 2

Replacement

Replacement is the reverse of the removal procedure.

REP 2 Cassette Tray

Parts list on PL 1

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. Open the cassette tray, Figure 1.

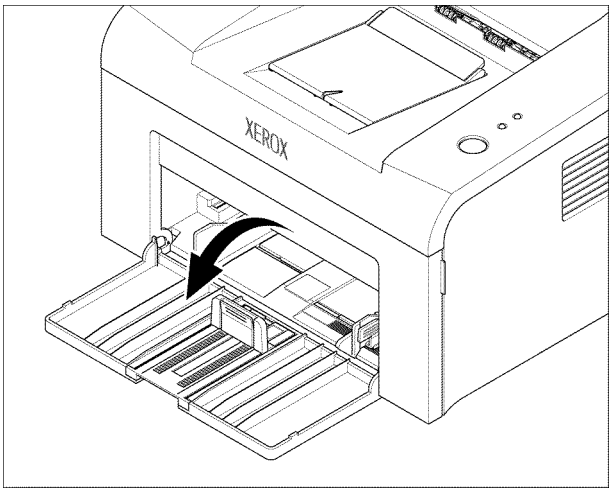


Figure 1

2. Unhinge the cassette tray in the direction of the arrow, then remove the cassette tray, Figure 2.

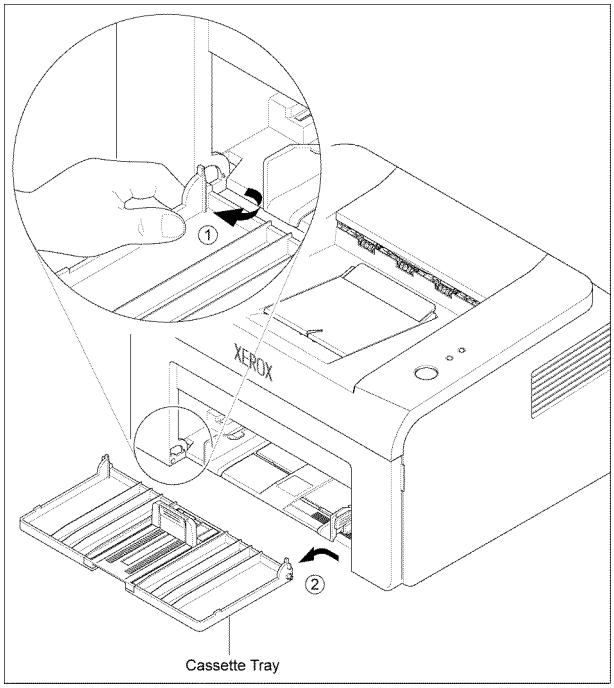


Figure 2

Replacement

Replacement is the reverse of the removal procedure.

REP 3 Rear Cover

Parts list on PL 1

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. Open the exit cover, Figure 1.

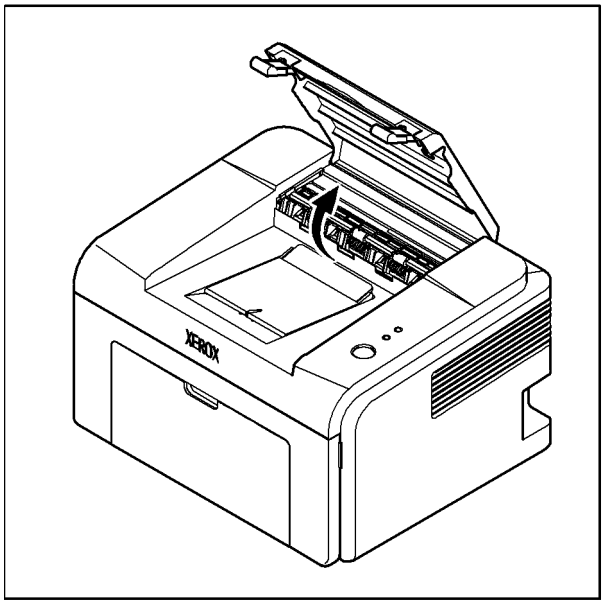


Figure 1

2. Gently flex the exit cover in the direction of the arrow, then remove the exit cover, Figure 2.

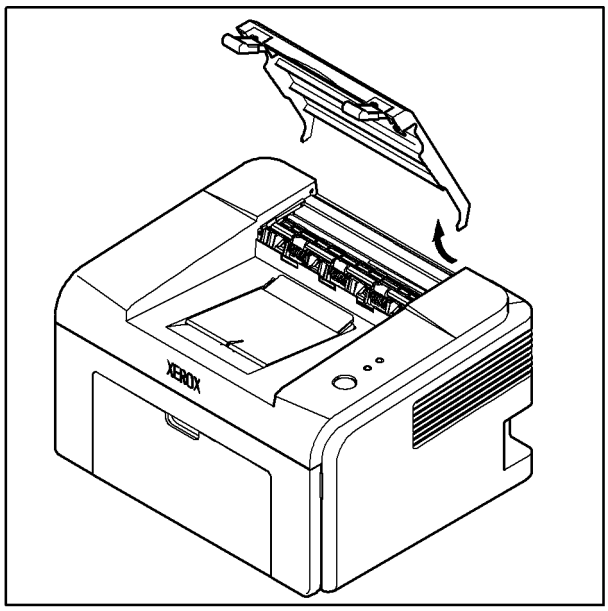


Figure 2

3. Remove 4 screws, Figure 3.

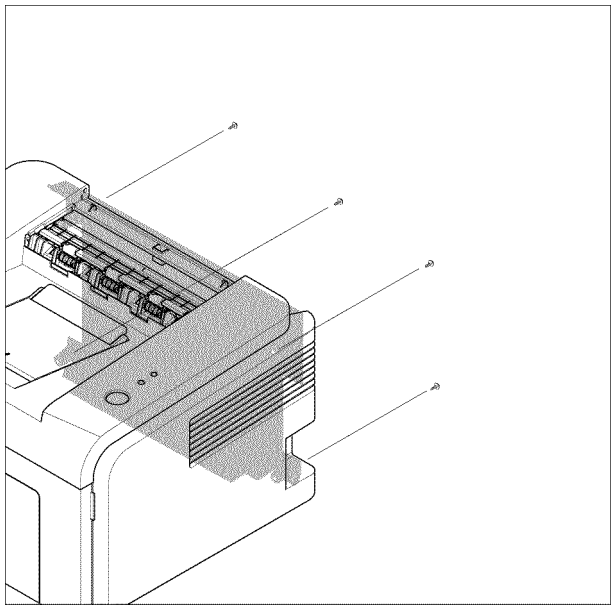


Figure 3

4. Use a flat bladed screwdriver to gently pry the rear cover open, Figure 4.

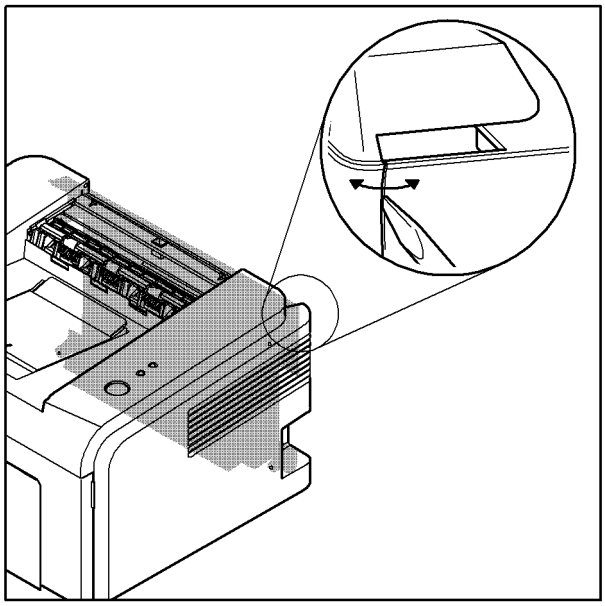


Figure 4

5. Remove the rear cover while disconnecting CN2 (Phaser 3124) / CN 6 (Phaser 3125) from the main PBA, Figure 5.

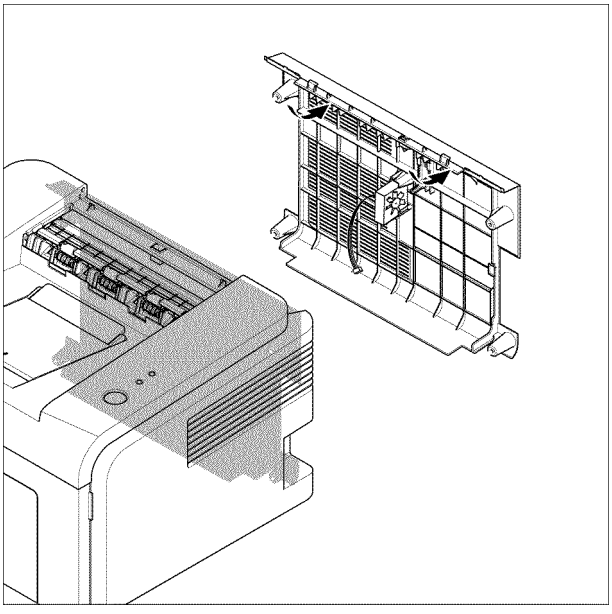


Figure 5

Replacement

Replacement is the reverse of the removal procedure.

REP 4 Top Cover Assembly

Parts list on PL 1

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 front cover assembly (refer to REP 1).
2. Remove the rear cover (refer to REP 3).
3. Remove the toner cartridge.
4. Remove 2 screws, Figure 1.

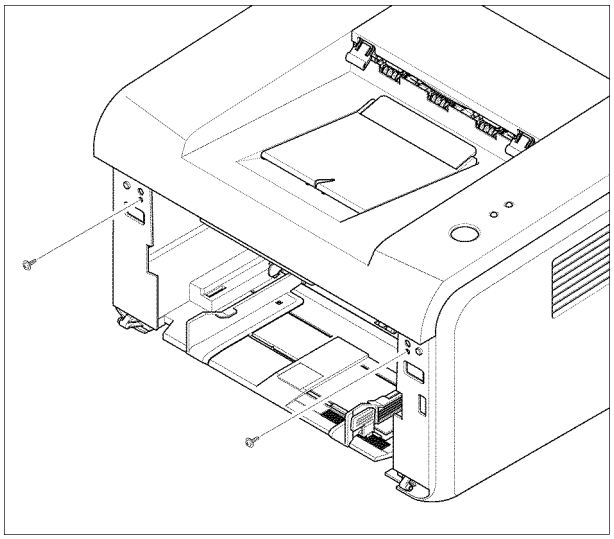


Figure 1

5. Gently flex the top cover in the direction of the arrows, then remove the top cover, Figure 2.

Note: *The plastic latches holding the top cover and the main assembly together are tightly fitted.*

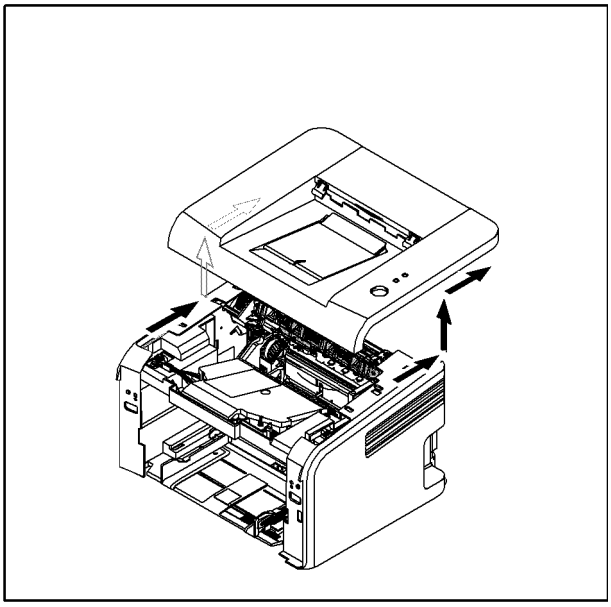


Figure 2

6. Remove 2 screws. Remove the LED lens and online key, Figure 3.

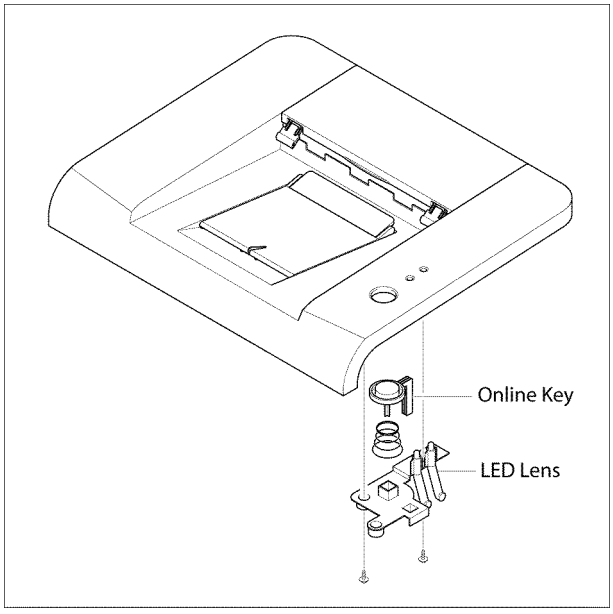


Figure 3

Replacement

Replacement is the reverse of the removal procedure.

REP 5 Left Cover and Right Cover

Parts list on PL 1

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 top cover (refer to REP 4).
2. Gently flex the left cover in the direction of the arrows, then remove the left cover, Figure 1.

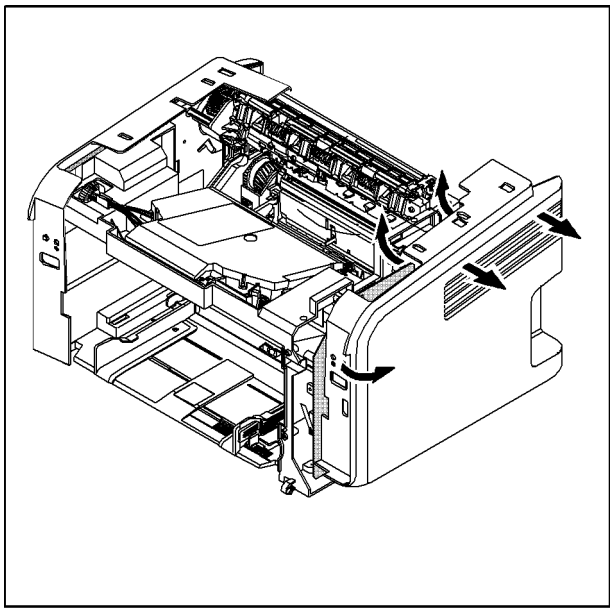


Figure 1

3. Gently flex the right cover in the direction of the arrows, then remove the right cover, Figure 2.

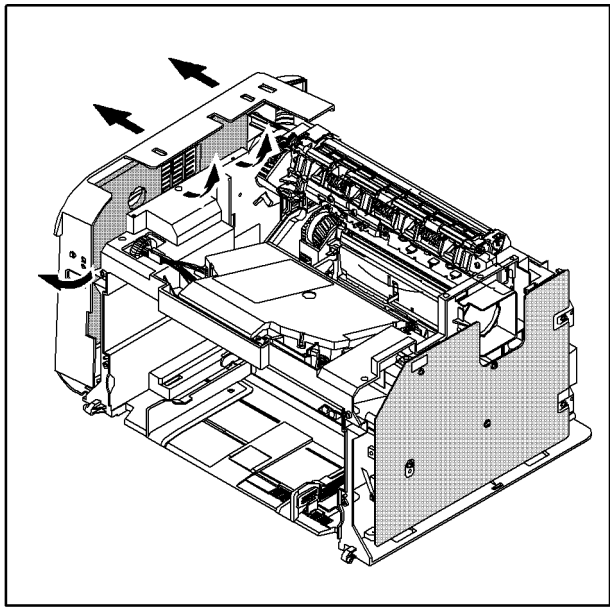


Figure 2

Replacement

Replacement is the reverse of the removal procedure.

REP 6 Engine Shield

Parts list on PL 1

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 front cover assembly (refer to REP 1).
2. Remove the rear cover (refer to REP 3).
3. Remove the top cover assembly (refer to REP 4).
4. Disconnect all connectors from the main PBA and SMPS except CN 18 (Phaser 3124) / CN 11 (Phaser 3125) from the main PBA and CON 2 from the SMPS, Figure 1.

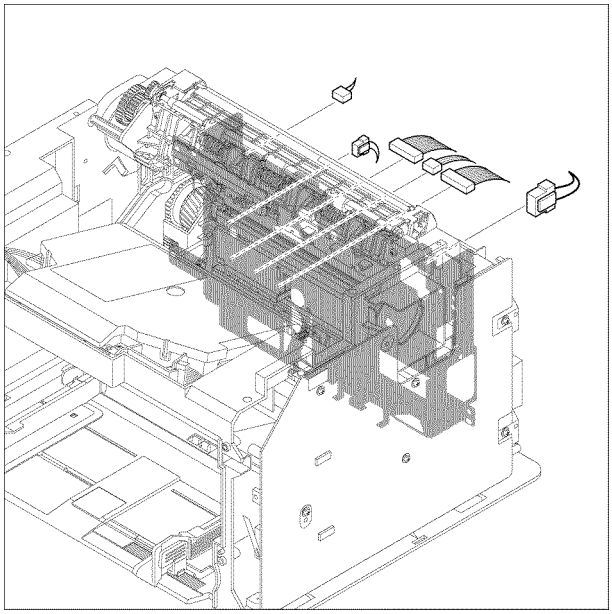


Figure 1

5. Remove 6 screws, then the shield assembly. Carefully release all the harnesses wound around the shield assembly.

CAUTION

Take care not to bend the feed sensor actuator when removing and replacing the shield assembly, Figure 2.

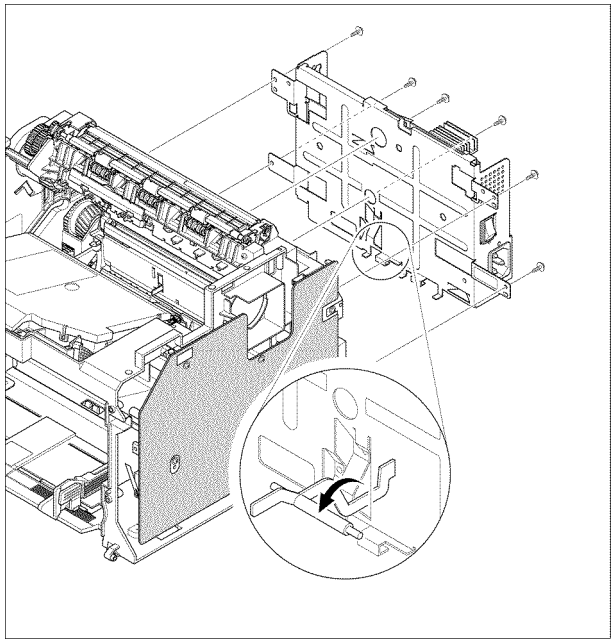


Figure 2

Replacement

Replacement is the reverse of the removal procedure.

REP 7 Fuser Assembly

Parts list on PL 3

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 engine shield (refer to REP 6).
2. Disconnect CN 1 (Phaser 3124) / CN 4 (Phaser 3125) from the main PBA and CON 1 from the SMPS, Figure 1.

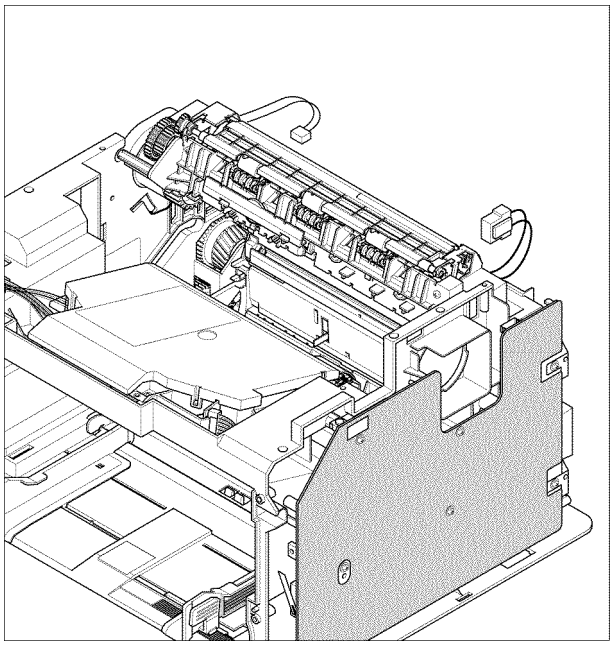


Figure 1

3. Remove 4 screws, then the fuser assembly, Figure 2.

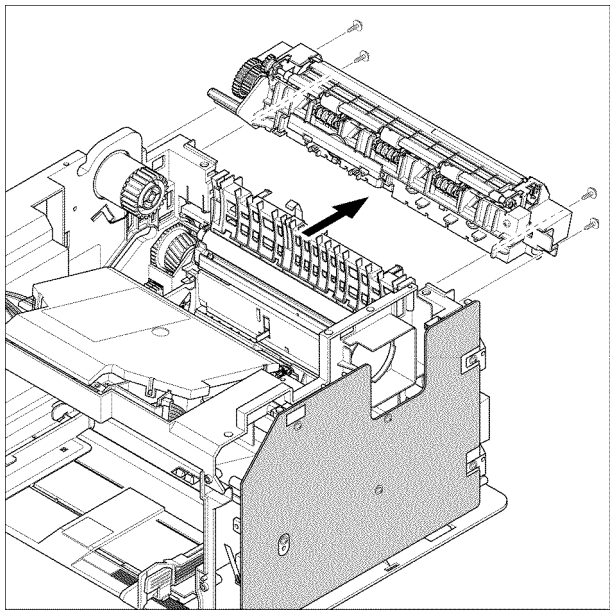


Figure 2

4. Remove the right lamp cover, left lamp cover and the fuser dummy, Figure 3.

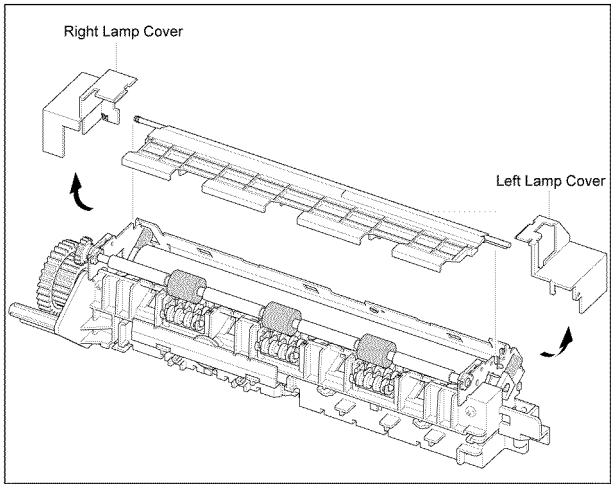


Figure 3

5. Unlatch the exit roller holders in the direction of the arrows. Remove the exit roller, Figure 4.

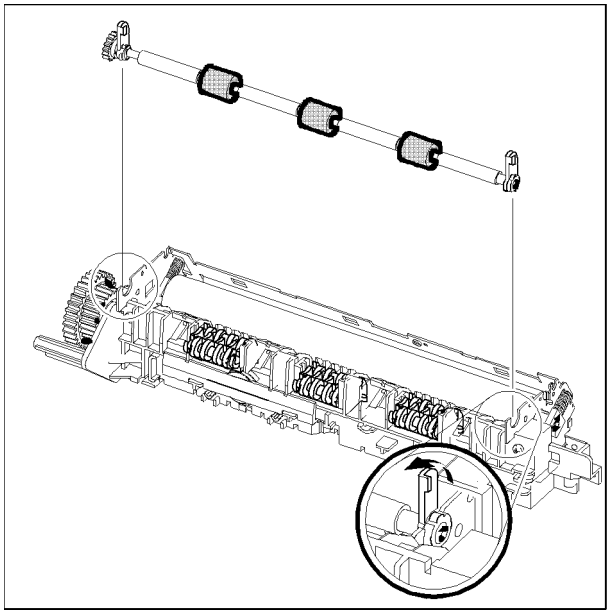


Figure 4

6. Remove the roller rack assemblies, Figure 5.

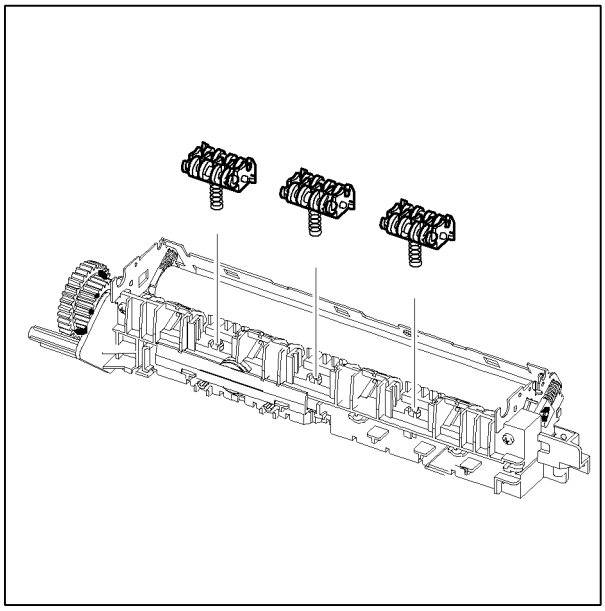


Figure 5

7. Remove the 2 spring place holders, then the thermostat cap, Figure 6

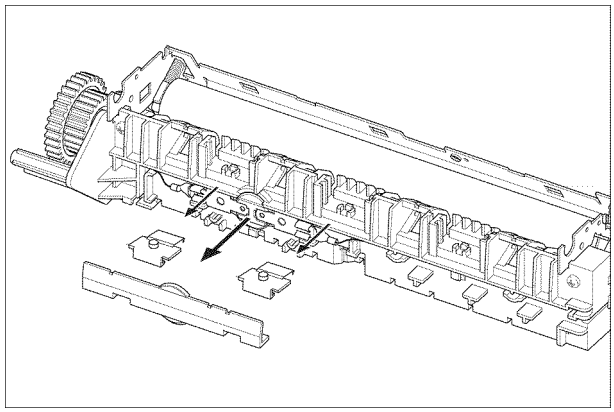


Figure 6

8. Disconnect the thermostat harnesses. Remove 2 screws, then the thermostat, Figure 7.

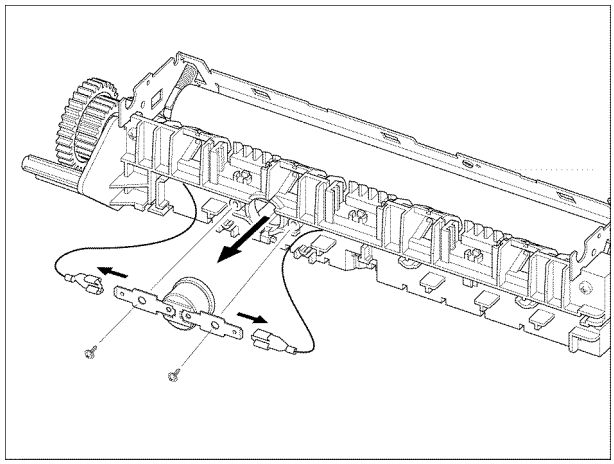


Figure 7

9. Disconnect 1 screw, then remove the thermistor, Figure 8.

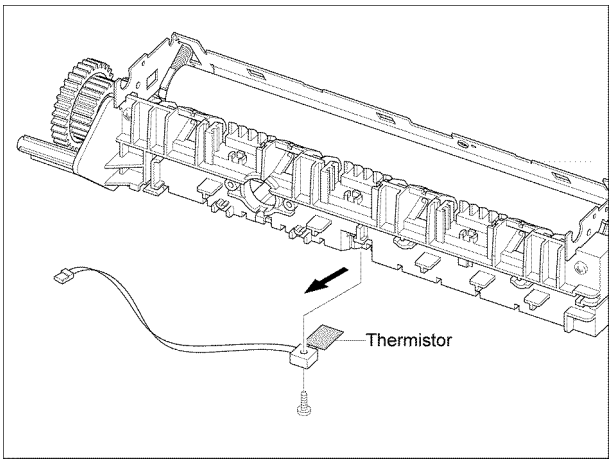


Figure 8

10. Disconnect the halogen lamp harnesses, then remove 2 screws, Figure 9.

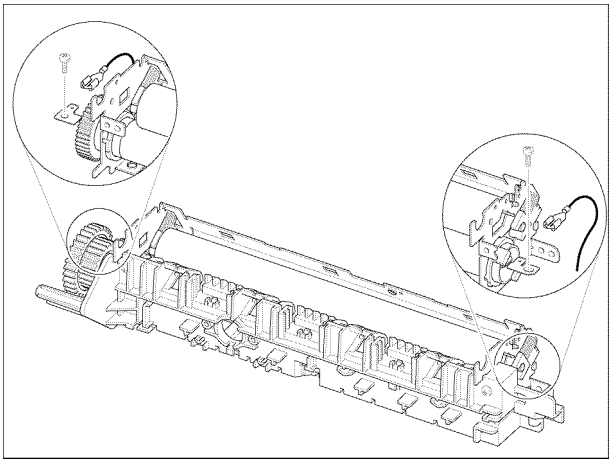


Figure 9

11. Remove 4 screws, then the fuser cover, Figure 10.

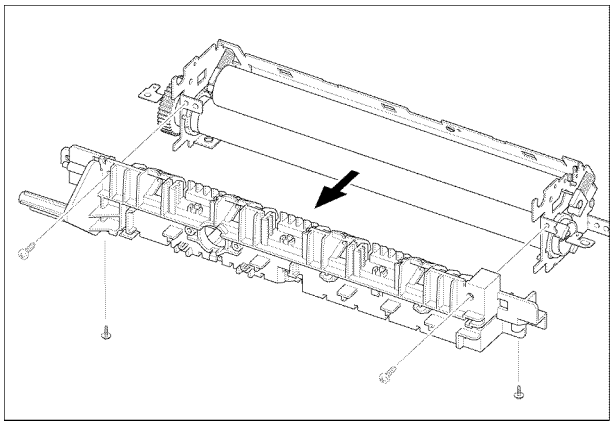


Figure 10

12. Slide the halogen lamp out of the fuser and remove the halogen lamp, Figure 11.

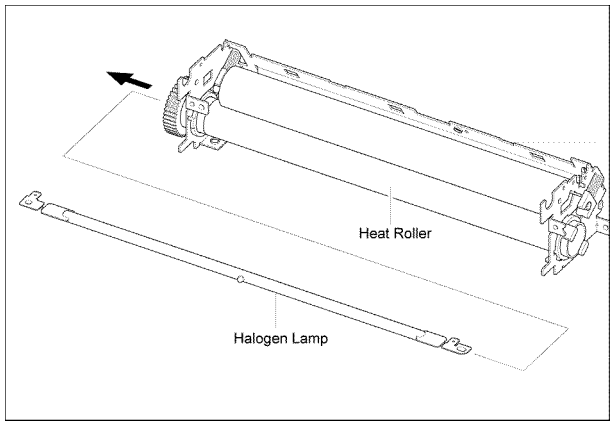


Figure 11

Replacement

Replacement is the reverse of the removal procedure.

REP 8 HVPS

Parts list on PL 1

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 front cover assembly (refer to REP 1).
2. Remove the rear cover (refer to REP 3).
3. Remove the top cover (refer to REP 4).
4. Remove the left cover (refer to REP 5).
5. Remove 6 screws, then the protective sheet.

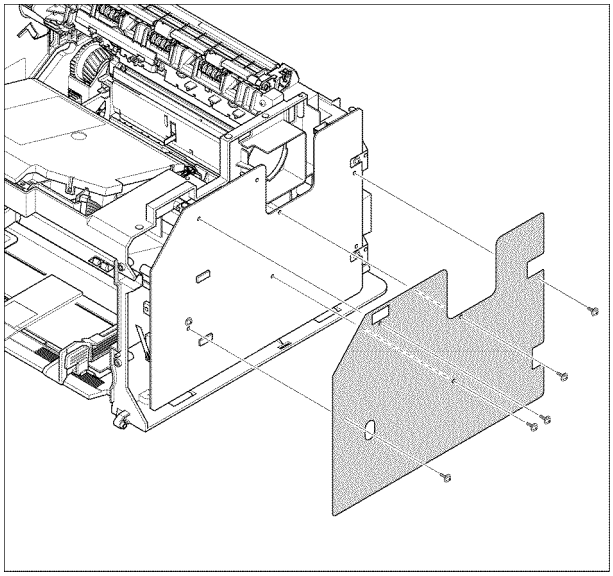


Figure 1

6. Disconnect CN 1 and CN 3, then remove the HVPS, Figure 2.

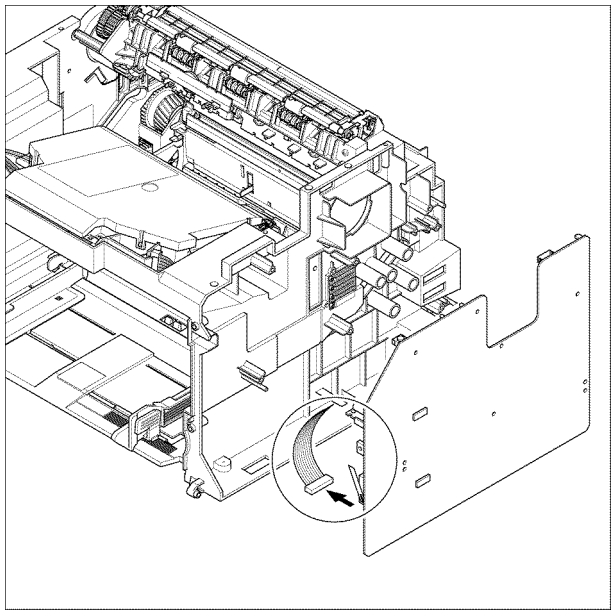


Figure 2

7. Remove 2 HVPS grounds.

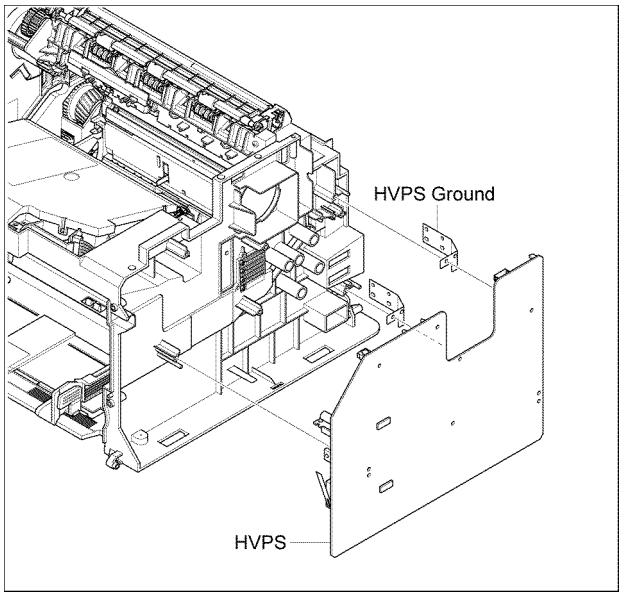


Figure 3

Replacement

1. When replacing the main drive assembly, tighten the screws in the reverse order they are numbered.

Replacement is the reverse of the removal procedure.

REP 9 SMPS

Parts list on PL 1

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 rear cover (refer to REP 1).
2. Disconnect all SMPS connectors. Remove 5 screws, then the SMPS, Figure 1.

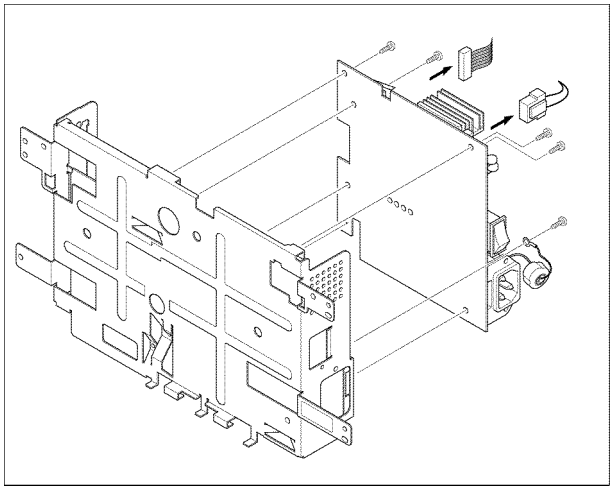


Figure 1

Replacement

Replacement is the reverse of the removal procedure.

REP 10 Main PBA

Parts list on PL 1

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 rear cover (refer to REP 3).
2. Disconnect all Main PBA connectors. Remove 6 screws, then the Main PBA, Figure 1.

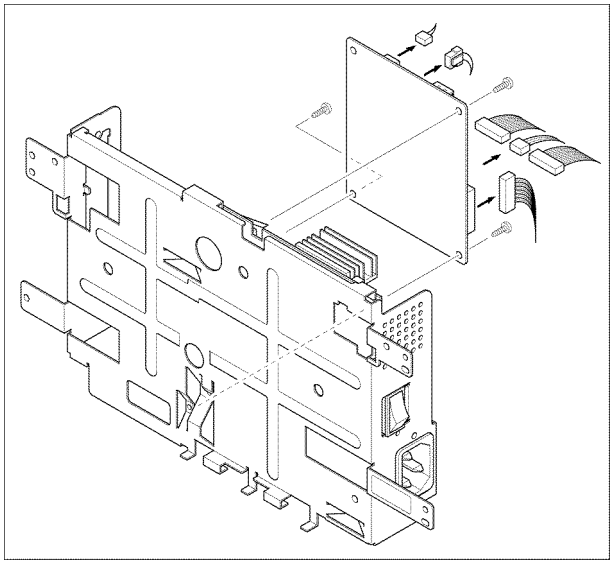


Figure 1

Replacement

Replacement is the reverse of the removal procedure.

REP 11 Main Drive 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.

1. Remove the front cover assembly (refer to REP 1).
2. Remove the rear cover (refer to REP 3).
3. Remove the top cover assembly (refer to REP 4).
4. Remove the left cover (refer to REP 5).
5. Remove 8 screws, Figure 1.

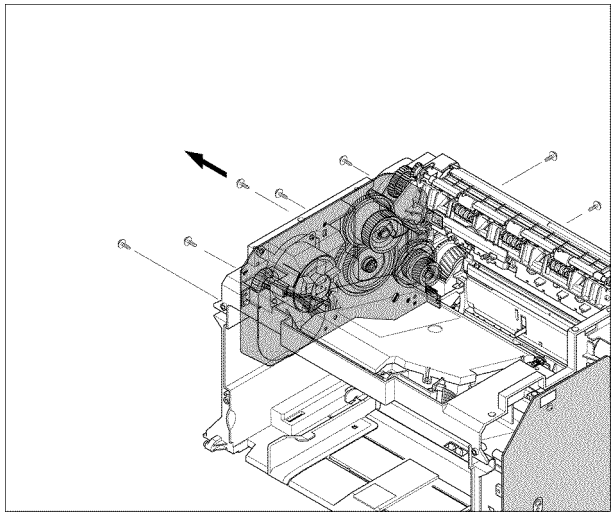


Figure 1

6. Disconnect the main motor harness, then remove the main drive assembly, Figure 2.

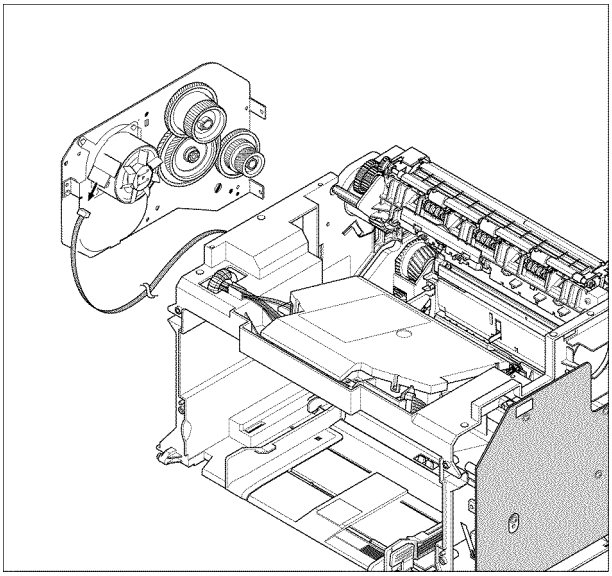


Figure 2

7. Remove the feed gear if necessary, Figure 3.

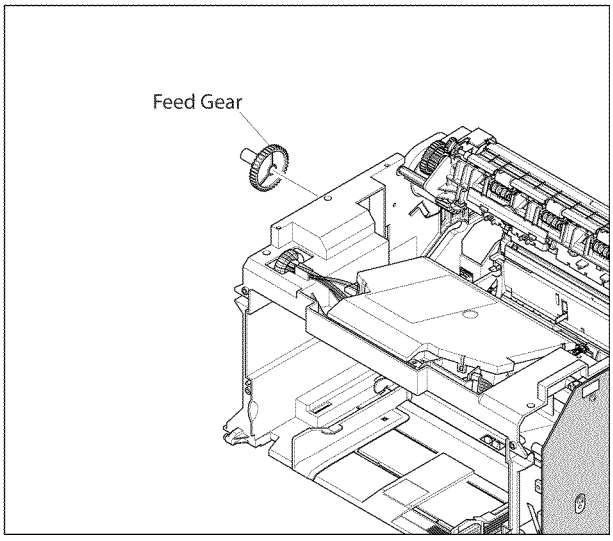


Figure 3

8. Remove the fuser drive gear, OPC drive gear, then the RDCN gear 113/83, Figure 4.

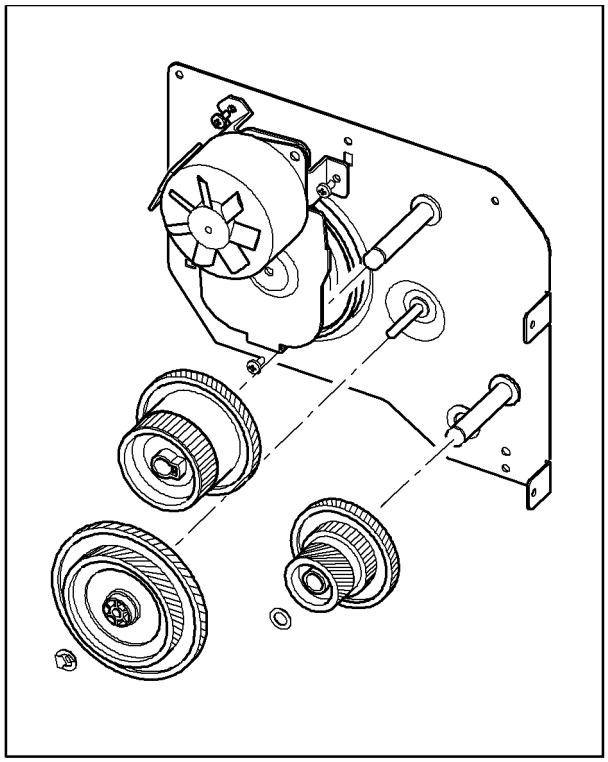


Figure 4

9. Remove the 2 screws, then the main motor, Figure 5.

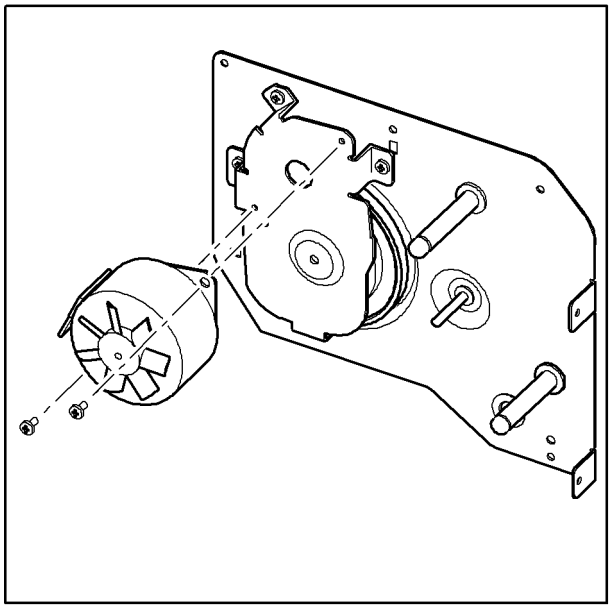


Figure 5

10. Remove 4 screws, then the motor bracket, Figure 6.

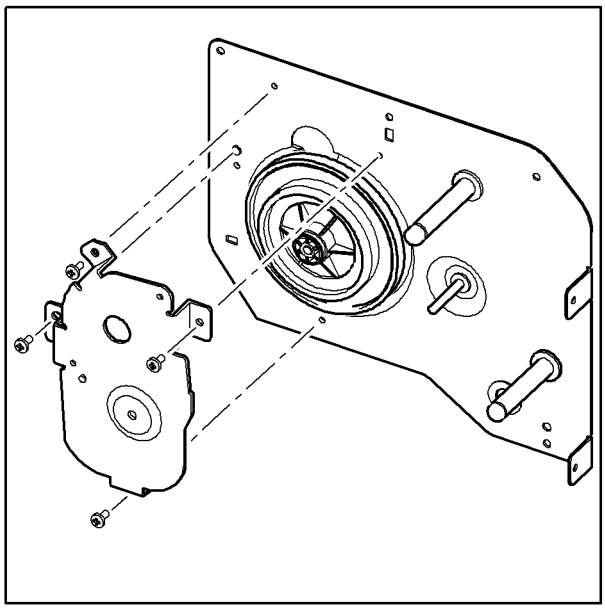


Figure 6

11. Remove the RDCN gear 139/83 gear, Figure 7.

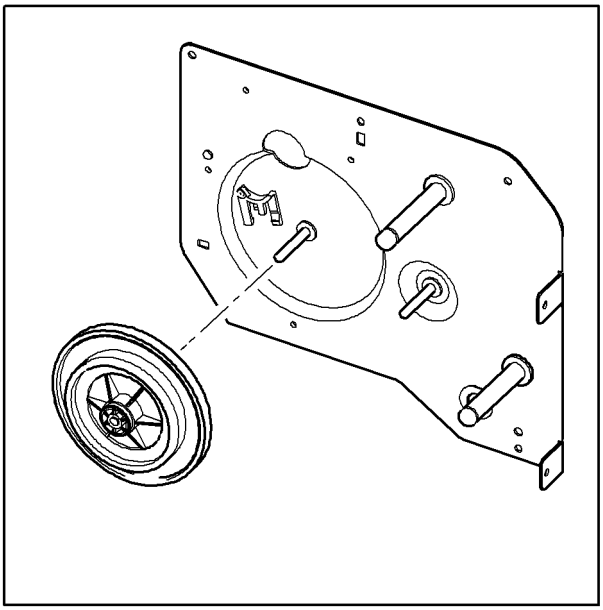


Figure 7

Replacement

1. When replacing the main drive assembly, tighten the screws in the reverse order they are numbered.

Replacement is the reverse of the removal procedure.

REP 12 LSU

Parts list on PL 1

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 top cover (refer to REP 4).
2. Remove 3 screws, then lift the LSU and disconnect all the harnesses attached. Remove the LSU, Figure 1.

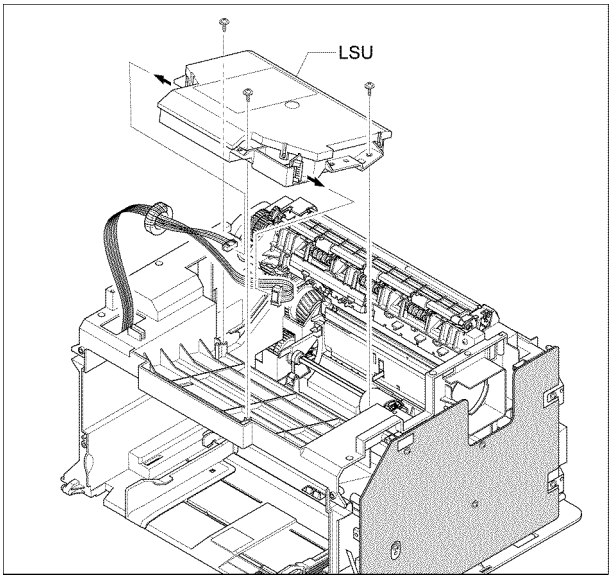


Figure 1

Replacement

Replacement is the reverse of the removal procedure.

REP 13 Paper Path Assembly

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.

1. Remove the fuser assembly (refer to REP 6).
2. Remove 4 screws, then the paper path assembly, Figure 1.

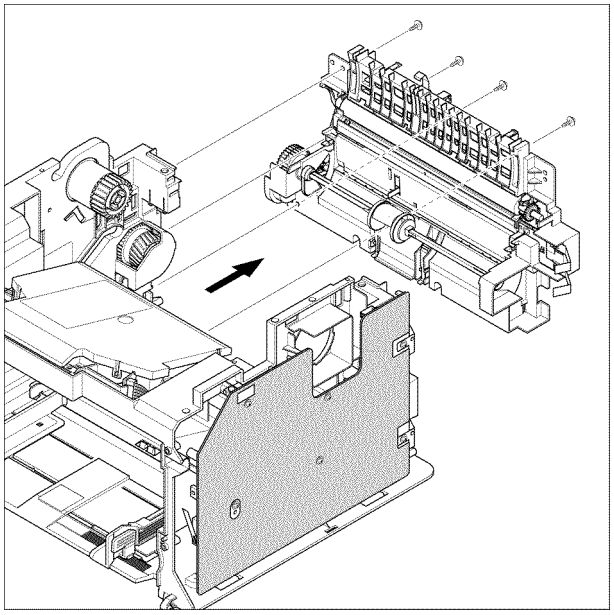


Figure 1

3. Unlatch the transfer roller bushes then remove the transfer roller, Figure 2.

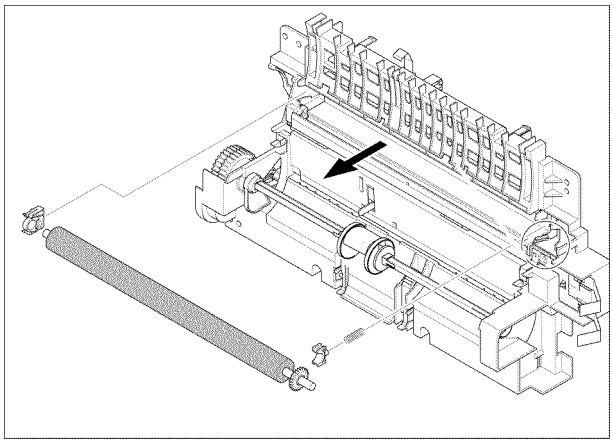


Figure 2

4. Remove 1 screw, then the solenoid, Figure 3.

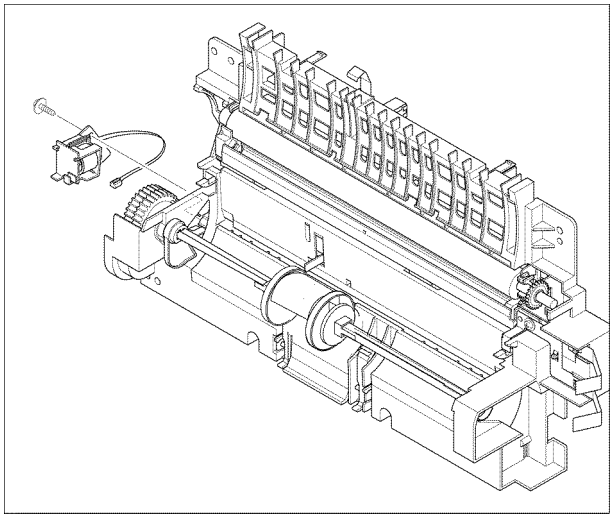


Figure 3

5. Release the catches on both sides of the pick up assembly, then slide them apart, Figure 4.

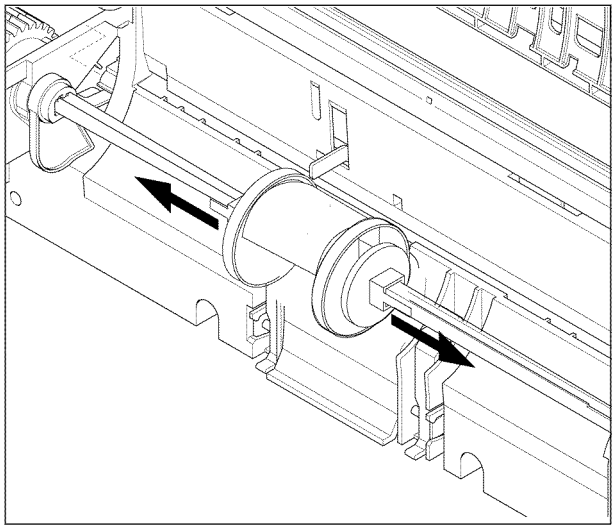


Figure 4

6. Remove the pick up assembly.

Replacement

Replacement is the reverse of the removal procedure.

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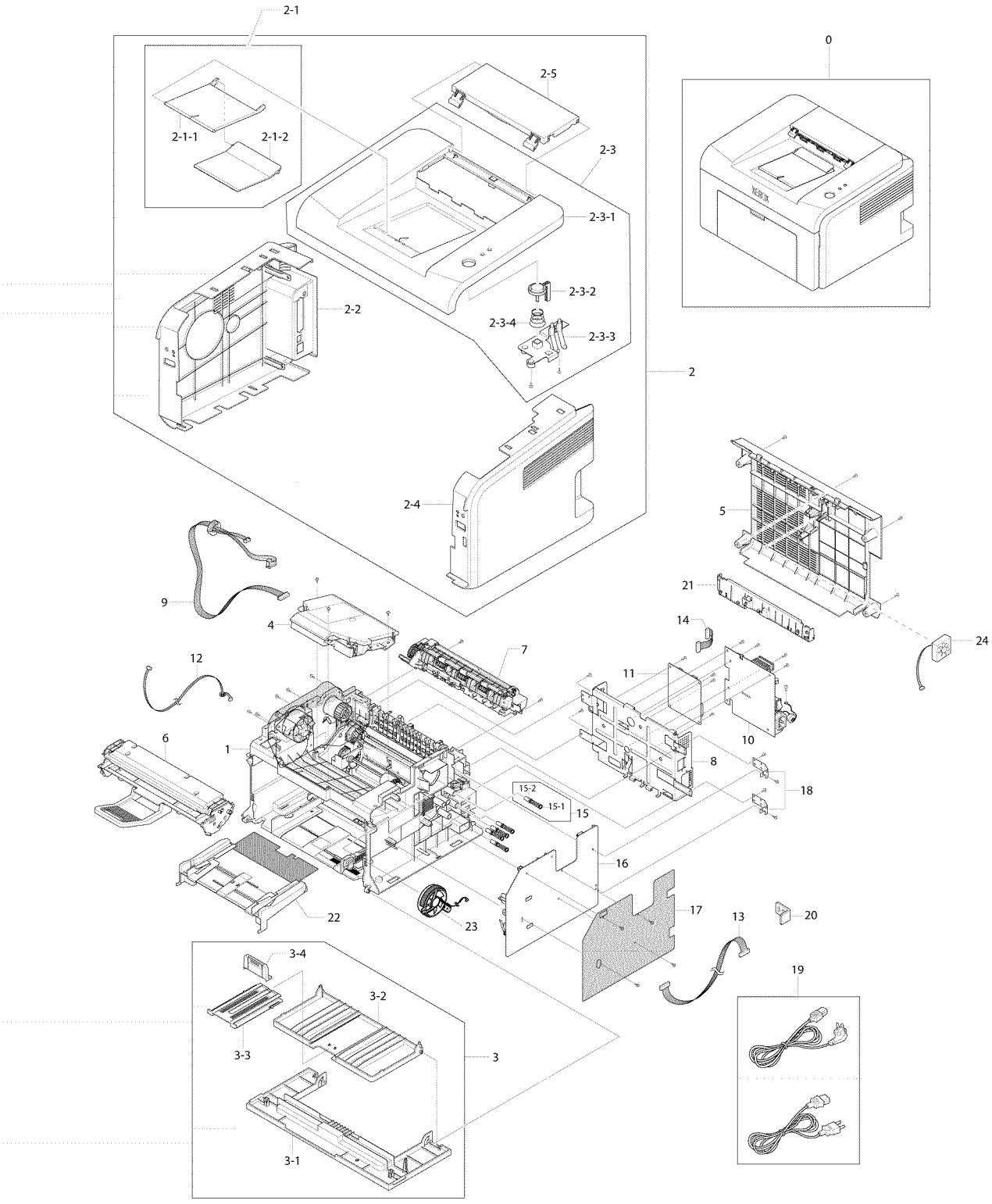
5. Spare Parts List

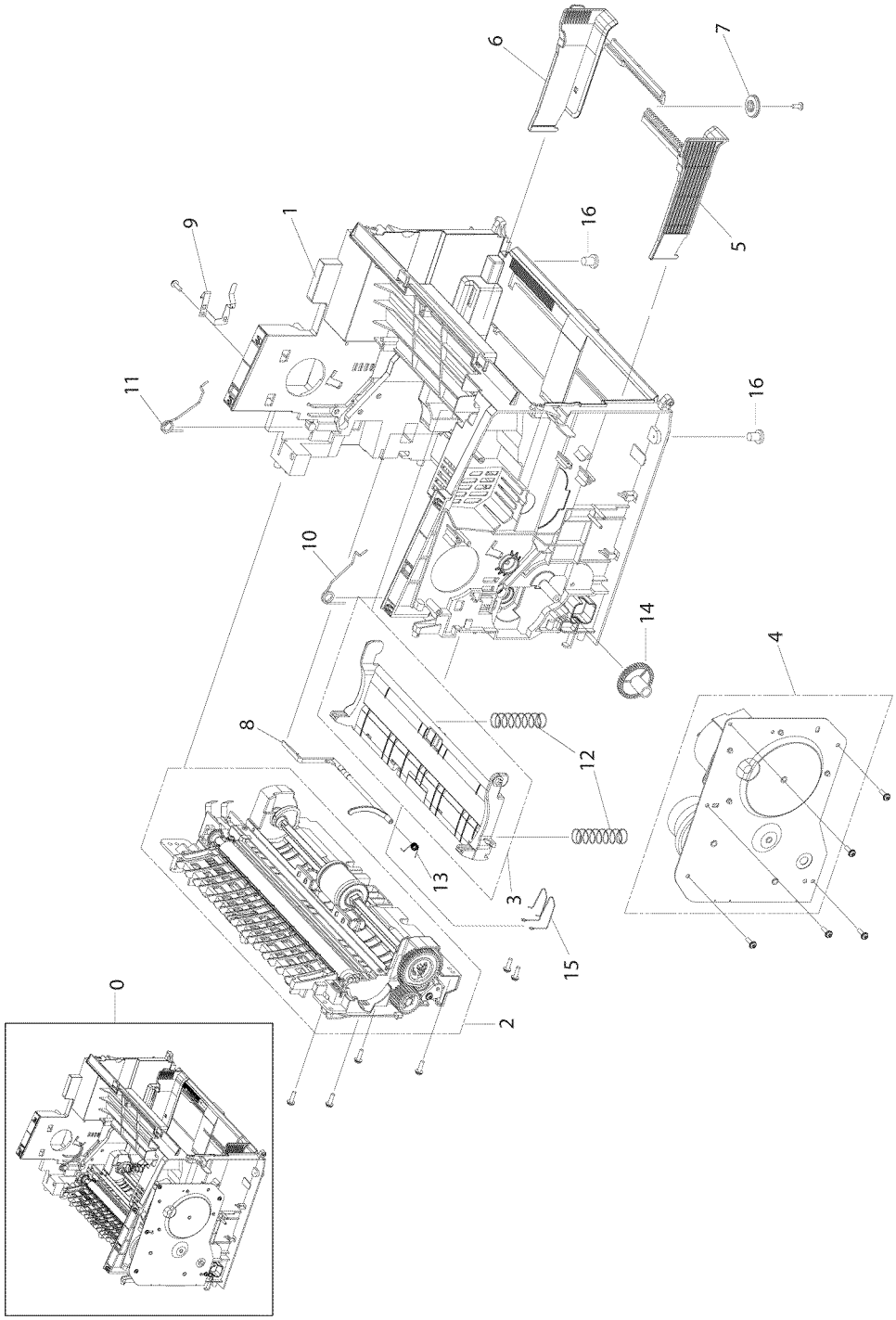
PL 1 Main Assembly



PL 1 Main Assembly

Item	Part Number	Description	Remark
0		PHASER 3124 / PHASER 3125	
1		LOWER FRAME UNIT	
2		MAIN COVERS	
2-1		STACKER EXT	
2-1-1		GUIDE-M-STACKER RX	
2-1-2		GUIDE-M-SUB-STACKER	
2-2		RIGHT COVER	REP 5
2-3		TOP COVER ASSEMBLY	REP 4
2-3-1		TOP COVER	
2-3-2		ONLINE KEY	
2-3-3		LED LENS	
2-3-4		KEY SPRING	
2-4		LEFT COVER	REP 5
2-5		EXIT COVER	
3		FRONT COVER ASSEMBLY	REP 1
3-1		FRONT COVER	
3-2		CASSETTE TRAY	REP 2
3-3		PAPER TRAY EXTENSION	
3-4		PAPER TRAY GUIDE	
4	122N00272	LSU	REP 12
5		REAR COVER	REP 3
6		TONER CARTRIDGE	
7		FUSER ASSEMBLY (220V)	
7		FUSER ASSEMBLY (110V)	
8		ENGINE SHIELD	REP 6
9		LSU HARNESS	
10	105N02067	SMPS (220V)	REP 9
10	105N02066	SMPS (110V)	REP 9
11	140N63235	MAIN PBA (PHASER 3124/B)	REP 10
11	140N63236	MAIN PBA (PHASER 3125/B)	REP 10
11	140N63237	MAIN PBA (PHASER 3125/N)	REP 10
12		MOTOR HARNESS	
13		HVPS HARNESS	
14		SMPS HARNESS	
15		TERMINAL	
15-1		HV SHAFT	
15-2		SPRING	
16	105N02068	HVPS	REP 8
17		PROTECTIVE SHEET	
18		HVPS GROUND	
19		POWER CORD (220V)	
19		POWER CORD (110V)	
20		CHANNEL PLATE	
21		ENGINE SHIELD CAP	
22		BYPASS TRAY	
23	127N01453	FUSER FAN	
24		REAR COVER FAN	

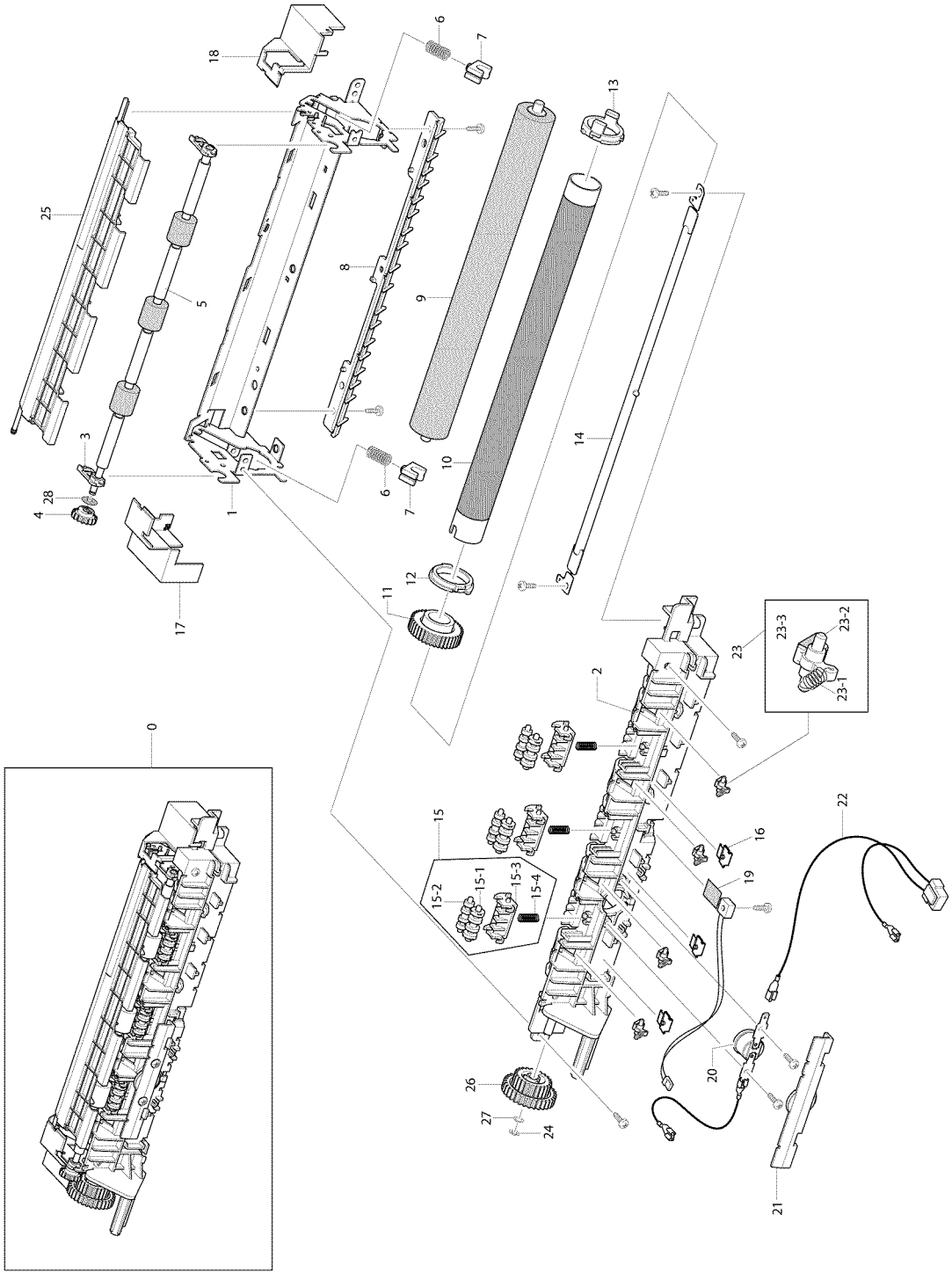
PL 2 Frame Assembly



PL 2 Frame Assembly

Item	Part Number	Description	Remark
0		LOWER FRAME UNIT	
1		BASE FRAME	
2		PAPER PATH ASSEMBLY	
3		PAPER KNOCK-UP ASSEMBLY	
4	007N01572	MAIN DRIVE ASSEMBLY	
5		RIGHT PAPER GUIDE	
6		LEFT PAPER GUIDE	
7		GEAR PINION	
8	120N00504	PAPER EMPTY ACTUATOR	
9		OPC GROUND	
10		RIGHT TORSION SPRING	
11		LEFT TORSION SPRING	
12		KNOCK-UP SPRING	
13		ACTUATOR SPRING	
14		FEED GEAR	
15		SPRING	
16		RUBBER FOOT	

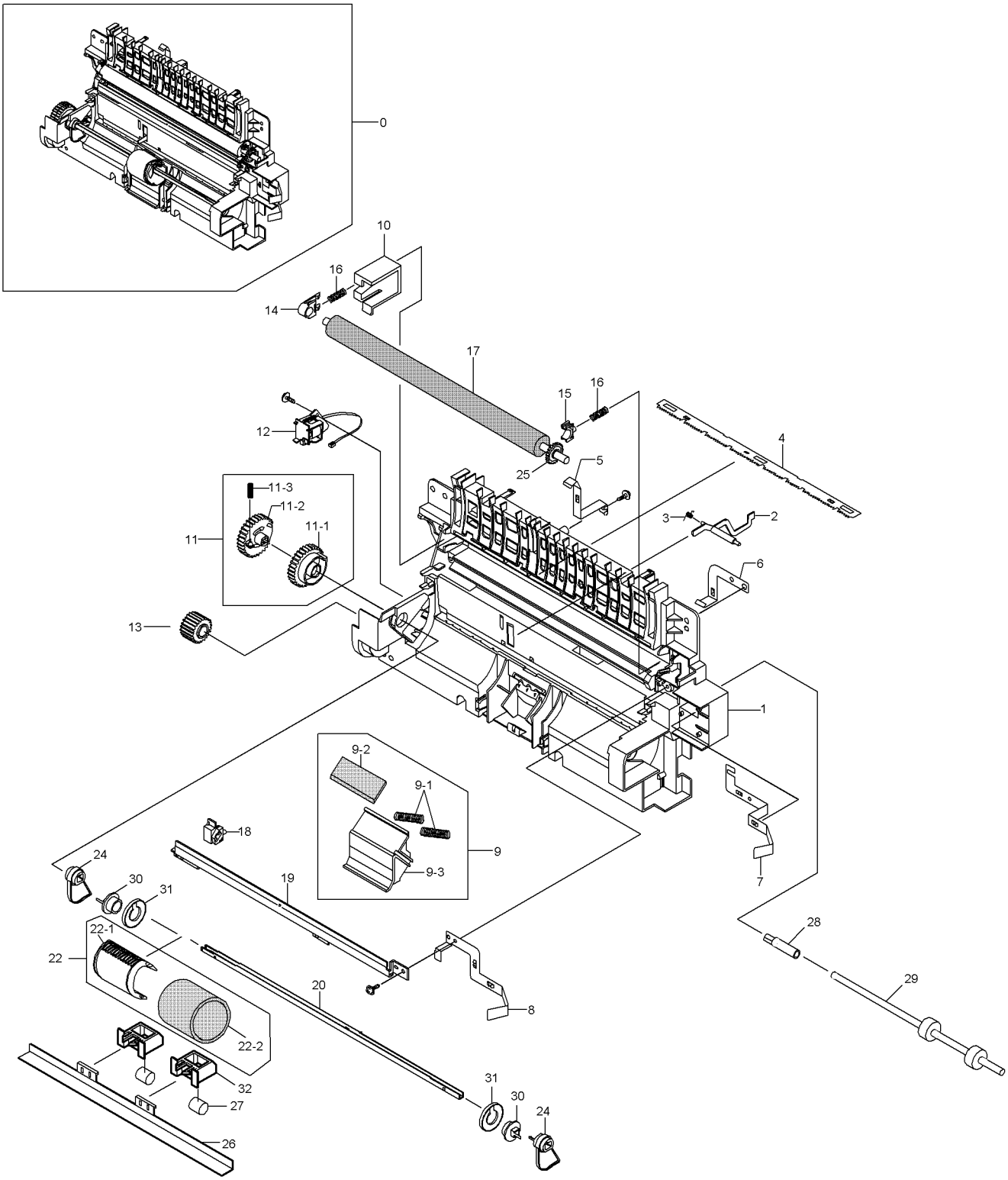
PL 3 Fuser Assembly



PL 3 Fuser Assembly

Item	Part Number	Description	Remark
0	126N00275	FUSER (220V)	REP 7
0	126N00274	FUSER (110V)	REP 7
1		FUSER FRAME	
2		FUSER COVER	
3		EXIT ROLLER HOLDER	
4		FUSER GEAR	
5		EXIT ROLLER	
6		SPRING	
7		BEARING	
8		FUSER GUIDE	
9	022N01611	PRESSURE ROLLER	
10	022N02310	HEAT ROLLER	
11		HEAT ROLLER GEAR	
12		RIGHT HEAT BUSH	
13		LEFT HEAT BUSH	
14	122N00270	HALOGEN LAMP 220V	
14	122N00269	HALOGEN LAMP 110V	
15		ROLLER RACK	
15-1		ROLLER MAIN	
15-2		ROLLER FR	
15-3		ROLLER HOLDER	
15-4		SPRING	
16		SPRING PLACE HOLDER	
17		LEFT FUSER COVER	
18		RIGHT FUSER COVER	
19	130N01499	THERMISTOR	
20	130N01498	THERMOSTAT	
21		THERMOSTAT CAP	
22		FUSER HARNESS JOINT	
23		STRIPPER FINGER	
23-1		SPRING	
23-2		FINGER PLATE	
23-3		CLAW	
24		E-CLIP	
25		FUSER DUMMY	
26		FUSER GEAR	
27		WASHER	
28		C-RING	

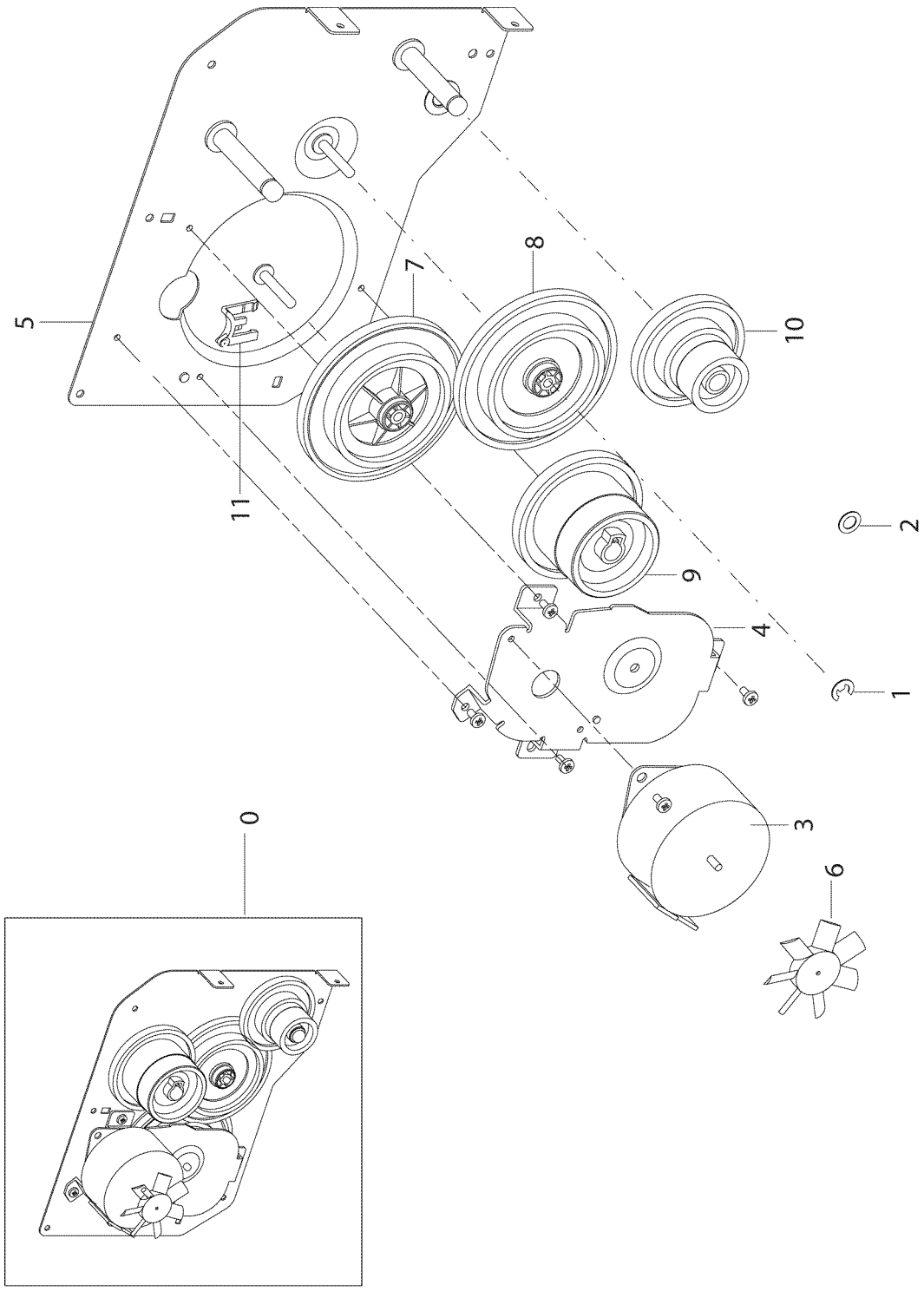
PL 4 Paper Path Assembly



PL 4 Paper Path Assembly

Item	Part Number	Description	Remark
0		PAPER PATH ASSEMBLY	REP 13
1		PAPER PATH GUIDE	
2	130N01497	FEED SENSOR ACTUATOR	
3		ACTUATOR SPRING	
4	015N00558	IPR PLATE SAW	
5		VARISTOR GROUND	
6		ZENER P GROUND	
7		THV GROUND	
8		SAW P GROUND	
9		HOLDER PAD UNIT	
9-1		SPRING	
9-2		FRICTION PAD	
9-3		HOLDER-M-PAD	
10		BUSH HOLDER	
11		PICK-UP GEAR	
11-1		PICK-UP GEAR B	
11-2		PICK-UP GEAR A	
11-3		PICK-UP GEAR SPRING	
12		SOLENOID	
13		FEED GEAR	
14		TRANSFER ROLLER RIGHT BUSH	
15		TRANSFER ROLLER LEFT BUSH	
16		TRANSFER ROLLER SPRING	
17	022N02309	TRANSFER ROLLER	
18		PTL HOLDER	
19		EARTH TRANSFER	
20		PICK-UP SHAFT	
21		NOT USED	
22		PICK-UP ASSEMBLY	
22-1		PICK-UP RUBBER HOUSING	
22-2		RUBBER PICK UP	
23		NOT USED	
24		PICK-UP CAM	
25		TRANSFER ROLLER GEAR	
26		IDLE BAR	
27		IDLE ROLLER	
28		FEED EXTENSION	
29		FEED ROLLER	
30		CATCH	
31		IDLE RING	
32		IDLE ROLL HOLDER	

PL 5 Main Drive Assembly



PL 5 Main Drive Assembly

Item	Part Number	Description	Remark
0		MAIN DRIVE ASSEMBLY	REP 11
1		E-CLIP	
2		WASHER	
3		MAIN MOTOR	
4		MOTOR BRACKET	
5		PLATE	
6		MOTOR IMPELLER	
7		RDCN GEAR 139/83	
8		RDCN GEAR 113/83	
9		FUSER DRIVE GEAR	
10		OPC DRIVE GEAR	
11		SPACER	

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6. General Procedures/Information

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GP 1 Printer Specifications

Table 1: Printer Specifications

Item		Phaser 3124/B	Phaser 3125/B	Phaser 3125/N
Size(WxDxH)		358 X 298 X 253mm (14.1 X 11.7 x 10 inches)		
Weight	Net	5.6kg / 12.4lb (without the toner cartridge)		
	Gross	8.9kg / 19.6lb		
Toner Save mode		Yes		
Print Method		Electrophotographic Laser		
Print Speed		24ppm (A4) / 25ppm (Letter)		
Resolution		1200x600 dpi	1200x1200 dpi	
Duty Cycle, Monthly		20,000 pages		
Warm-Up Time	Cold	Less than 15sec		
	Sleep mode	Less than 15sec		
First page print out time	Ready	9 seconds		
	Sleep mode	25 seconds		
Processor Speed		150MHz	400MHz	
Memory		8MB	32MB	
Font Type		Windows Fonts		
Standard Emulation		GDI	PCL 6[d], Postscript 3	
Auto Emulation Sensing		Yes		
System requirements				
Operating system		Windows 98/ME/NT 4.0/2000/XP(23/64 bit)/2003	Windows 98/ME/NT 4.0/2000/XP(23/64 bit)/2003, Mac 8.6 - 9.2/10.1 - 10.4, Linux	
CPU		Windows 98/ME/2000/XP: Pentium II 400 or higher Windows XP: Pentium II 933GHz or higher		
RAM		Windows 98/ME/2000/XP: 64MB or higher Windows XP: 128MB or higher		
Free Disk Space		1GB or higher		
Internet Explorer		5.0 or higher		
Interface Support				
Standard Interfaces		USB 1.1(Compati-ble with USB 2.0)	USB 2.0	
		IEEE 1284 Parallel		
		N/A		Ethernet 10/100 Base TX wired LAN

Table 1: Printer Specifications

Item		Phaser 3124/B	Phaser 3125/B	Phaser 3125/N
Paper Handling Specifications				
Standard Paper Capacity		250 Sheets		
Paper Output		100 Sheets (faced down)		
Duplexing		Manual		
Paper Weight:	Plain paper	16 to 24 lb. Bond(60 to 90g/m2)		
	Thick stock	24 - 90 lb. Index(163g/m2)		
Media Sizes	Cassette	A4, Letter, Folio, Legal, Executive, Statement, ISO B5, JIS B5, A5		
	Manual	A6, No. 10 Envelope, Monarch Envelope, DL Envelope, C5 Envelope, C6 Envelope, Transparency, Labels		
Media Size		76 X 128mm (3 x 5”) to 216 X 356mm (8.5 X 14”)		
Electrical Specifications				
Power Save mode		Yes		
Energy Star Compliant		Yes		
Input Voltage	Nominal input voltage	110~127 VAC, 5.5 A 220~240 VAC, 3 A		
	Nominal frequency	50/60 MHz		
Power Consumption	Printing	390W Ave. (Max. 400W)	400W Ave. (Max. 420W)	
	Ready (Idle)	65W	70W	
	Power Save	6.5W Ave. or less	8.5W Ave. or less	
Environmental Specifications				
Temperature	Operating	10~32°C(50~90°F)		
	Non-Operating	-20~40°C(-4~104°F)		
Humidity:	Operating	20% to 80% RH		
	Non-Operating	20% to 80% RH		
Noise Level	During operation	Sound Pressure: 53dB Sound Power: 66dB		
	During standby	Sound Pressure: 35dB Sound Power: 66dB		
Consumables Specifications				
Toner Cartridge Yield	Initial	1,000 sheets@ISO 5% coverage		
	Standard	3,000 sheets@ISO 5% coverage		
Developing Method		Non-magnetic Contact Developing		
Charging Method		Conductive Roller Charging		
Toner Empty Sensor		N/A		
Cartridge Style		Single cartridge		

GP 2 System Overview

Printing Path Layout

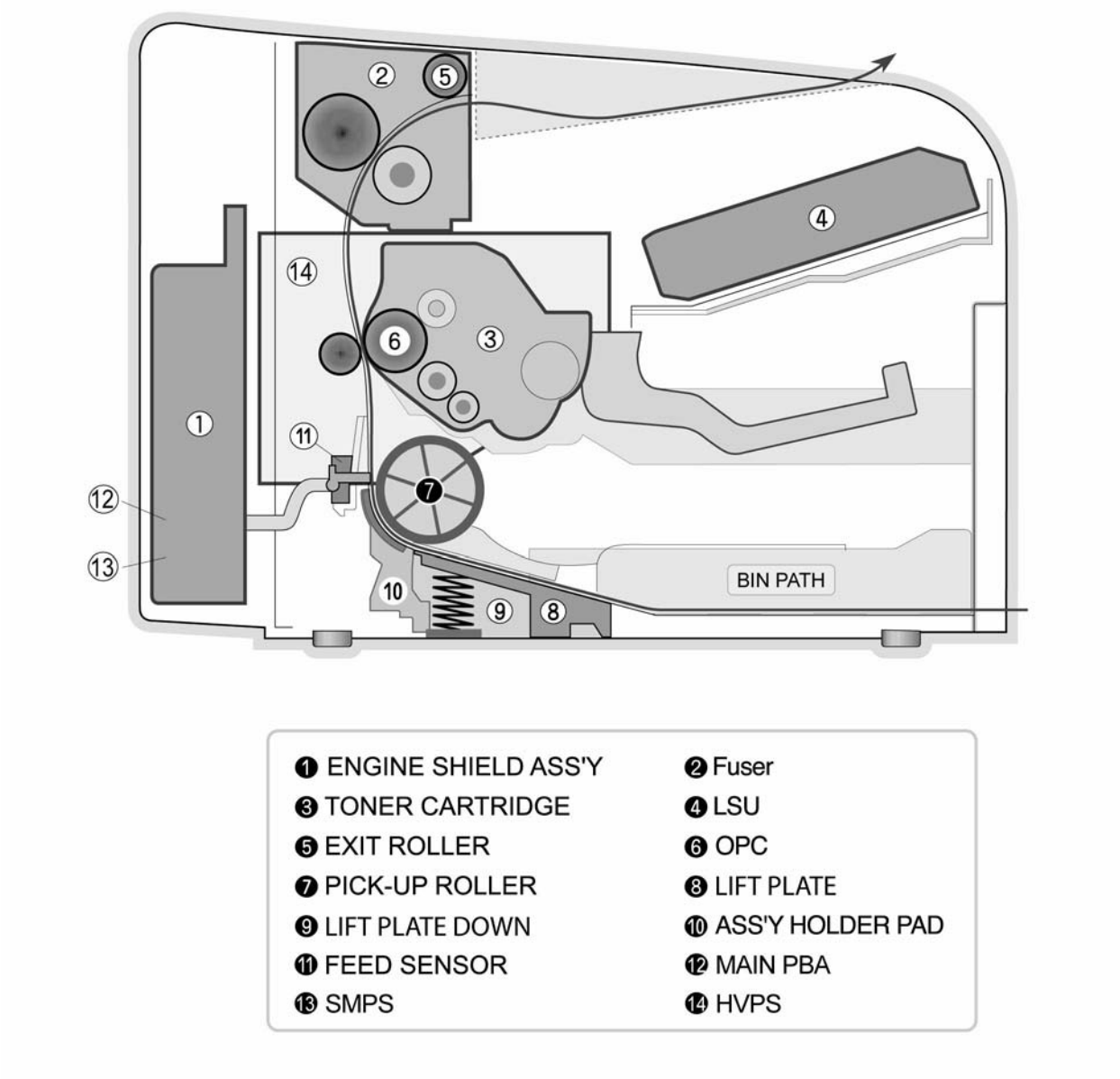


Figure 1 Printing Path

Mechanical components specifications

Paper Feed

- Feed type : Multi-purpose feeder
- Feed method : Center loading
- Feed Qty : Cassette 250 sheets (75g/m^2, 20lb paper standard)
- Manual 1 sheet bypass feeder : Paper, Transparencies, Envelope etc.
- Separation method
  Cassette : Friction pad
  Bypass feeder : N/A
- Drive mechanism : Main motor gearing
- Pick up roller driver : Solenoid
- Paper detection sensor : Photo sensor
- Paper size sensor : N/A
- Paper exit type : Faced Down

Transfer Assembly

The transfer roller transfers toner from the toner cartridge to paper.

Main Drive Assembly

The main drive assembly provides mechanical movement throughout the machine. The assembly is powered by a single step motor.

Fuser

The fuser is consists of the heat lamp, heat roller, pressure roller, thermistor and thermostat.

It adheres toner on to paper with pressure and heat.

1. Heat Lamp
   - Heat Lamp Terminal Type : Terminal single type
   - Voltage
     120 V : 115 +/- 5%
     220 V : 230 +/- 5%
   - Capacity : 750 Watt +/- 30 W
   - Life : 3000 Hr.
2. Thermostat
   - Thermostat Type : Non-contact type THERMOSTAT
   - Control Temperature : 150 +/- 5°C
3. Thermistor
   - Thermistor Model : FS-50004 (SEMITEC 364Fs Type)
   - Temperature Resistance : 7 (180)

- System temperature settings
  - Stand by : 160 +/- 5°C
  - Printing: 180 +/- 5°C (before 30pages), 75 +/- 5°C (after 30pages)
  - Overshoot : 200°C or less
  - Overheat : 210°C or less

4. Heat roller
   - Length : 254 mm (10 inches)
   - Valid length : 222 mm (8.74 inches)
   - GND Type : Heat roller bearing fuser frame grounding
5. Pressure roller
   - Shaft
     - Length : 239.5 mm (9.43 inches)
   - Rubber
     - Length : 222 mm (8.74 inches)
6. Paper separation method
   - Teflon coating with moulded claw system
7. Safety Features
   - To prevent overheating
     - 1st protection device: Hardware stops working when printer is overheated
     - 2nd protection device: Software system stops when printer is overheated
     - 3rd protection device: Thermostat cuts off power to the lamp.
   - Safety device
     - The fuser power is cut-off when the front cover is open.
     - The overheating safety device for customer

LSU (Laser Scanning Unit)

The LSU unit is controlled by a video controller. It scans video data received from the video controller with a laser beam by using the rotation principle of the polygon mirror to create the latent image on the OPC drum. This is a core part of a laser beam printer.

The OPC drum rotates at the same speed as the paper being fed. The Phto Diode creates a HSYNC signal and sends it to the engine when the laser beam of the LSU reaches the end of each horizontal scan line. The engine detects the HSYNC signal and arranges the vertical line of the image on to paper. After detecting the HSYNC signal, the image data is sent to the LSU to set the margin on the paper. Each side of the polygon mirror represents one line of scanned data.

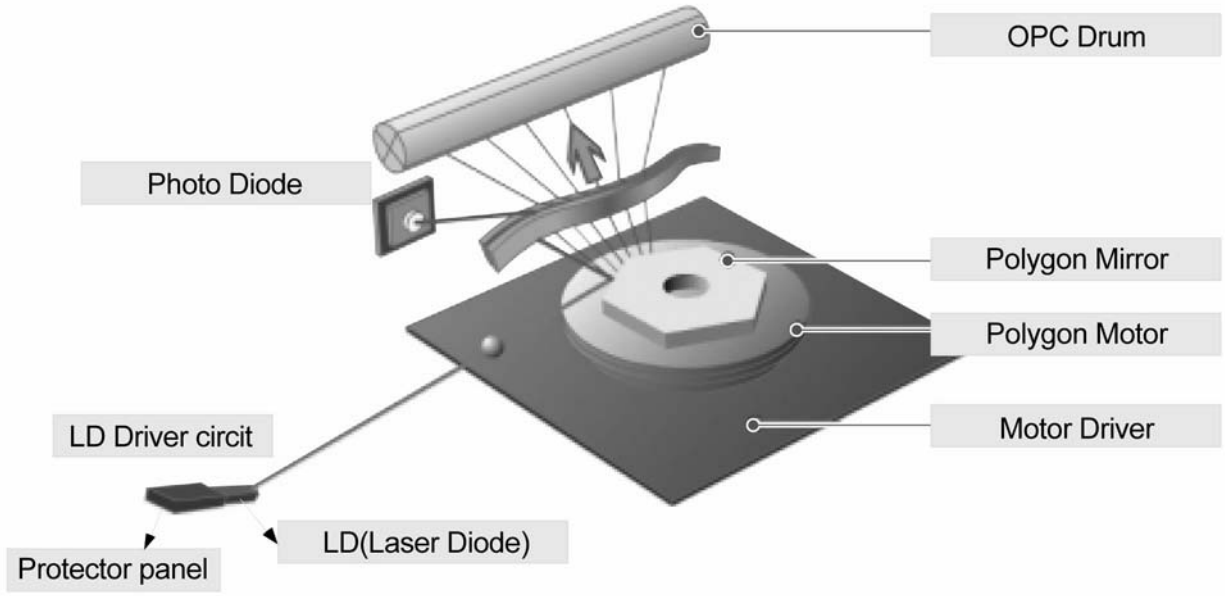


Figure 2 LSU

Toner Cartridge

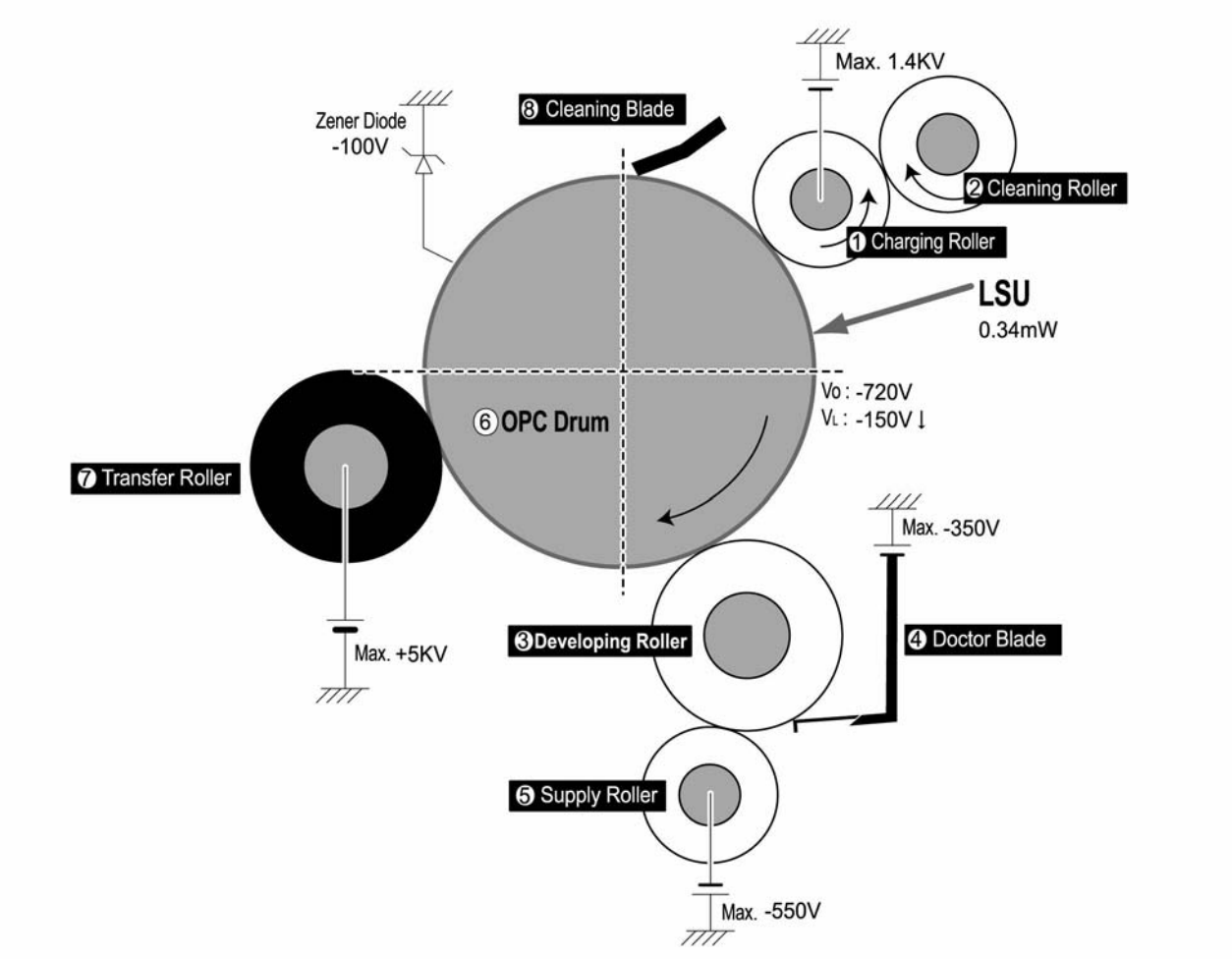


Figure 3 Toner Cartridge Layout

The OPC unit consists of an OPC drum and a charge roller, while the developer unit consists of a toner cartridge, supply roller, developing roller and blade.

- OPC Cleaning: Removes toner by using static electricity
- OPC drum protective shutter: N/A
- Classifying device for toner cartridge: ID is classified by interruption of the frame channel.

Hardware Structure and Descriptions

The printer is basically controlled by the main PBA. The Phaser 3124/B main PBA uses a Jupiter4E processor while the Phaser 3125/B and Phaser 3125/N uses a SPGP V3 processor. The processor provides integrated printing functions such as the printer video controller, laser scan unit controller, PWM controller and bi-polar stepper motor controller and has USB and IEEE 1284 parallel interface capacity.

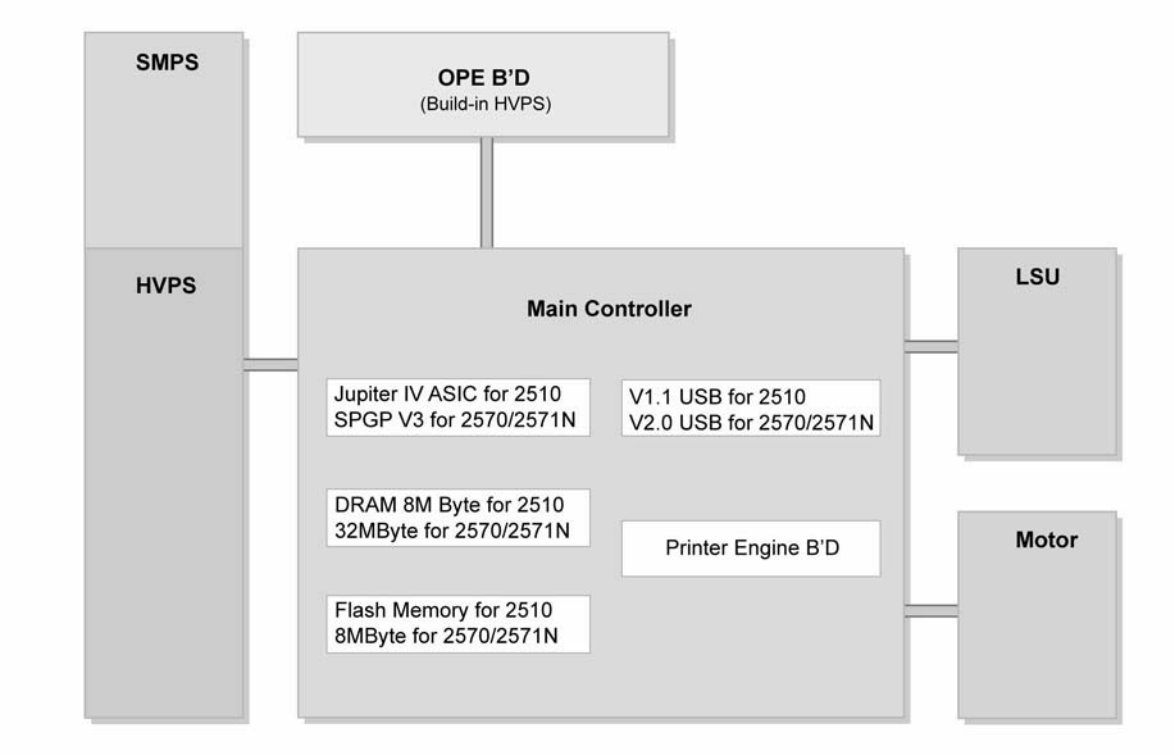


Figure 4 :Hardware Structure

Flash Memory

- Capacity
  Phaser 3124/B - 0.5MB ASIC built flash memory
  Phaser 3125/B and Phaser 3125/N : 8MB
- Access Time : 70 nsec

DRAM

- Phaser 3124/B : 8MB
- Phaser 3125/B and Phaser 3125/N : 32MB
- Access Time : 60 nsec

Jupiter 4E Specifications (Phaser 3124/B only)

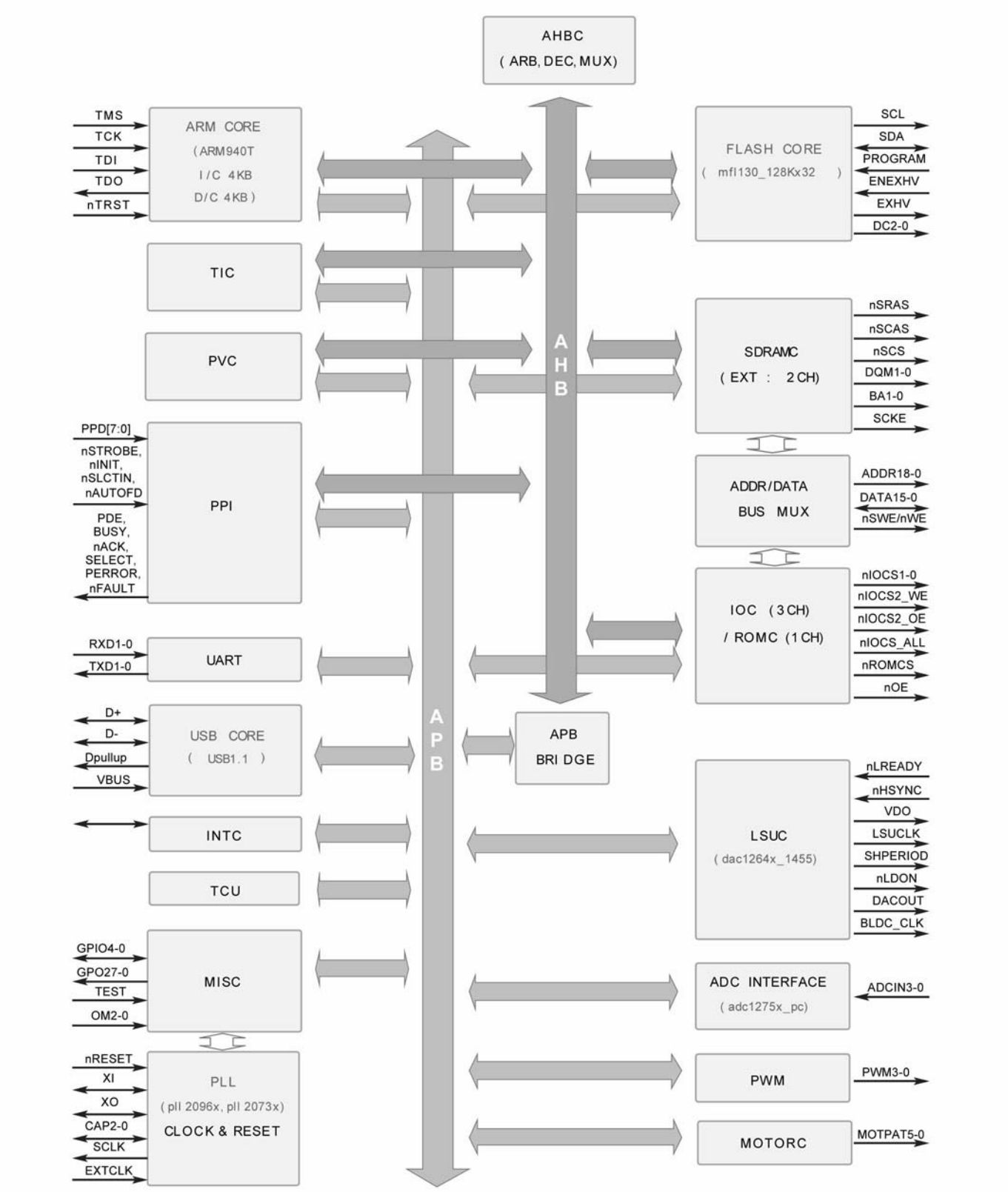


Figure 5 Jupiter4E Internal Block Diagram

The Jupiter4E is a single chip micro-controller designed for low cost laser printers.

- Single chip laser printer controller
  - GDI only
  - AMBA AHB used for high speed bus transactions between masters and slaves
  - AMBA APB used for low speed bus transactions between ARM core and peripherals
  - 3 PLLs (2 Dithered PLL and 1 General PLL)
    - i) CPU(150MHz), AHB(75MHz), APB(75MHz),
    - ii) USB(48MHz)
    - iii) PVC(59MHz)
  - 75MHz system operation
  - +1.8V power operation
  - +3.3V tolerant input and bi-directional I/Os
  - SDRAM and IO Address / Data signals multiplexing
- Integrated ARM940T 32-bit RISC embedded processor core
  - 75MHz core frequency operation
  - Harvard Architecture Cache : 4KB Instruction cache, 4KB Data cache
  - Single memory bus architecture
- Built in Flash Memory
  - 4MBits (128Kx32bits)
  - Serial programming mode using flash programmer tool
  - Internally flash memory read / write operation support
  - Programmable access timing control
- 32MB Special function register area
- Directly connected to 3 external IO banks (IOC)
  - 32 MB size in each IO bank
  - Programmable setup, access, hold timing
  - Programmable recovery time for slow devices
  - Allows to access peripheral devices such as GPIO control logic
- Directly connected to 1 external ROM bank (ROMC)
  - 32 MB size for one ROM bank
  - One external flash memory attachable.
- Directly connected to two SDRAM banks (SDRAMC)
  - Extensible architecture
  - Two external SDRAM attachable.
  - SDRAM controller supports PC-100 and PC-133 SDRAM running at 75MHz
  - Up to 32MB per bank.
  - Support for SDRAM configurations including programmable column address
  - Programmable refresh interval
- Interrupt Controller (INTC)
  - FIQ or IRQ mode operation selectable
  - Programmable interrupt Enable/Disable
- USB interface
  - Version 1.1
  - Four 128x8 FIFOs for Data transmission.
  - Interrupt based input / output interface, no DMA based interface support

USB wrapper for AHB interface
AHB bus interface

- Serial port interface (UART)
  - Programmable baud rate
  - 2 channel Independent Full Duplex UART
  - Polling, Interrupt based operation support
  - Max 16 byte FIFO to handle SIR Bit Rate Speed
- Printer video controller for LBP engines (PVC)
  - 20MHz video rate (Hummingbird 2 : letter - 21 ppm, A4 : 20ppm)
  - video data transmitted through LSU Controller
- Laser Scan Unit (LSU) controller
  - Laser Scan Unit (LSU) interface for Laser Diode turn on/off timing control
  - Sample & hold period generation.
  - Auto Power Control for laser diode with PID control method using internal 10 bits DAC.
  - LSU clock generation
  - Brushless DC motor control clock generation
- ADC interface
  - 4 channels ADC interface for analog devices such as temperature sensor.
  - Programmable ADC clock cycle.
  - Automatic or Manual AD conversion support.
  - 4 special function registers for monitoring the ADC results for 4 channels.
- PWM controller
  - 4 PWM output ports - THV, BIAS, FAN control and AC ELECTRIFICATION
- Bi-polar stepper motor controller (MOTORC)
  - Phase generation for the purpose of paper feeding
  - fixed hardware phase and current table
  - programmable phase and interval time
  - interrupt based phase change operation
- Timer
  - 3 Independent programmable timers
  - Watch Dog timer for Software Trap
- Miscellaneous
  - Mux controlled 24 GPI, 28 GPO & 5 GPIO ports .
  - Mutual exclusive GPO/GPIO ports control by the port control enable register
  - Programmable bus master priority.

SPGPv3 Specifications (Phaser 3125/B and Phaser 3125/N only)

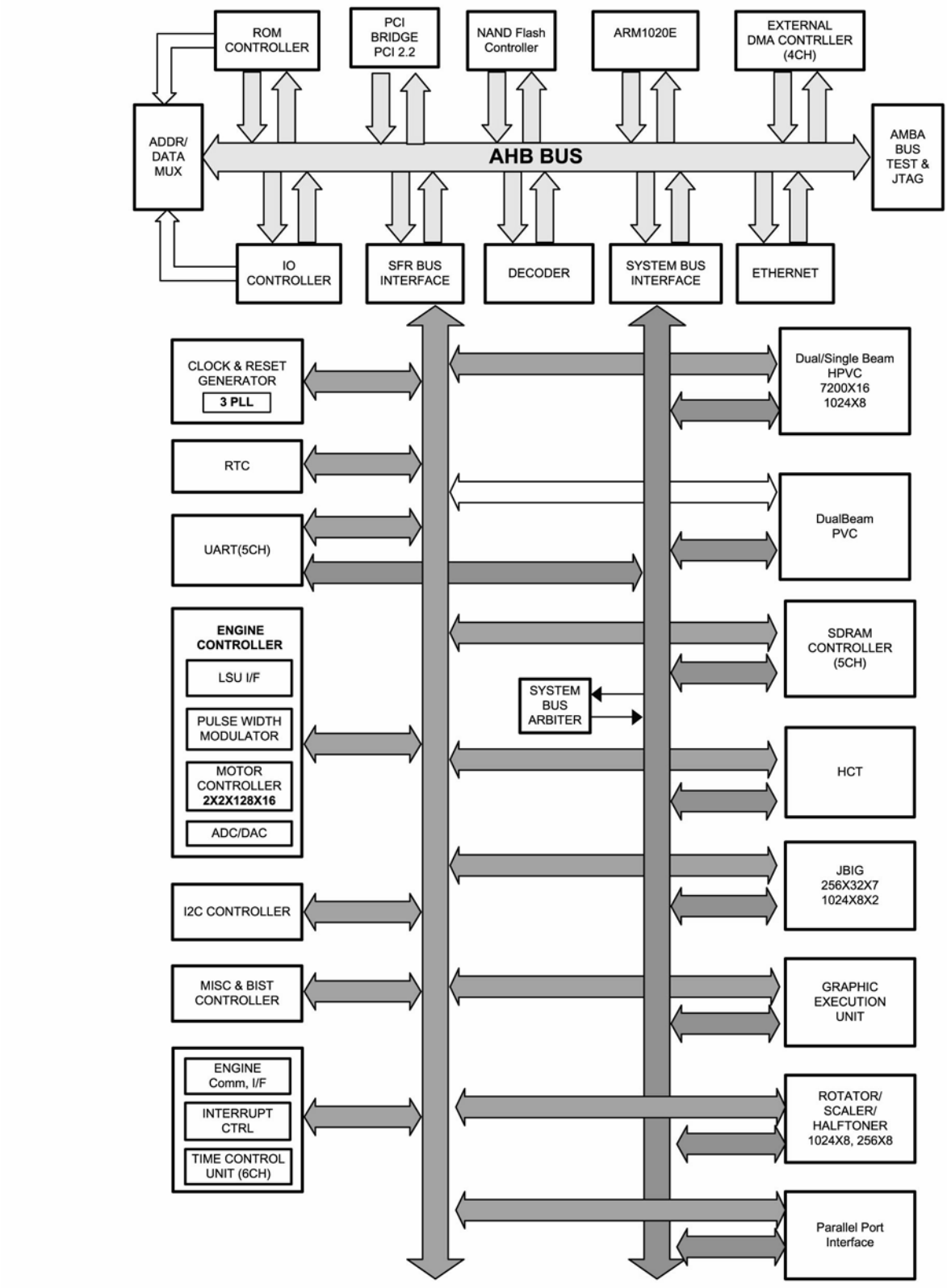


Figure 6 SPGPv3 Internal Block Diagram

- CPU Core : ARM1020E
  32KB instruction cache and 32KB data cache
- Operating Frequency
  CPU Core : over 300MHz
  System Bus : 100MHz
- SDRAMC
  32Bits Only, 100MHz
  5 Banks (Up to 128MB per Bank)
- ROMC
  4 Banks (Up to 16MB per Bank)
- IOC
  6 Banks (Up to 16MB per Bank
- DMAC
  4 Channels
- HPVC
  Dual/Single Beam
  LVDS Pad(VDO, HSYNC)
- UART
  5 Channels (1 Channels Supports DMA Operation)
- PCI Controller
  32Bits, 33/66MHz
  PCI local bus specification rev2.2 Complaint
  Host / Agent Mode (Supports 4 devices in host mode)
- NAND Flash controller
  8/16Bits, H/W EEC generation
  Auto boot mode (Using Internal SRAM, 4KB)
- MAC
  10M/100Mbps
  Full IEEE 802.3 Compatibility
- Engine Controller
  LSU interface unit
  Step Motor : 2 Channels
  PWM : 8 Channels
  ADC : 6 Channels
- I2C Controller
  I2C(S-BUS) Slave device support(I2C Version 2.1)
- RTC
  RTC Core Voltage : 3V
- PLL
  3 PLL : MAIN, PCI, PVC
- Flash Memory :
  Capacity : 8MB
  Random Access Time : 10 us (Max)
  Serial Page Access Time : 50ns (Min)
- DRAM : Capacity : 32MB (STD/MAX)
  Type : SDRAM 100MHz/133MHz, 16bit

Paper Feed Sensor

When paper passes the feed sensor actuator after paper has been fed, a signal is detected by the feed sensor and sends a signal to the CPU.

If a signal is not received by the CPU from the feed sensor after the paper has been fed, an error occurs.

Paper Empty Sensor

The paper in the cassette is detected by a paper empty sensor mounted on the HVPS while the paper empty actuator sensor and the actuator mounted to a frame. Paper senses the on/off time of the empty sensor by using CPU and informs the normal operation status and the jam occurrence status to CPU.

Cover Open Sensor

The front cover open sensor is located on the HVPS. When the front cover is open, +24V supplied to each unit (DC fan, solenoid, main motor, LSU polygon motor unit, fuser assembly, and HVPS) is interrupted.

The exit cover open sensor is located on the SMPS. When the jam cover is open, +24V supplied to each unit (DC fan, solenoid, main motor, LSU polygon motor unit, fuser assembly, and HVPS) is interrupted.

D0 bit of the CPU detects the an open cover. The D7 bit of the CPU detects the existence the toner cartridge. It informs the status to the user by switching on the red LED.

Solenoid Driving Circuit

The solenoid consists of two used for paper pick-up and MP signal. D4 bit of the CPU turns it on or off. The driving time is 300ms. The diode protects the drive TR from pulse (noise) generated by the de-energizing operation of the solenoid.

SMPS

The SMPS supplies DC power to the system.

It takes 110V/220V and produces +5V and +24V to supply power to various parts of the printer. It consists of the AMPS, which supplies DC power to drive the system, and the AC heater control, which supplies power to the fuser.

SMPS Specifications

- AC Input
  Input Rated Voltage : AC 220V ~ 240V AC 120V / AC 220V(EXP version)
  Input Voltage fluctuating range : AC 90V ~ 135V / AC 180V ~ 270V(EXP version)
  Rated Frequency : 50/60 Hz
  Frequency fluctuating range : 47 ~ 63 Hz
  Input current : Under 4.0Amps / 2.5Amps
  (But, the status when lamp is off or rated voltage is inputted/outputted)

- Rated Output Power

Table 1: Rated Output Power

Items	CH1	CH2	Remarks
Channel	+5V	+24.0V	
Connector pin	CON 3 5V PIN : 11, 12 GND PIN : 8, 9	CON 3 24V PIN : 2, 3, 4 GND PIN : 6, 7	
Rated output	+5V ± 5% (4.75 ~ 5.25V)	+24V ± 5% (20.4 ~ 27.6V)	
Max. output current	0.8A	2.5A	
Peak loading current	1.0A	2.7A	1ms
Ripple noise voltage	100mVp-p or less	500mVp-p or less	
Maximum output	4W	60W	
Peak output	5W	65W	1ms

- Consumption Power

No	Items	CH1	CH2	Remarks
1	Stand-by	1.0 A	0.4 A	AVG : 55 Wh
2	Printing	1.0 A	2.5 A	AVG : 350 Wh
3	Sleep-Mode	0.8 A	0.4 A	AVG : 10 Wh

- Power cord length : 1830 ± 50mm
- Feature
  - Insulating resistance : 100 ohms or more (at DC 500V)
  - Insulating revisiting pressure : Must be no problem within 1 min. (at 1000Vac,10mA)
  - Leaking Current : under 3.5mA
  - Rising Time : within 2 Sec
  - Falling Time : over 20 ms
  - Surge : Ring Wave 6KV-500A (Normal, Common)
- Environment Condition
  - Operating temperature range : 0 ~ 40°C
  - Maintaining temperature range : -20 ~ 40°C
  - Preserving Humidity Condition : 10% ~ 90% RH
  - Operating atmospheric pressure range : 1atm
- EMI Requirement : CISPR ,FCC, CE, MIC,
- Safety Requirement : IEC950 UL1950, CSA950, C-UL,Semko, EK, CB, CCC(CCIB), GOST, EPA, Power Save

HVPS

The HVPS creates the high voltage of THV/MHV/Supply/Dev and supplies it to the developer part for making best condition to display the image. The HVPS part takes the 24V and outputs the high voltage for THV/MHV/BIAS, and the output high voltage is supplied to the toner, OPC cartridge, and transfer roller.

- Transfer High Voltage (THV+)
  - Input Voltage : 24 V DC ° ± 15%
  - Out Voltage : Max. +1.3KV ° ± 15% (Cleaning,200 Mega Ohms)
  - Out Voltage Trigger : 6.5µA
  - Input Voltage Variation : ± 5% below (Variation 21.6V~ 26.4V)
  - Out Voltage Rising Time : 100 ms Max
  - Out Voltage Falling Time : 100 ms Max
  - Transfer Variation Voltage on Environment Variation : +650 V (Duty 10%) ~ 5KV (Duty 90%)
  - Control method on environment : THV-PWM ACTIVE, transfer active signal, of environment sensing voltage is input and get feedback current, and recalculate it to resistance.
  - Control method on transfer output voltage : It is controlled by changing its duty of THVPWM signal as follows. 10% Duty : +650V, 90% Duty : +5KV ± 5%
- Charge Voltage (MHV)
  - Input Voltage : 24 V DC ± 15%
  - Out Voltage : -1.3KV ~ ± 3.2%
  - Out Voltage Rising Time : 50 ms Max
  - Out Voltage Falling Time : 50 ms Max
  - Out Voltage Range : 30MΩ ~ 1000MΩ
  - Output Control Signal (MHV-PWM) : CPU is HV output when PWM is low
- Developing Voltage (DEV)
  - Input Voltage : 24 V DC ± 15%
  - Output Voltage: -350V ± 4.6%
  - Output Voltage fluctuation range: PWM Control
  - Input contrast of the output stability degree : ±5 % or less
  - Loading contrast : ±5 % or less
  - Output Voltage Rising Time : 50 ms Max
  - Output Voltage Falling Time : 50 ms Max
  - Output Loading range : 10MßŸ ~ 1000
  - Output Control Signal (BIAS-PWM) : the CPU output is HV output when PWM is low.

- Supply
  - Output Voltage : -550 V ± 8.6%(ZENER using, DEV)
  - Input contrast of the output stability degree : under ± 5%
  - Loading contrast : ± 5% or less
  - Output Voltage Rising Time : 50 ms Max
  - Output Voltage Falling Time : 50 ms Max
  - Output Loading range : 10 ~ 1000
  - Output Control Signal (BIAS-PWM) : the CPU is HV output when PWM is low.
- Input

Table 2: Input

Pin NO	Signal Name	Remark	Pin NO	Signal Name	Remark
1	+24VS		11	MHVPWM	
2	+24VS		12	THVREAD	
3	+24VS2		13	BIAS-PWM	
4	+24VS2		14	FAN	
5	+24VS2		15	P_EMPTY	
6	+3.3		16	CRU_DET	
7	DGND		17	KEY_IN	
8	P_EXIT		18	TONERSAVE	
9	THV_PWM		19	ERROR	
10	THVEN		20	READY	

Fuser AC Power Control

Fuser (HEAT LAMP) gets heat from AC power. The AV power controls the switch with the Triac, a semiconductor switch. The 'ON/OFF control' is operated when the gate of the Triac is turned on/off by Phototriac (insulting part).In other words, the AC control part is passive circuit, so it turns the heater on/off with taking signal from engine control part.

When the 'HEATER ON' signal is turned on at engine, the LED of PC1 (Photo Triac) takes the voltage and flashes. From the flashing light, the triac part (light receiving part) takes the voltage, and the voltage is supplied to the gate of triac and flows into the triac. As a result, the AC current flows in the heat lamp, and heat is occurred.

On the other hand, when the signal is off, the PC1 is off, the voltage is cut off at the gate of triac, the triac turns off, and then the heat lamp is turned off.

- Triac (THY1) feature :16A, 600V SWITCHING
- Phototriac coupler (PC3)
  - Turn ON if current : 16mA
  - High repetive peak off state voltage : Min 600V

Firmware Structure and Descriptions

This Engine Control Firmware is a program that controls the laser beam printer engine of the Phaser 3124 and Phaser 3125. This firmware is executed every 10msec as an interrupt routine by the main system. At stand-by state, this firmware monitors the enable print command signal from the main system. If the enable print command signal is detected, this firmware controls the engine mechanism according to the printing process and paper feeding state.

Engine Control Firmware Overview

- Engine Control Firmware is executed every 10msec by a timer from the main system. And it consists of 3 control modules.
  - Engine Main Control
  - Interface Control and Sensing
  - Unit Control Module.
- Major operations of the Engine Control Firmware are as follows:
  - Pick-Up, Feeding and Discharging of Paper Control
  - LSU Control
  - HVPS Developer Process Control
  - Fuser Temperature Control

Architecture of Engine Control Firmware

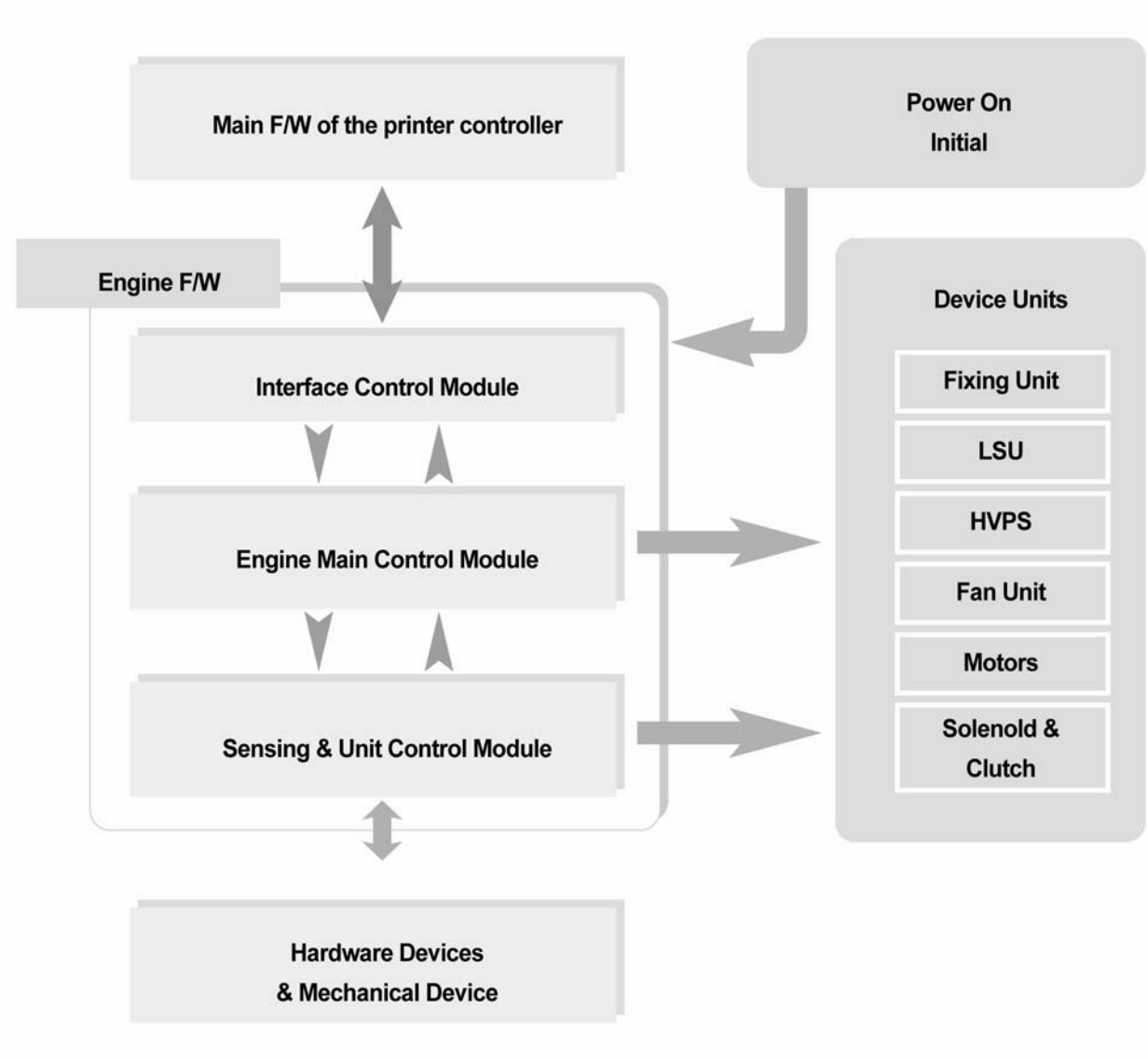


Figure 7 Architecture Diagram

Heat error compensation

- Low Heat Error
  When this error occurs, it does not indicate an error but stores the present temperature and supplies heat to the fuser. If the temperature increases after a a period of time, it goes back to its normal state. However, if no temperature change is detected, an error will be flagged.
- Over Heat Error
  When this error occurs, it does not indicate an error but stores the present temperature and cuts heat to the fuser. If the temperature decreases after a a period of time, it goes back to its normal state. However, if no temperature change is detected, an error will be flagged.

Engine Interface Module Design

Engine Interface Module communicates with the main system in order to receive the command from main system and to transmit the present engine status for the requested status. There are two sub functions. One is a function to receive the command from the main system. The other is a function that informs the main system of the current engine status for the requested item.

Engine Sensing and Unit Control Module Design

Engine Sensing & Unit Control Module consists of 4 sub-functions. The first function is an ADC function that reads the ADC values of the temperature of the fixing unit. The second one is a fixing unit control function. This function regulates the temperature of the fixing unit within a fixed range to be set by the paper type and the number of pages to print out. The third one is a fan control function that controls the fan unit. And the last one sets the flag that describes the present status of each sensor.

Firmware Architecture

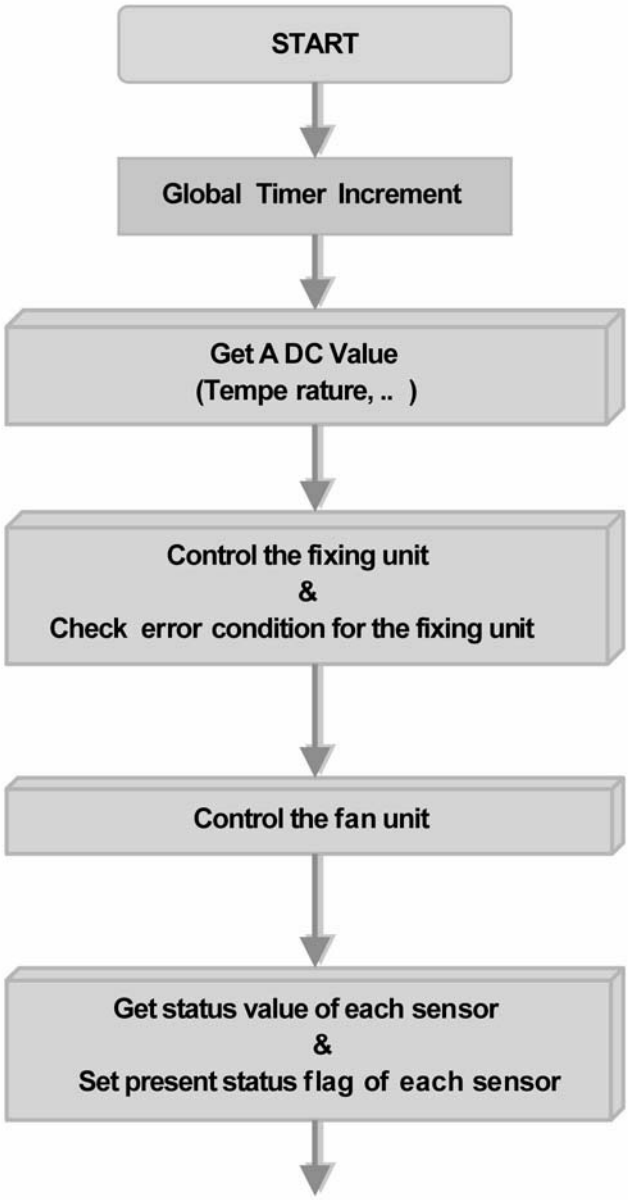


Figure 8

GP 3 Control Panel

OPE Panel

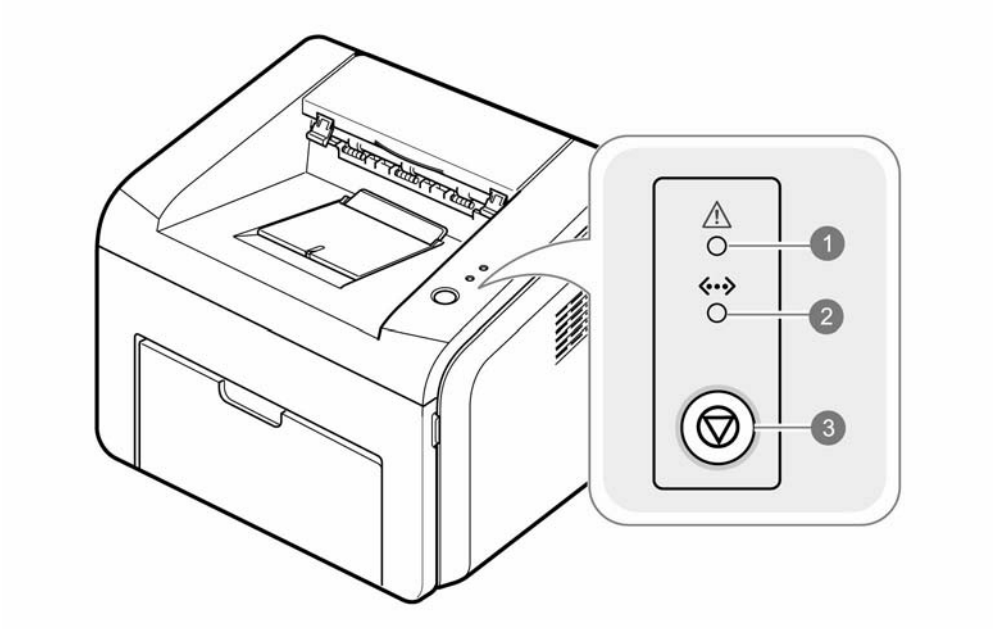


Table 1: Cancel Button

1	Error LED	Indicates an error on the printer
2	Online LED	Indicates the status of the printer
3	Online key	Cancels a print job. Allows the printer to pick up media from the bypass tray. Prints a configuration page.

Online Key

Table 1: Online Key

Item	Description
Printing a demo page	In Ready mode, press and hold the button for 2 seconds until the error LED and online LED blinks slowly, then release.
Printing a configuration page and menu map (Phaser 3125 only)	In Ready mode, press and hold the button for 5 seconds until the online LED blinks at a faster rate.
Manual feeding	After loading the bypass tray, press the button to feed the loaded media into the printer. ***Note:*** *When feeding from the bypass tray, ensure the 'Manual Feed for Source' option is selected from the software application.*

Table 1: Online Key

Item	Description
Cancelling print job	Press the button during printing to cancel the job. The online LED and error LED will blink while the print job is being cleared from the printer memory and computer. The printer will then return to Ready mode. The time taken to cancel a print job depends on the size. ***Note:*** *A print job cannot be cancelled while in Manual Feed mode.*

GP 4 Consumables and Replacement Parts

The cycle period outlined below is a general guideline for maintenance.
The example list is for an average usage of 50 pages per day.
Environmental conditions and actual use will vary these factors.
The cycle period given below is for reference only.

COMPONENT	REPLACEMENT CYCLE
Pick-up Roller	50,000 Pages
Transfer Roller	50,000 Pages
Fuser	50,000 Pages
Toner Cartridge	3000 Pages (Sales), 1000 Pages (Initial)

GP 5 Printer Settings Utility

The Printer Settings Utility enables the customer to select various printing preferences.

To enter Printer Settings Utility:

- Click on Start > All Programs > 'Xerox Phaser 3125' or 'Xerox Phaser 3124' > Printer Settings Utility.
- When the program has loaded, click on the item you want to change the settings or values.
- When all changes have been made, click Apply, then Exit.
- If you wish to revert the printer to it's original settings, click Printer Default.

Settings

Information

This option allows the user to make prints of demo pages and configuration pages.

Setting

This option allows the user to adjust printer settings such as power save settings, auto continue settings, altitude adjustments, timeout settings and emulation type.

Layout

This option allows the user to select different types of copying layouts such as orientation and paper source.

Graphic

This option allows the user to adjust the print quality.

Emulation (Phaser 3124 is a GDI printer only)

This option allows the user to change the printer language settings.

Network (Phaser 3125/N only)

This option allows the user to change the network settings.

Refer to Table 1 for the Printer Settings Utility map.

Table 1: Printer Settings Utility

Level 1	Level 2	Level 3	Level 4	Level 5
Information	Print Configuration Page	Print		
	Print Demo Page	Print		
Setting	Power Save	5 / 10 / 15 / 30 / 60 / 120 min		
	Auto Continue	Off / On		
	Altitude Adj.	Plain / High		
	Auto CR	LF / LF+CR		
	Job Timeout	0-1800		
	Emulation Type	Auto / PCL / PostScript / EPSON / IBM		

Table 1: Printer Settings Utility

Level 1	Level 2	Level 3	Level 4	Level 5
Layout	Orientation	Portrait / Landscape		
	Paper Size	Letter / Legal / A4 / Executive / JIS B5 / ISO B5 / No. 10 Envelope / Monarch Envelope / DL Envelope / C5 Envelope / C6 Envelope / Folio / A5 / A6 / Custom Paper / Oficio		
	Paper Type	Plain Paper / Thick Paper / Thin Paper / Bond Paper / Color Paper / Card Stock / Labels / Transparency / Envelope / Recycled / Preprinted / Cotton / Archive		
	Paper Source	Auto / Manual Feed		
Graphic	Resolution	600dpi-Normal		
		1200dpi - Best		
	Darkness	Light / Normal / Dark		
	Image Enhance	Normal / Text Enhance		
Emulation (3125 series only)	Emulation Setting	PCL	Setting	Type Face
				Symbol Set
				Lines
				Pitch
				Point Size
				Courier
		PostScript	Setting	Print Postscript Error
		EPSON / IBM	Setting	Font
				Character Set
				Character Table
				Pitch
				LPI
				Auto Wrap
Network (3125/N only)	Configuration Network	TCP/IP	BOOTP	
			DHCP	
			Static	IP Address
				Subnetmask
				Gateway
	Print Network Configuration	Print		

GP 6 Clearing Paper Jams

If a paper jam occurs, the Online/Error LED on the control panel turns red. Find and remove the jammed paper.

In the Paper Exit Area

1. Open and close the front cover. The jammed paper is automatically ejected from the printer.
2. Gently pull the jammed paper out of the output tray, Figure 1.

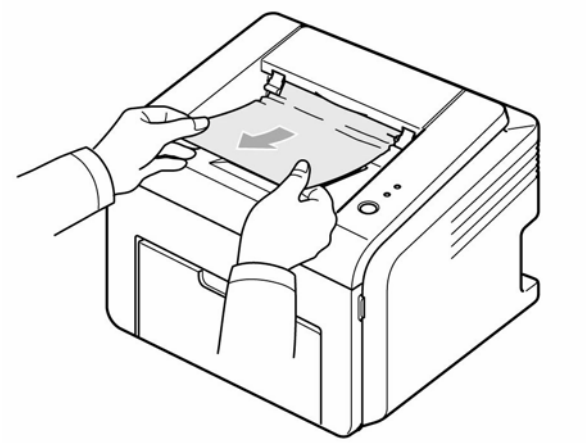


Figure 1

If you do not see the jammed paper or if there is any resistance when you pull, stop pulling and go to the next step.

3. Open the exit cover, PL 1 and fuser dummy, PL 3, Figure 2.

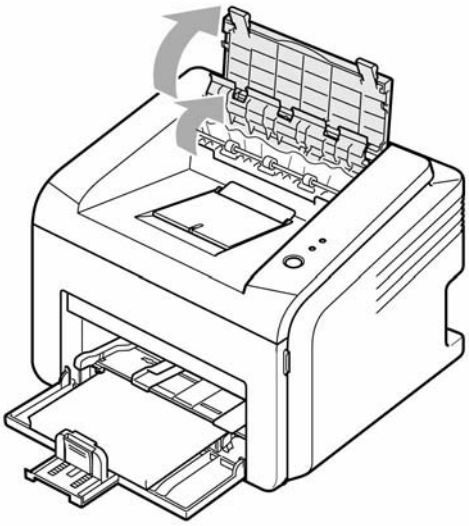


Figure 2

4. Loosen the jammed paper if it is caught in the heat roller, PL 3. Gently pull the jammed paper out, Figure 3.

CAUTION:

Do not touch the fuser while it is hot.

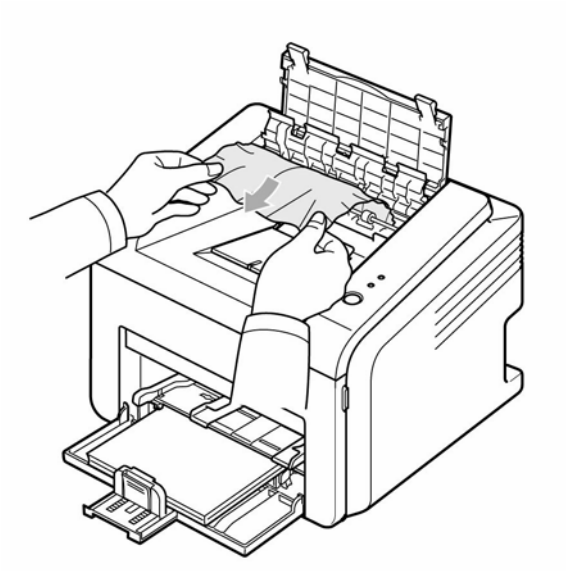


Figure 3

5. Close the fuser dummy, PL 3 and exit cover, PL 1. Printing automatically resumes.

In the standard tray

1. Remove the jammed paper by gently pulling it straight out. Make sure that all of the paper is properly aligned in the standard tray, Figure 4.

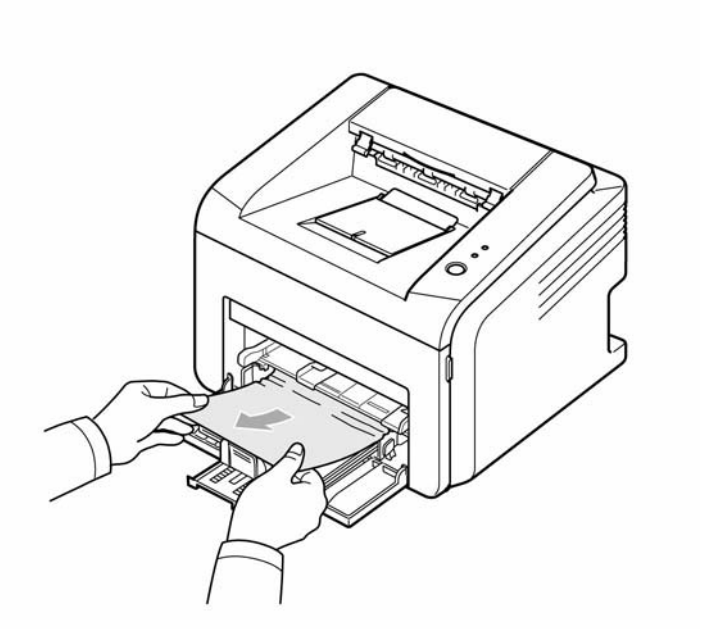


Figure 4

If the paper does not move when you pull, or if you do not see the paper in this area, check the fuser area around the toner cartridge, PL 1.

2. Open and close the front cover, PL 1 to resume printing the document from failed pages.

In the manual tray

1. Remove the jammed paper in the manual tray, PL 1 by gently pulling it straight out, Figure 5.

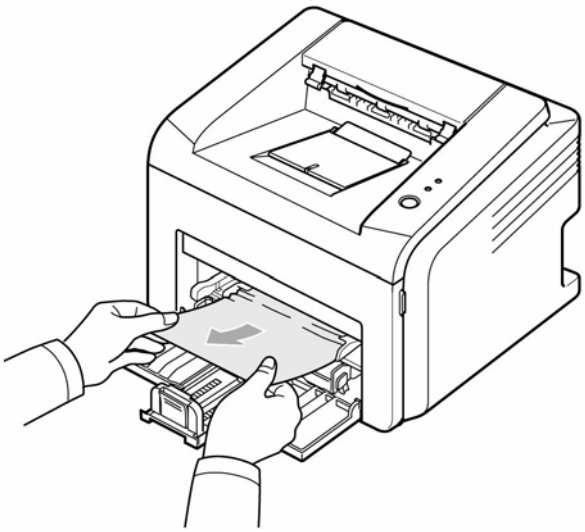


Figure 5

If the paper does not move when you pull, or if you do not see the paper in this area, check the fuser area around the toner cartridge PL 1.

2. Open and close the front cover, PL 1 to resume printing the document from failed pages.

Around the Toner Cartridge

CAUTION:

Do not touch the fuser while it is hot.

1. Open the front cover, PL 1 and pull the toner cartridge, PL 1 out, Figure 6.

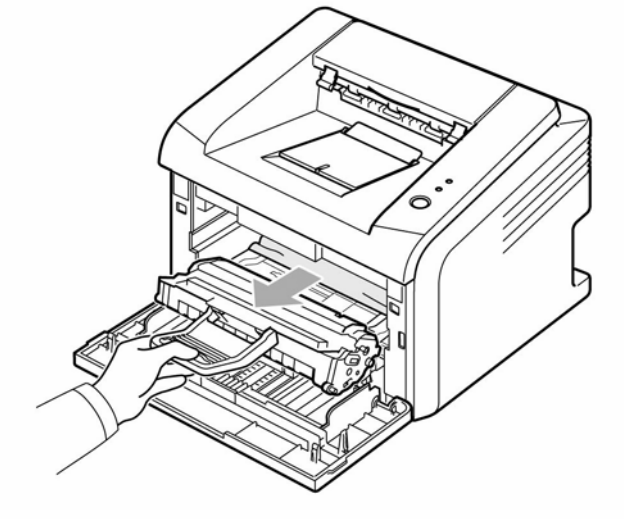


Figure 6

Note: *Prevent exposing the toner cartridge to light. If necessary, store the toner cartridge in a black bag.*

2. If necessary, pull the manual tray, PL 1 out.
3. Remove the jammed paper by gently pulling it out, Figure 7. If you do not see the jammed paper or if there is any resistance removing the paper, stop pulling and go to the paper exit area.

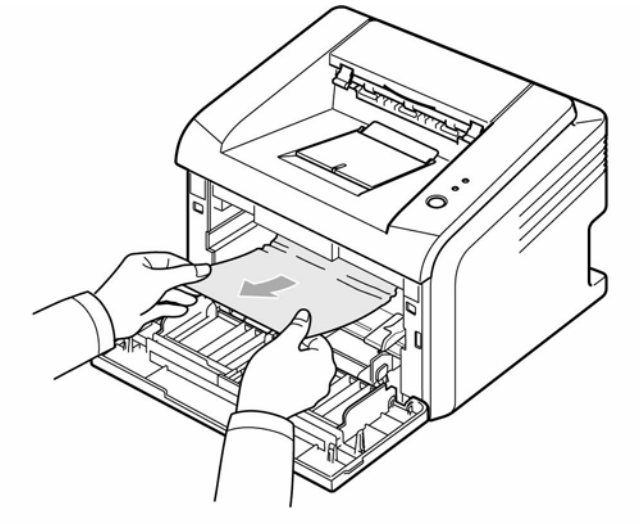


Figure 7

4. If necessary, re-insert the manual tray, PL 1.
5. Replace the toner cartridge, PL 1 and close the front cover, PL 1. Printing automatically resumes.

Tips to Avoid Paper Jams

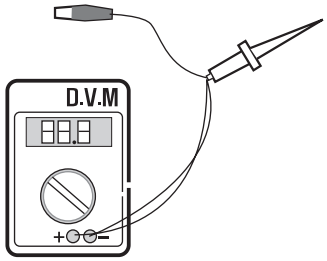
By selecting the correct paper types, most paper jams can be avoided.

- Ensure the front cover, PL 1 is not opened during a print job.
- Ensure that the adjustable guides are positioned correctly.
- Do not overload the tray, PL 1.
- Do not remove the paper from the tray while printing.
- Flex, fan and straighten the paper before loading.
- Do not use creased, damp or highly curled paper.
- Do not mix paper types in the input tray.
- Use only recommended print media.
- Ensure that the recommended print side is facing up when loading paper into the input tray.

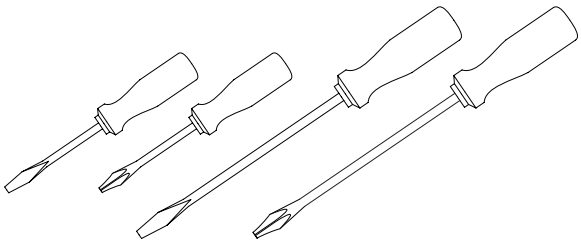
GP 7 Tools

The following tools are recommended.

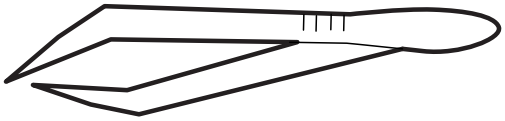
DVM (Digital Volt Meter)
Standard: Indicates more than 3 digits.



Screwdriver
Standard: Slotted and Philips (M3 long, M3 short, M2 long, M2 short).

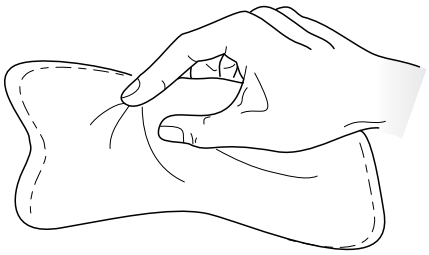


Tweezers
Standard: For general home use.

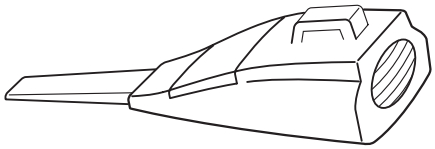


Cotton Swab
Standard: For general home use.

Cleaning Equipment
Standard: An IPA (Isopropyl Alcohol) dry wipe tissue or a gentle neutral detergent and lint-free cloth.

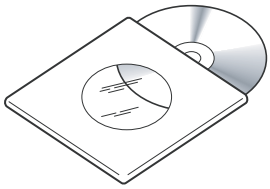


Vacuum Cleaner



Spring Hook
Standard: For general use

Software (Driver) installation CD ROM



GP 8 Acronyms and Abbreviations

The table below explains the abbreviations and acronyms used in this service manual. Where abbreviations or acronyms are used in the text please refer to this table.

Table 1: Acronyms and Abbreviations

Abbreviations	Explanation
AP	Access Point
AC	Alternating Current
APC	Auto Power Control
ASIC	Application Specific Integrated Circuit
BIOS	Basic Input Output System
BLDC	Brush-less Direct Current
CN	connector
CON	connector
CPU	Central Processing Unit
dB	decibel
dbA	decibel A
dBM	decibel milliwatt
DC	direct current
DCU	Diagnostic Control Unit
DPI	Dot Per Inch
DRAM	Dynamic Random Access Memory
DVM	Digital Voltmeter
ECP	Enhanced Capability Port
EDC	Embedded Diagnostic control
EEPROM	Electronically Erasable Programmable Read Only Memory
EMI	Electro Magnetic Interference
EP	electrophotographic
EPP	Enhanced Parallel Port
FPOT	First Printout Time
F/W	firmware
GDI	graphics device interface
GND	ground
HBP	Host Based Printing
HDD	Hard Disk Drive
H/H	High temperature and high humidity
HV	high voltage
HVPS	High Voltage Power Supply
I/F	interface
I/O	Input and Output
IC	integrated circuit
IDE	Intelligent Drive electronics or Embedded Drive Electronics
IEEE	Institute of Electrical and Electronics Engineers. Inc.
IPA	Isopropyl Alcohol
IPM	Images Per Minute

Table 1: Acronyms and Abbreviations

Abbreviations	Explanation
LAN	local area network
lb	pound(s)
LBP	Laser Beam Printer
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LIU	Line Interface Unit
L/L	Low temperature and low humidity
LSU	Laser Scanning Unit
MB	megabyte
MHz	megahertz
MP	Multi Purpose
NIC	Network Interface Card
N/N	Normal temperature and normal humidity
NVRAM	nonvolatile random access memory
OPC	Organic Photo Conductor
OPE	Operate Panel Equipment
PBA	Printed Board Assembly
PCL	Printer Command Language, Printer Control Language
PDL	Page Description Language
PPM	Page Per Minute
PPS	Pulse Per Second
PS	Post Script
PTL	Pre-Transfer Lamp
PWM	Pulse Width Modulation
Q-PID	Quick Printer Initiating Device
Qt'y	quantity
RAM	Random Access Memory
ROM	Read Only Memory
SCF	Second Cassette Feeder
SMPS	Switching Mode Power Supply
Spool	Simultaneous Peripheral Operation Online
SW	switch
sync	synchronous or synchronization
USB	Universal Serial Bus
WECA	Wireless Ethernet Compatibility Alliance

GP 9 Selecting Printer Locations

Leave enough room to open the printer trays, covers, and allow for proper ventilation.
Provide the proper environment:

- A firm, level surface
- Away from the direct airflow of air conditioners, heaters, or ventilators
- Free of extreme fluctuations of temperature, sunlight, or humidity
- Clean, dry, and free of dust

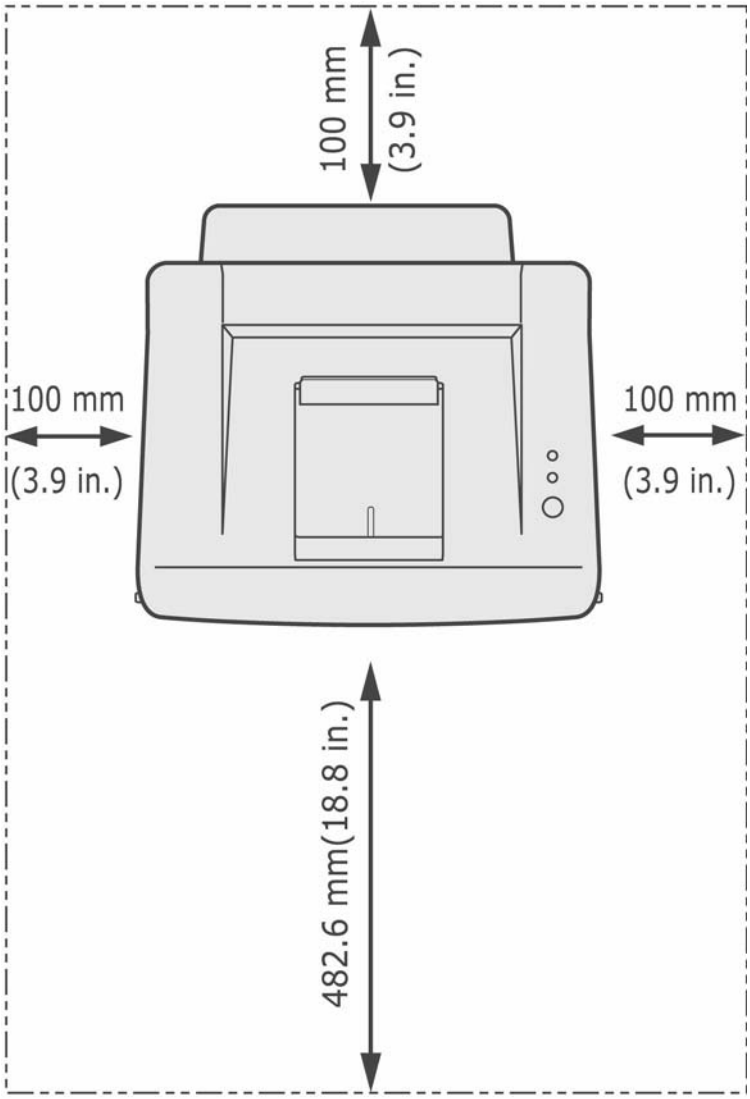


Figure 1

GP 10 Restriction of Hazardous Substances (RoHS)

Purpose

To give information on the RoHS Directive.
The RoHS Directive restricts the use of certain hazardous substances in electrical and electronic equipment. It applies to equipment placed in the European Union (EU) market. The directive takes effect from 1st July 2006.

Note: *Currently these restrictions are only for the European Union (EU) market and some associated countries. For more information go to www.Xerox.com.*

The hazardous substances are:
- Lead (Pb)
- Mercury (Hg)
- Cadmium (Cd)
- Hexavalent Chromium (Cr 6+, Cr [VI])
- Polybrominated Diphenyl Ethers (PBDE's)
- Polybrominated Biphenyls (PBB's)

Identification of a RoHS Compliant Machine

Xerox will maintain a central list of RoHS compliant machines.

This general procedure is for information only. All Phaser 3124/B, Phaser 3125/B and Phaser 3125/N machines are RoHS compliant.

GP 11 Sample Test Pattern

The sample pattern shown below is the standard test pattern used in the factory.

The life of the print cartridge, developer cartridge and printing speed are measured with the pattern shown below of 5% area coverage. The pattern is shown at approximately 70% of actual size.

A4 ISO 19752 Standard Pattern

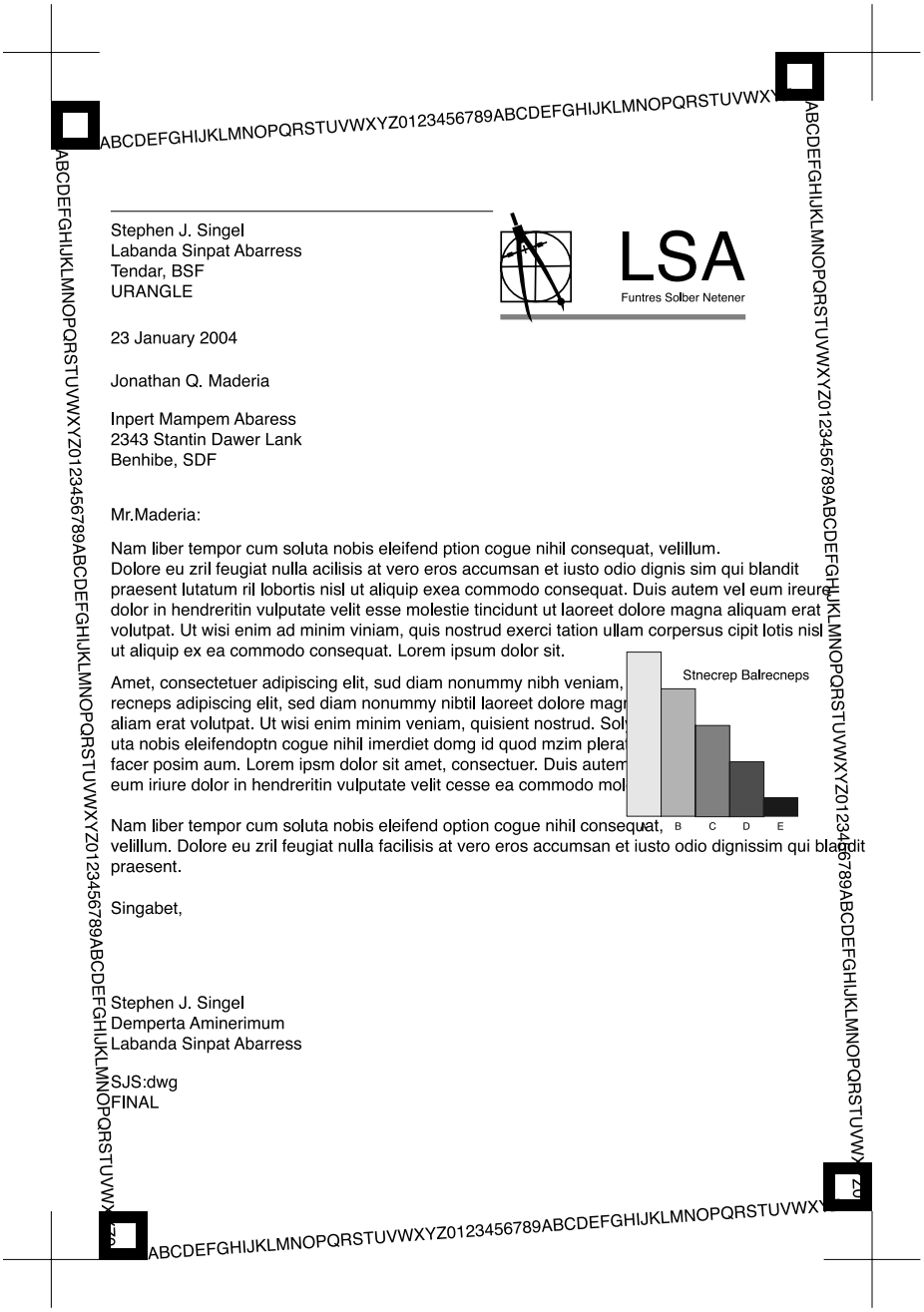
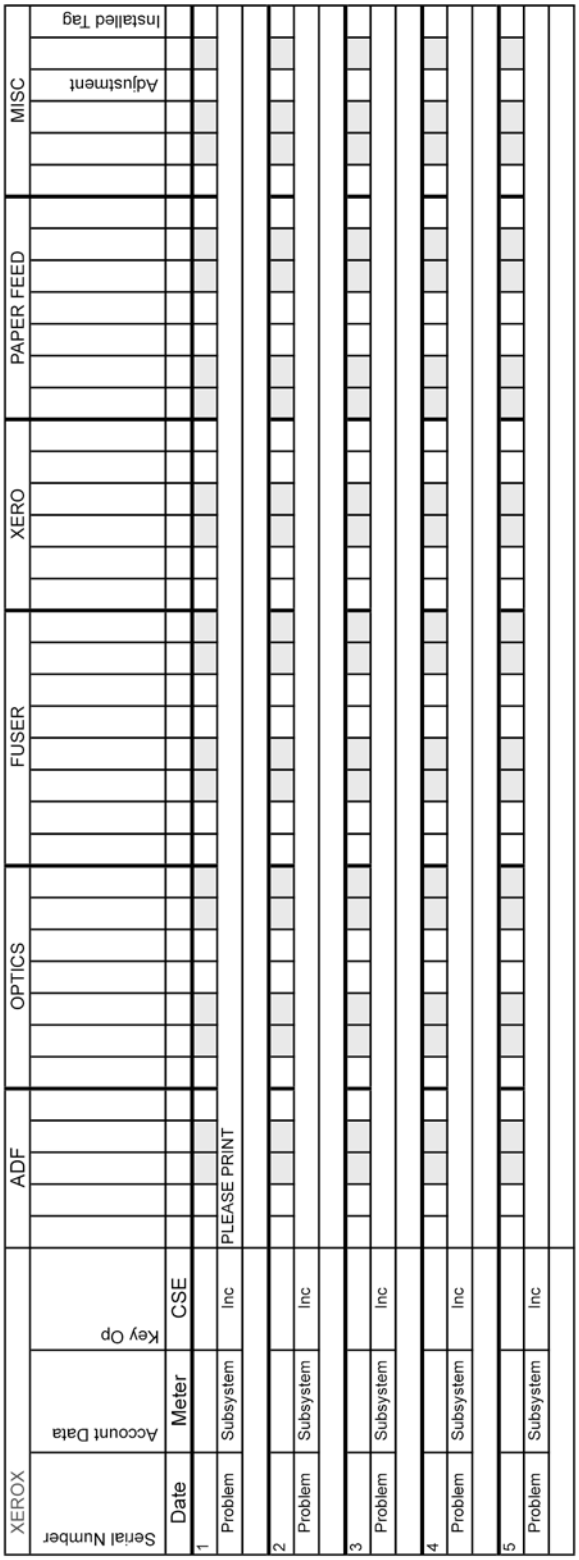


Figure 1 A4 ISO 19752 Standard Pattern

GP 12 Service Log

Service Log

Use the service log to record all service procedures.



7. Wiring Data

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WD 1 PJ Locations

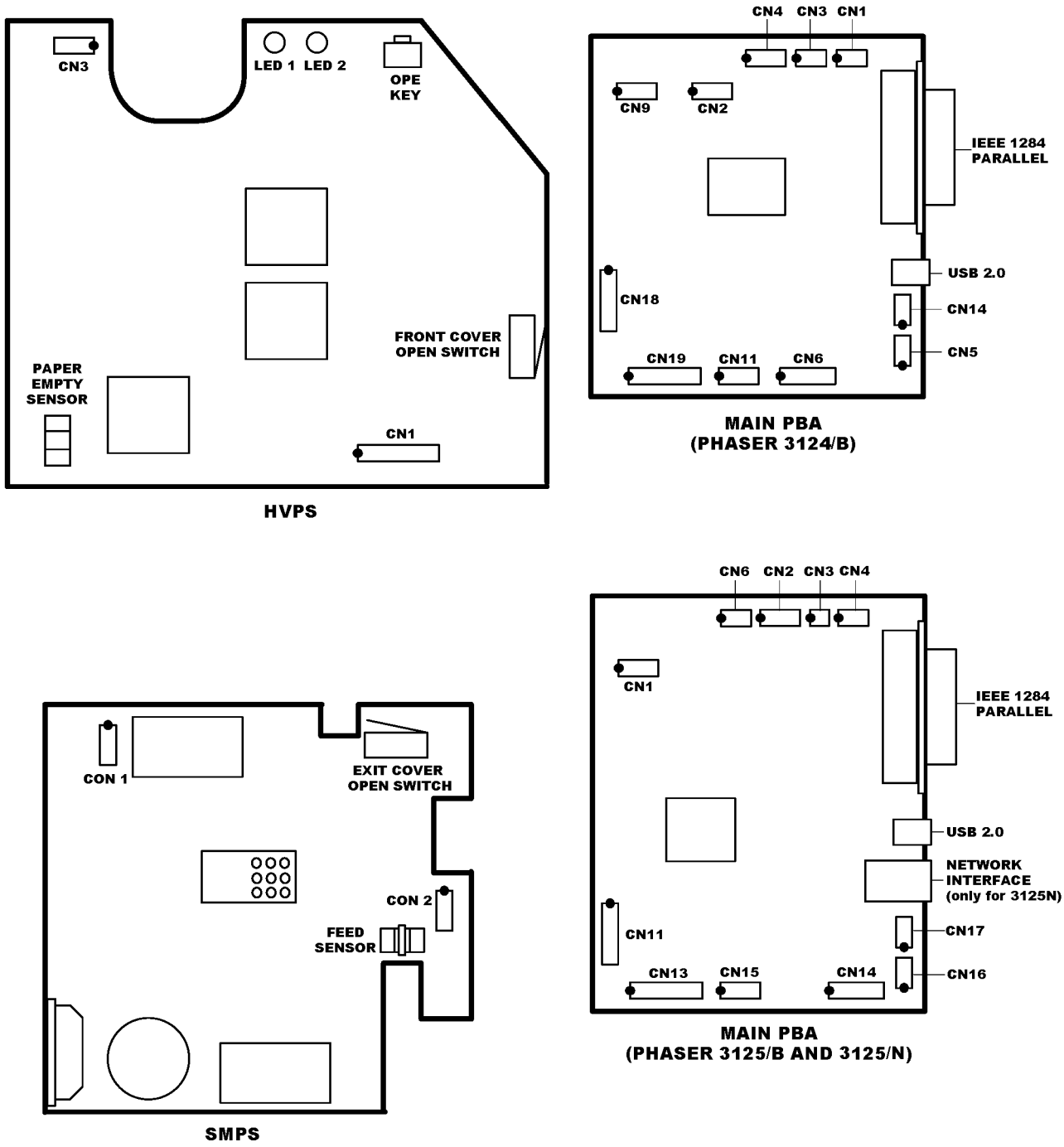

Figure 1

WD 2 Connection Diagram Phaser 3124 (1/2)

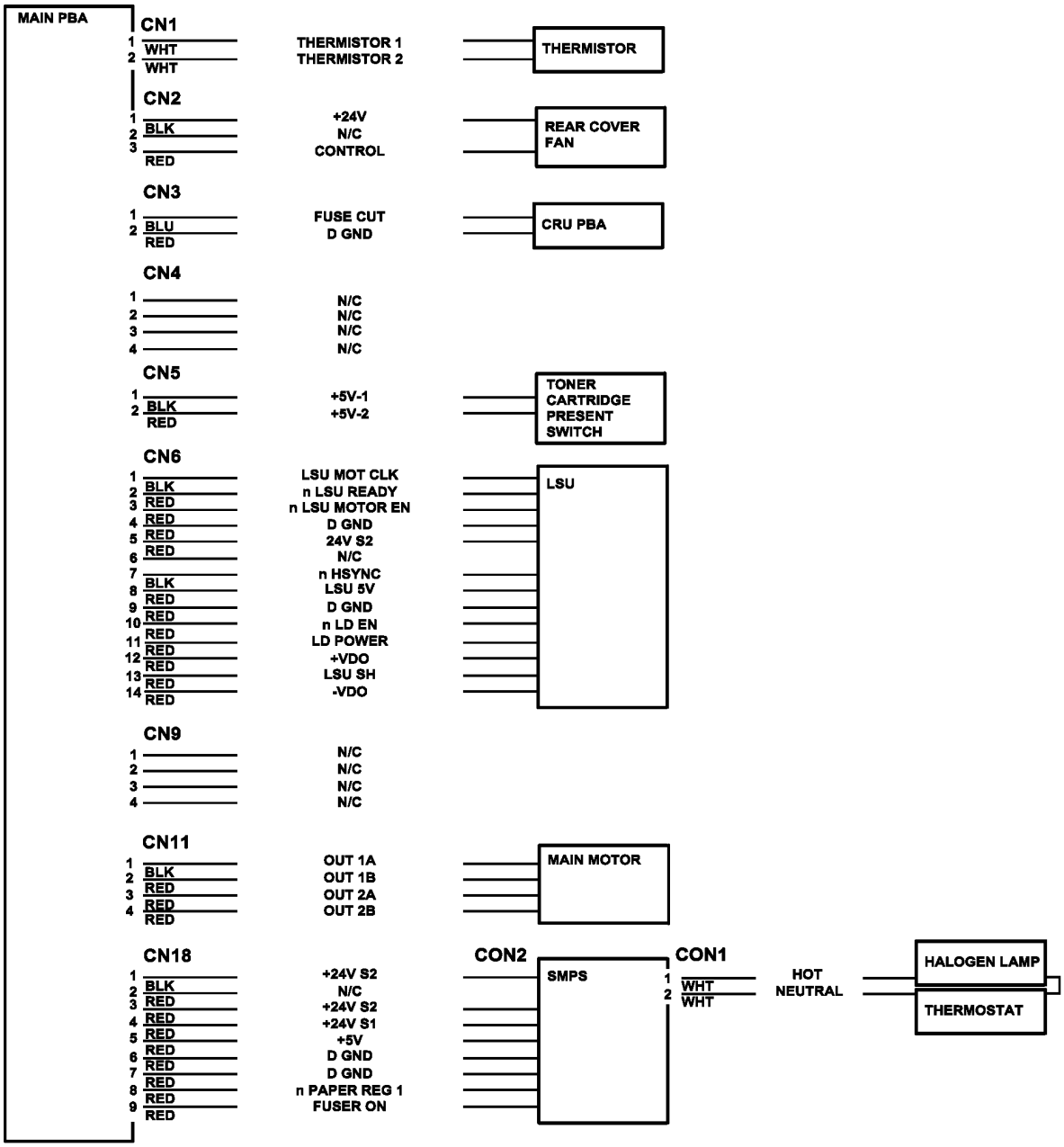

Figure 2

WD 3 Connection Diagram Phaser 3124 (2/2)

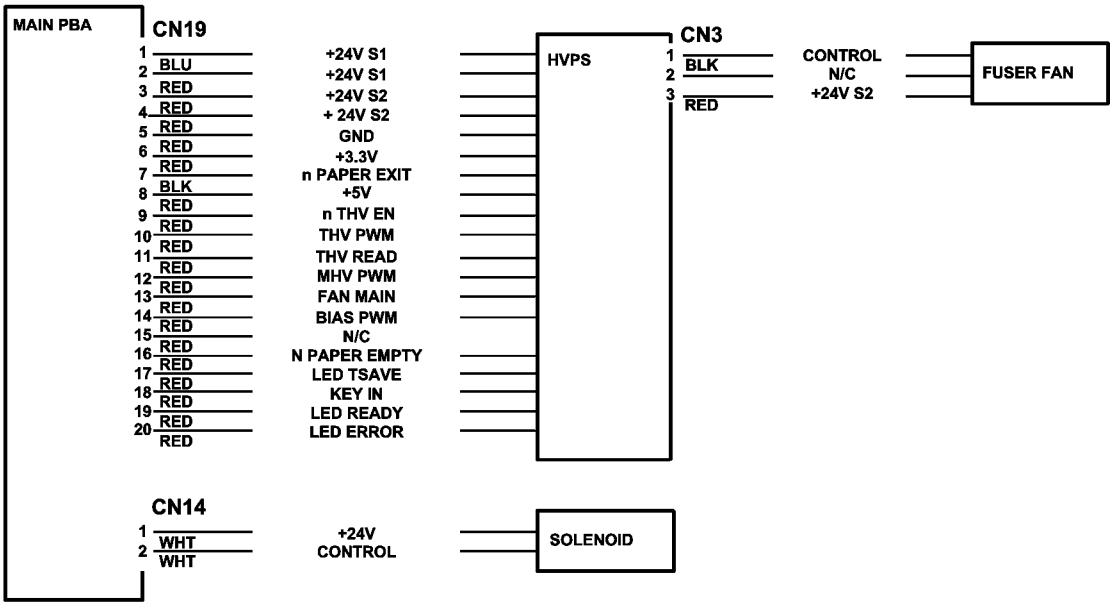

Figure 3

WD 4 Connection Diagram Phaser 3125 (2/2)

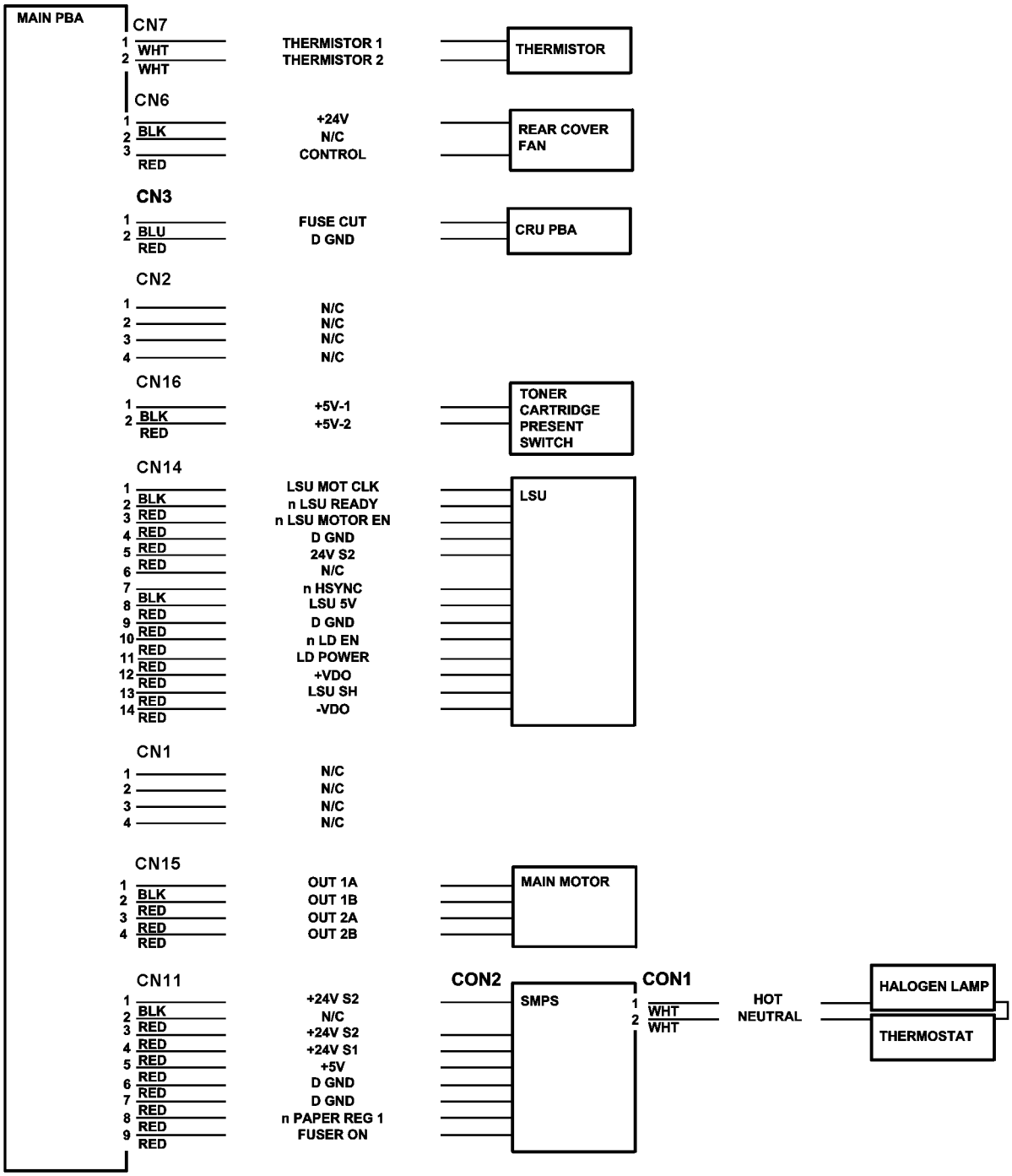

Figure 4

WD 5 Connection Diagram Phaser 3125 (2/2)

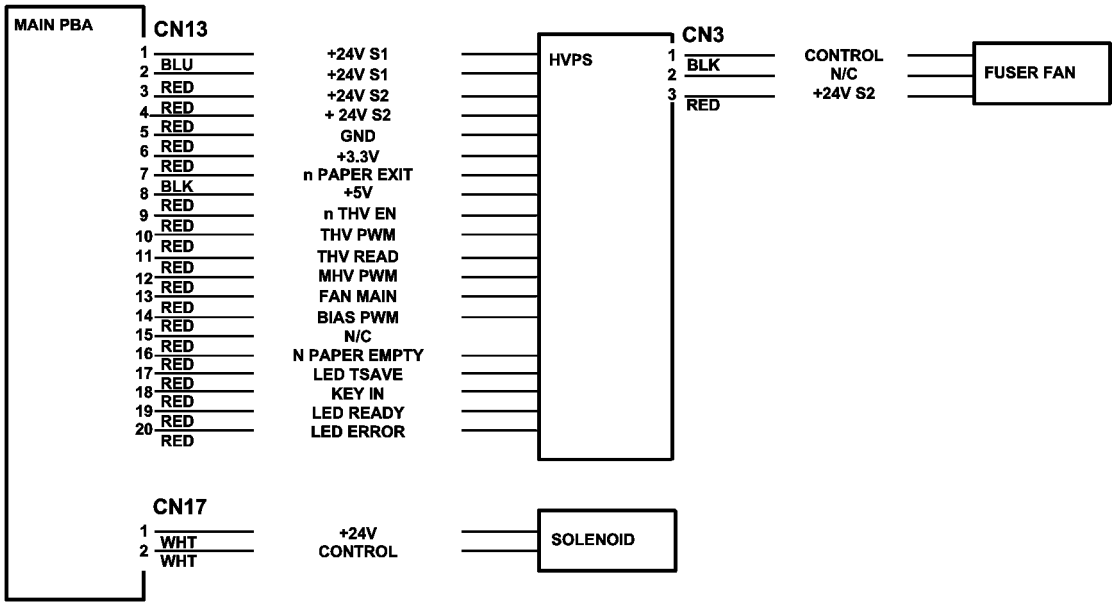

Figure 5

WD 6 Phaser 3124 Main PBA (1/5)

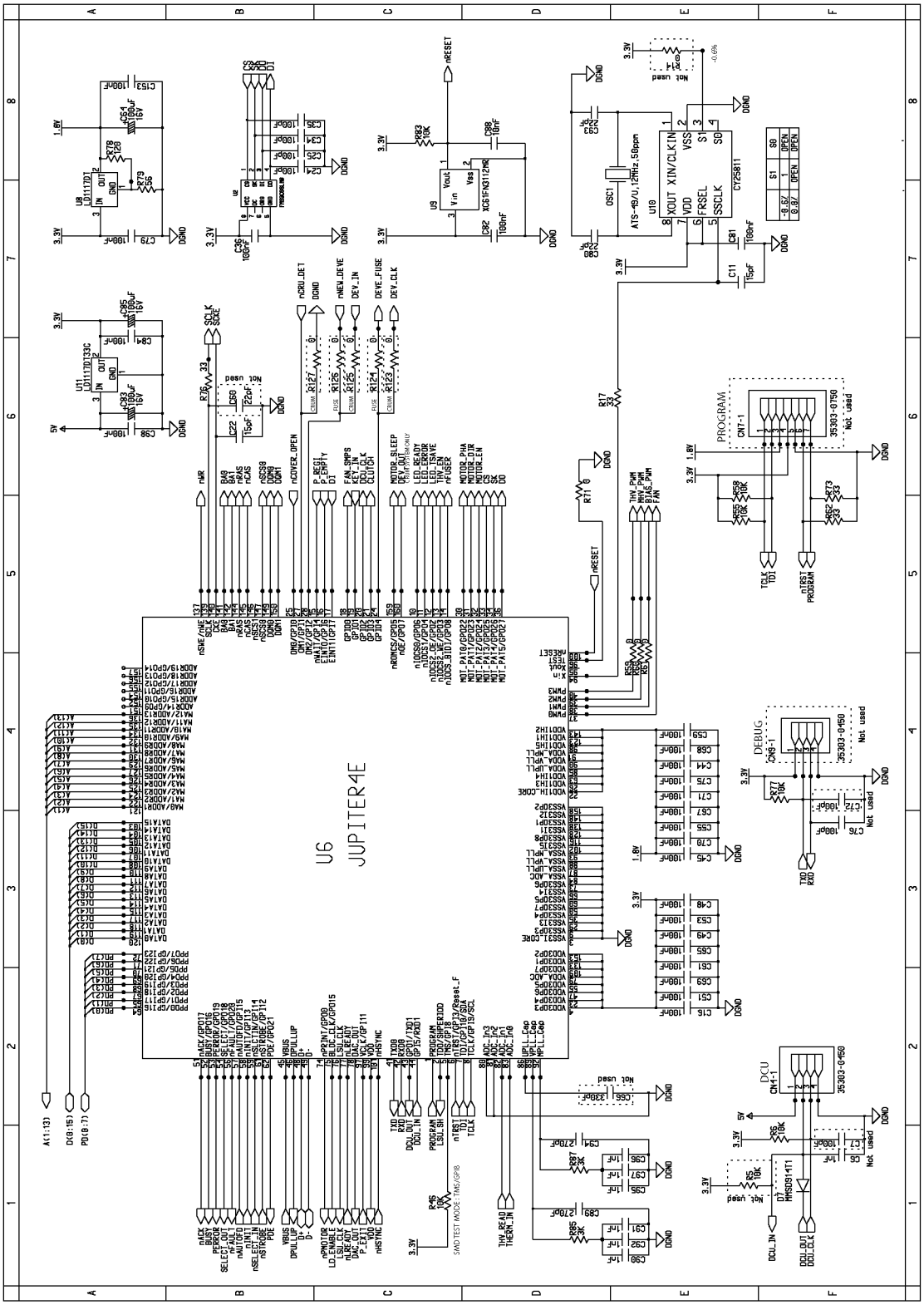

Figure 6

WD 7 Phaser 3124 Main PBA (2/5)

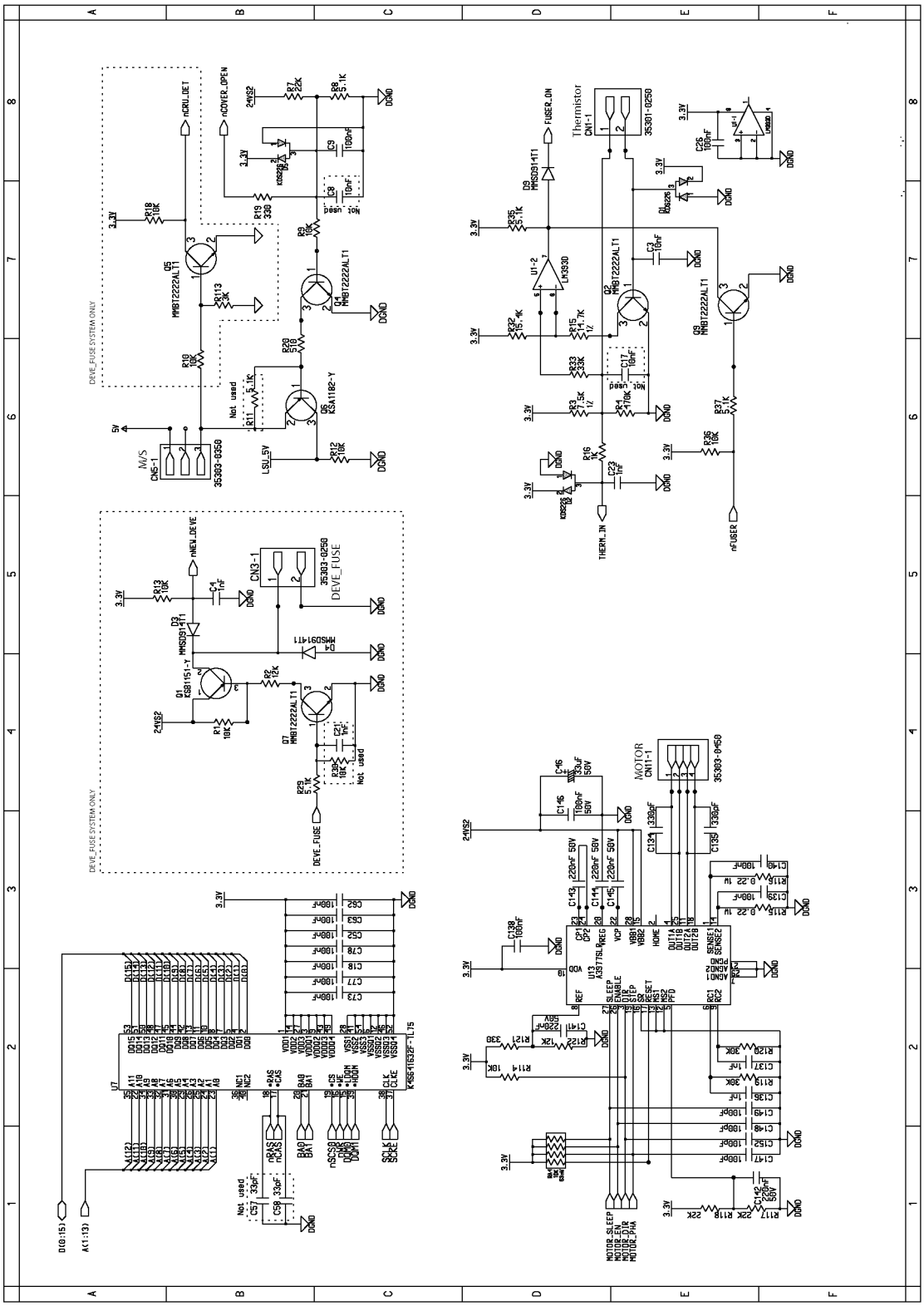

Figure 7

WD 8 Phaser 3124 Main PBA (3/5)

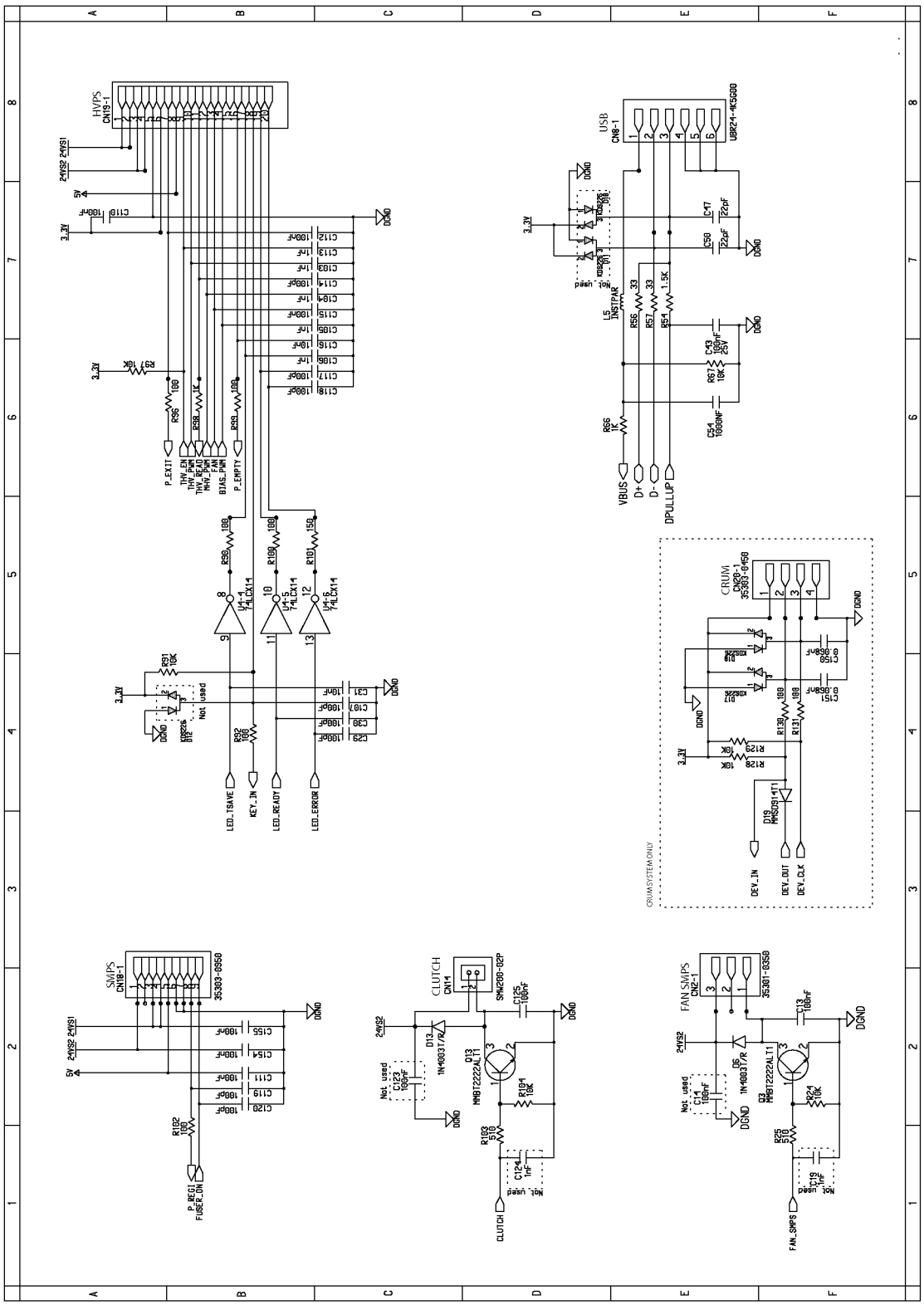

Figure 8

WD 9 Phaser 3124 Main PBA (4/5)

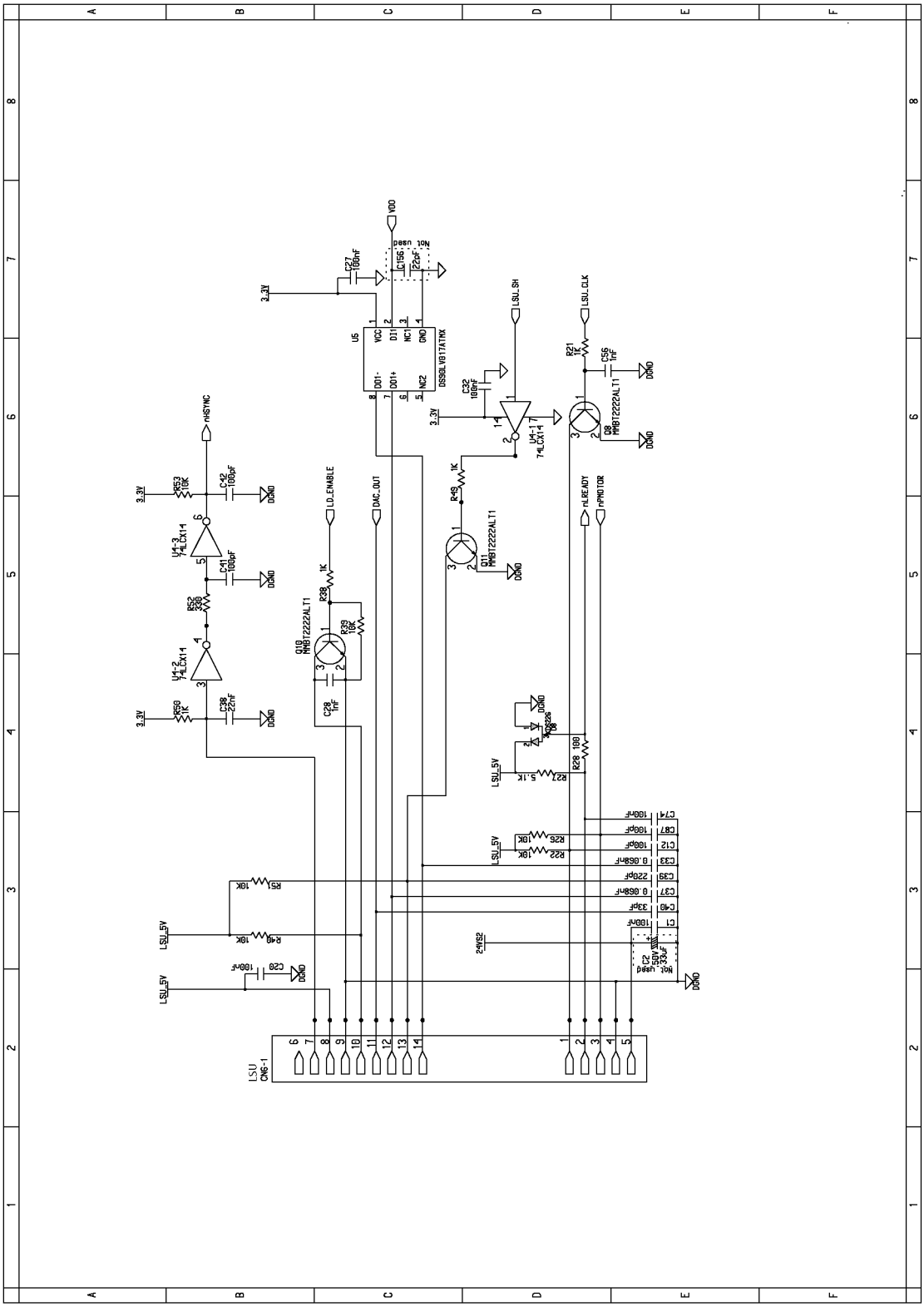

Figure 9

WD 10 Phaser 3124 Main PBA (5/5)

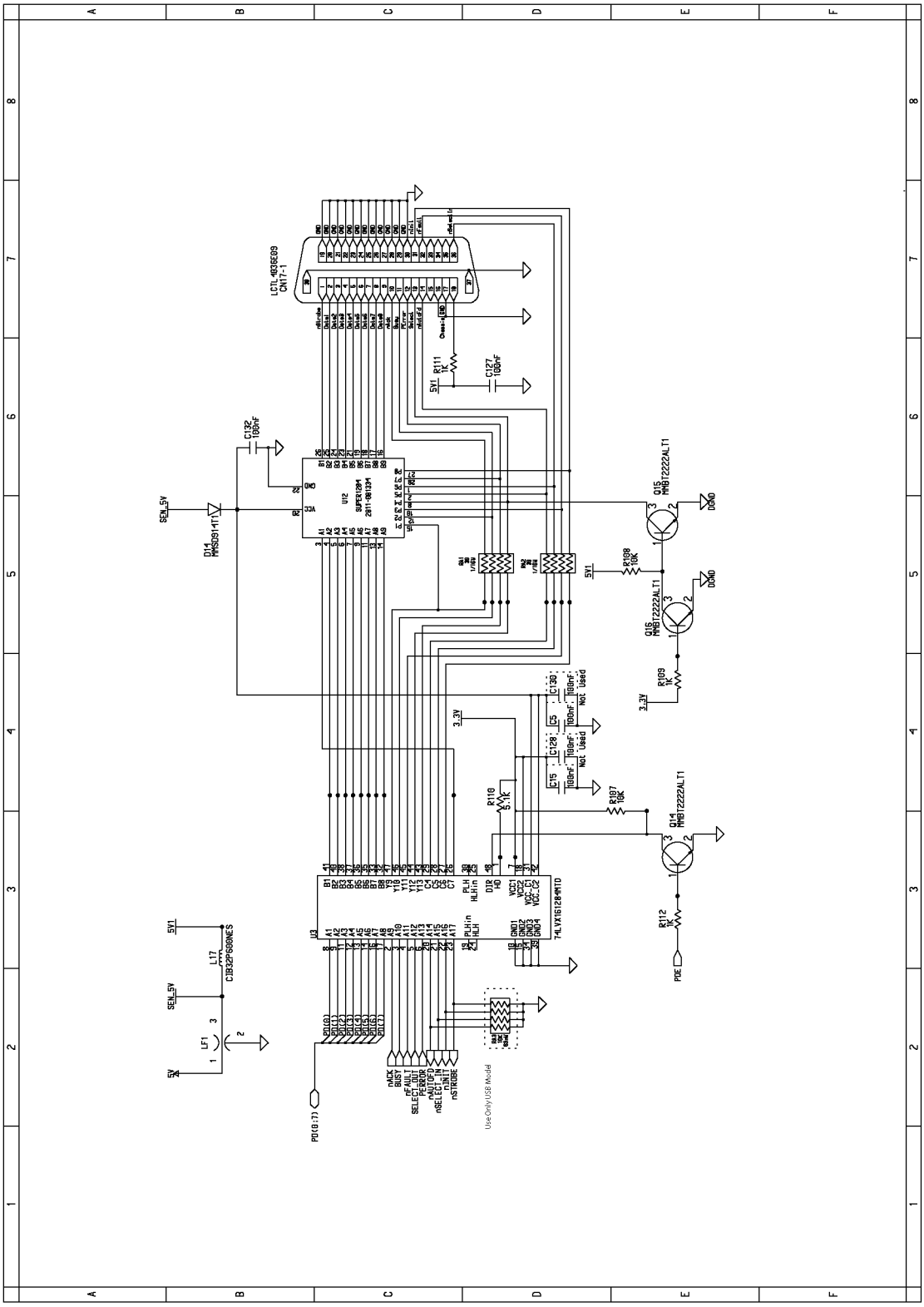

Figure 10

WD 11 Phaser 3125 Main PBA (1/11)

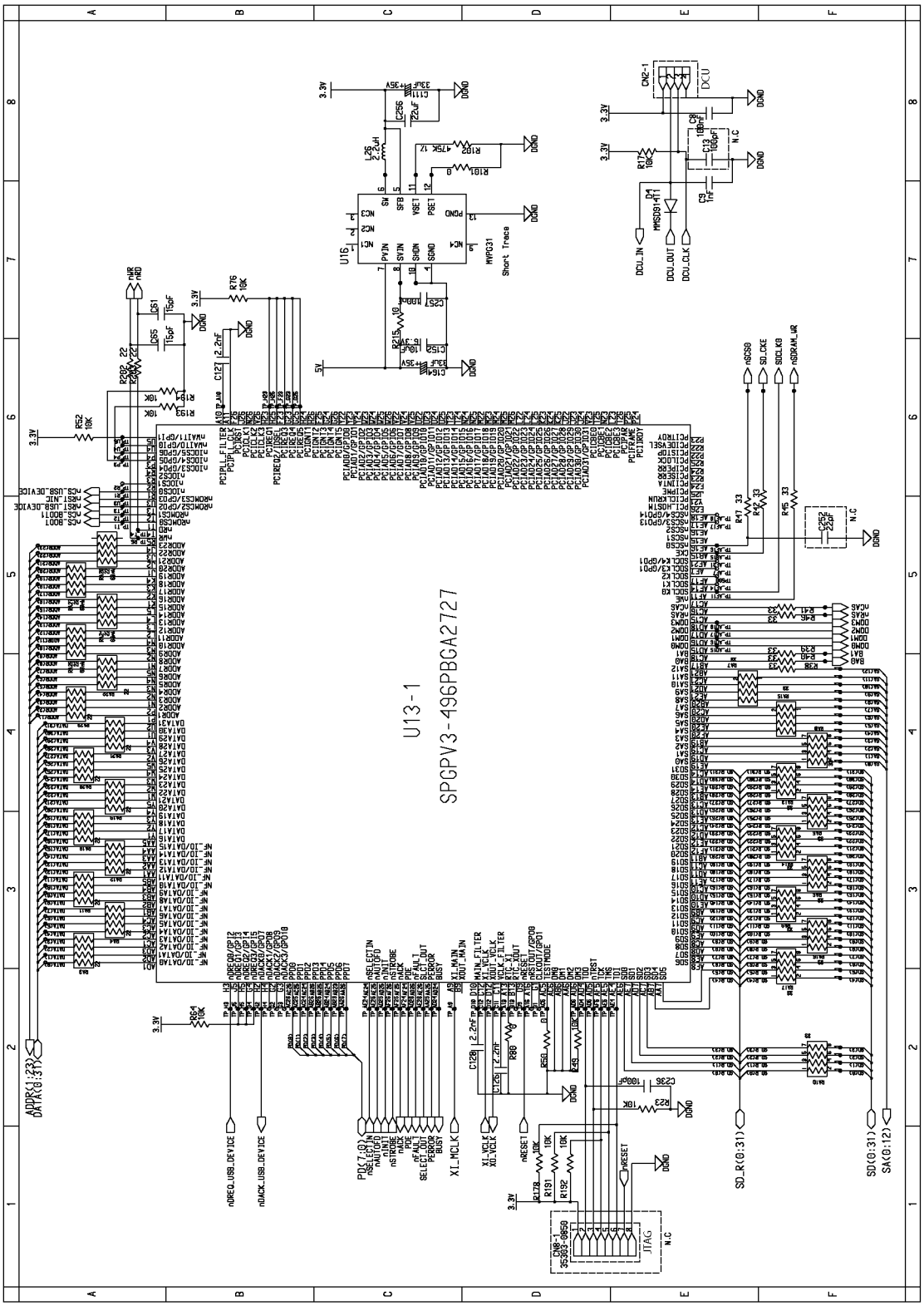

Figure 11

WD 12 Phaser 3125 Main PBA (2/11)

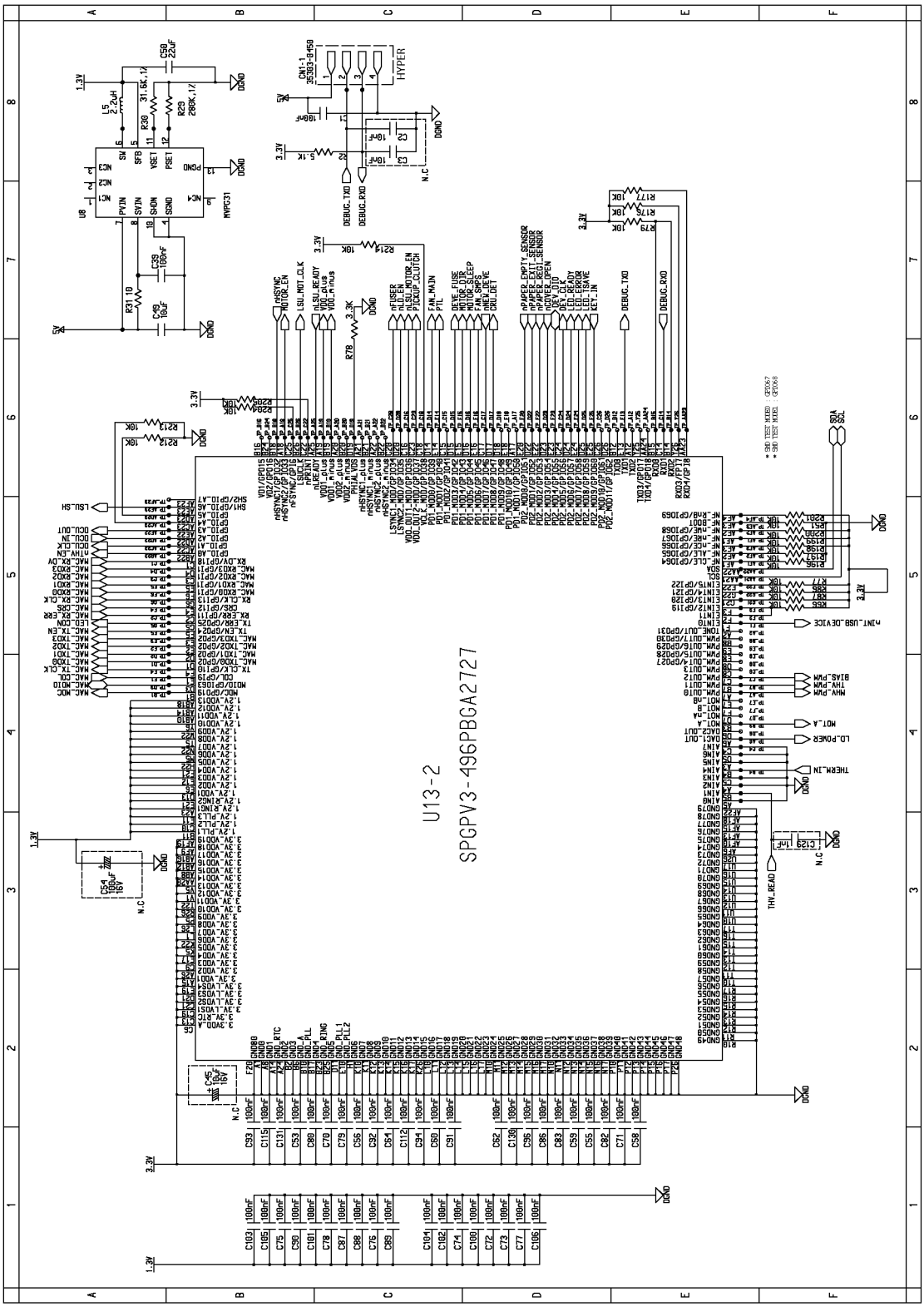

Figure 12

WD 13 Phaser 3125 Main PBA (3/11)

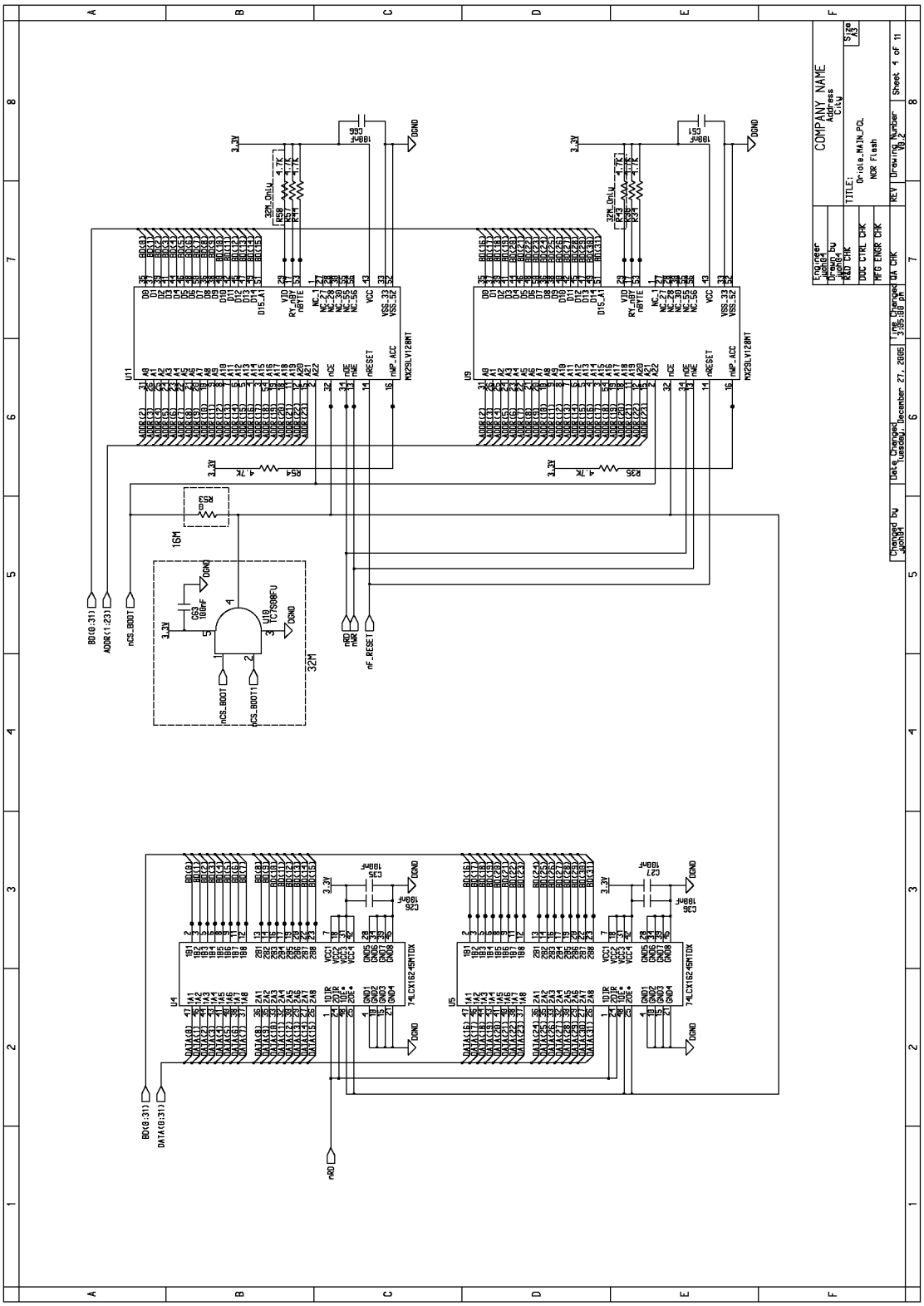

Figure 13

WD 14 Phaser 3125 Main PBA (4/11)

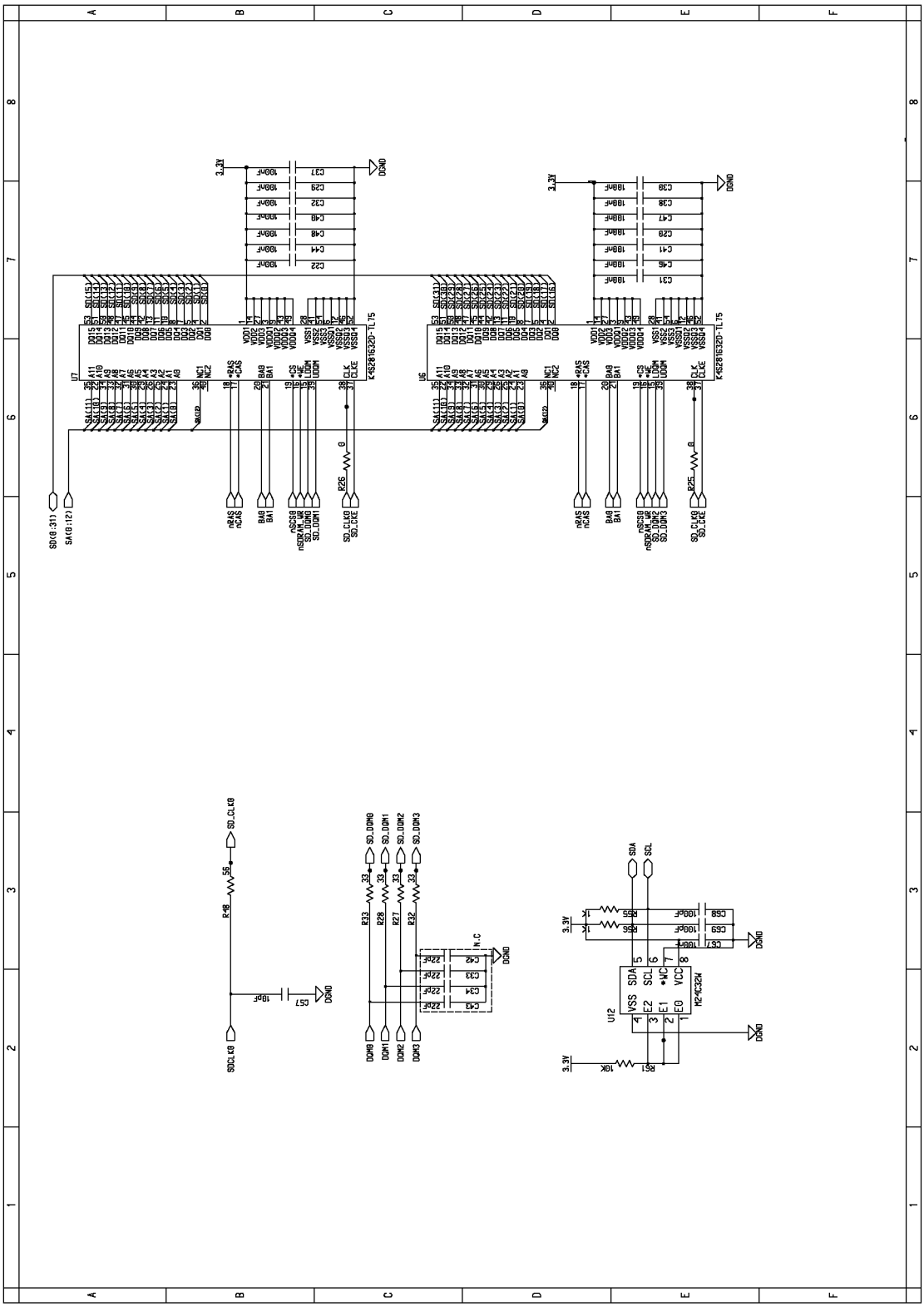

Figure 14

WD 15 Phaser 3125 Main PBA (5/11)

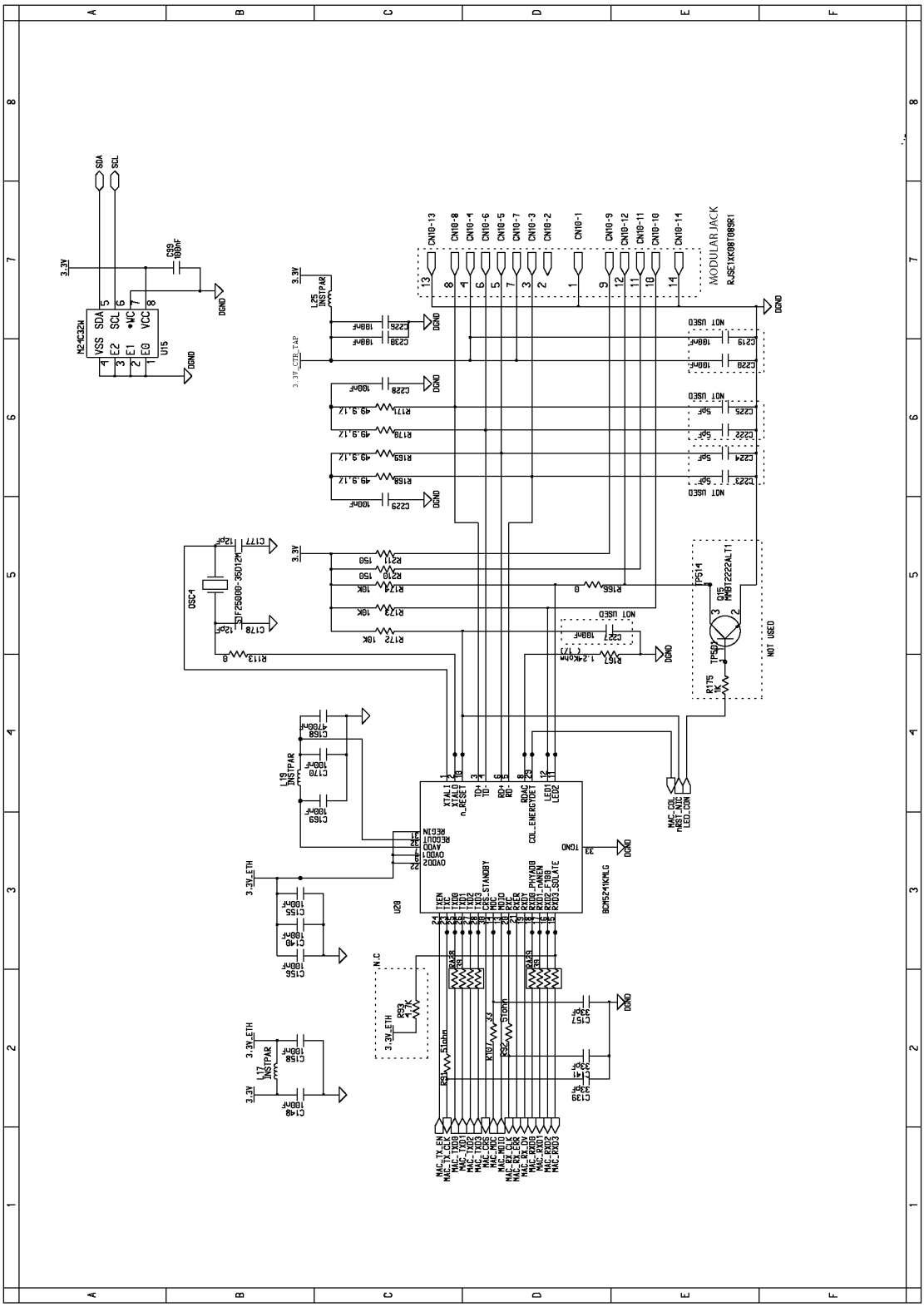

Figure 15

WD 16 Phaser 3125 Main PBA (6/11)

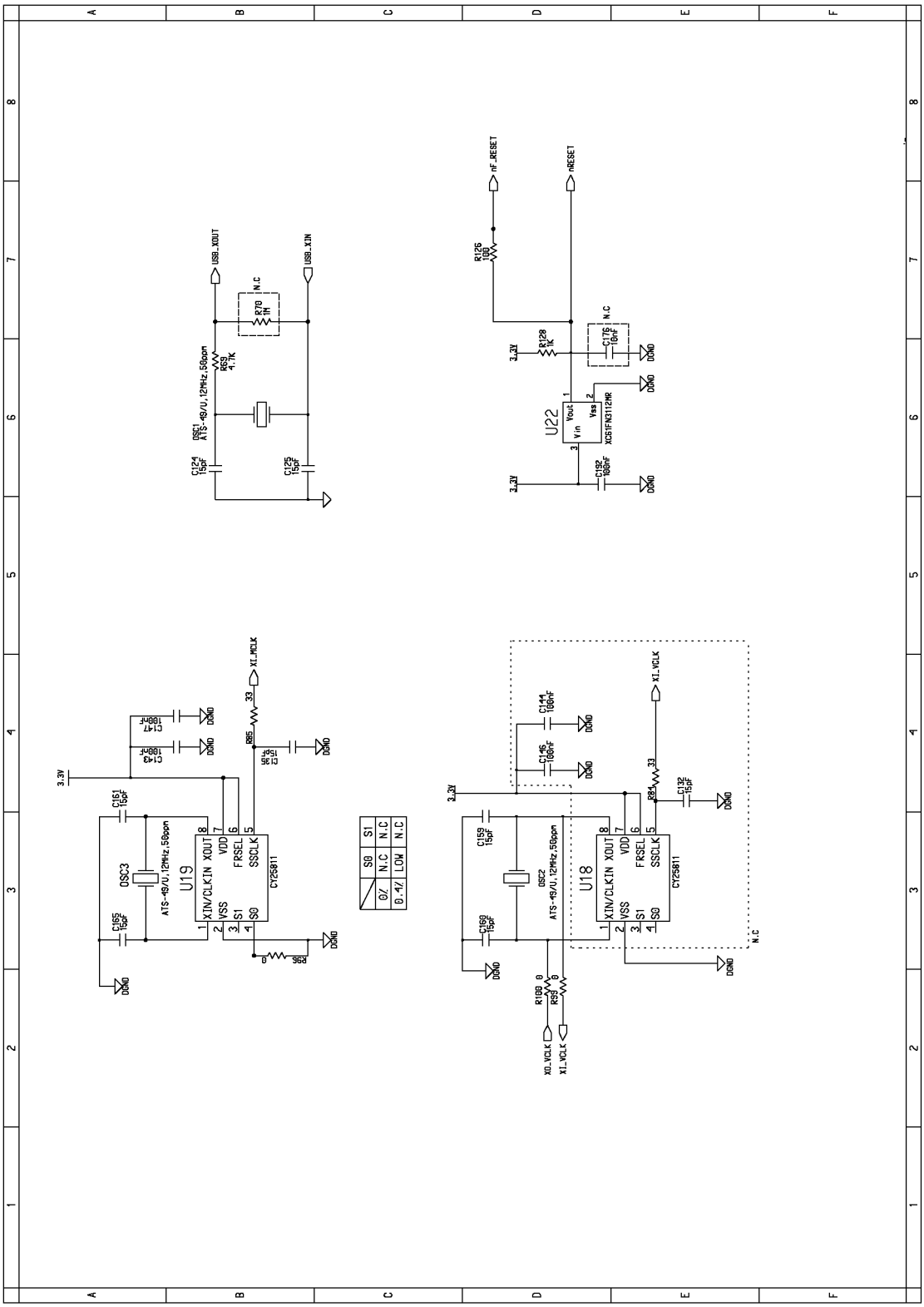

Figure 16

WD 17 Phaser 3125 Main PBA (7/11)

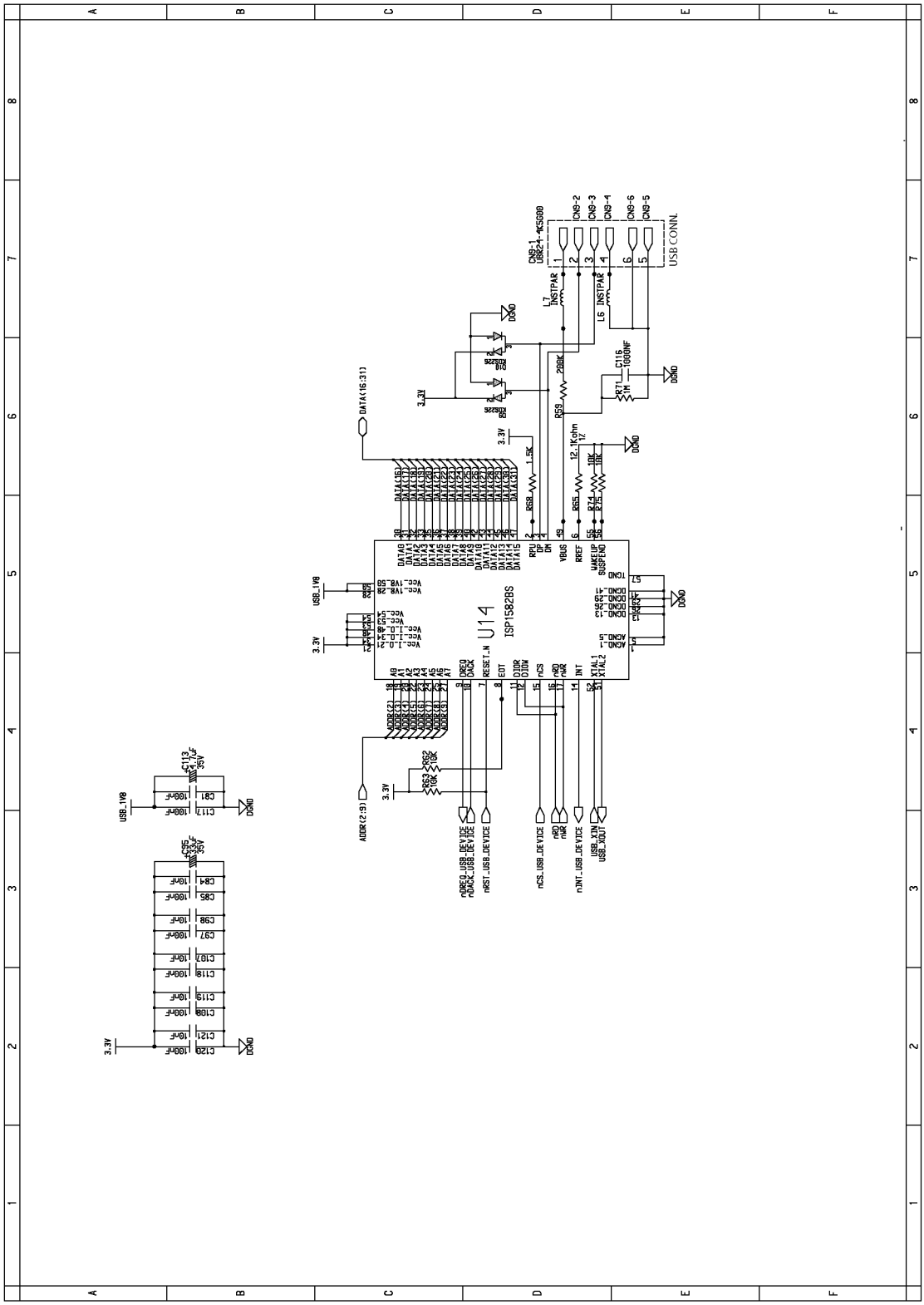

Figure 17

WD 18 Phaser 3125 Main PBA (8/11)

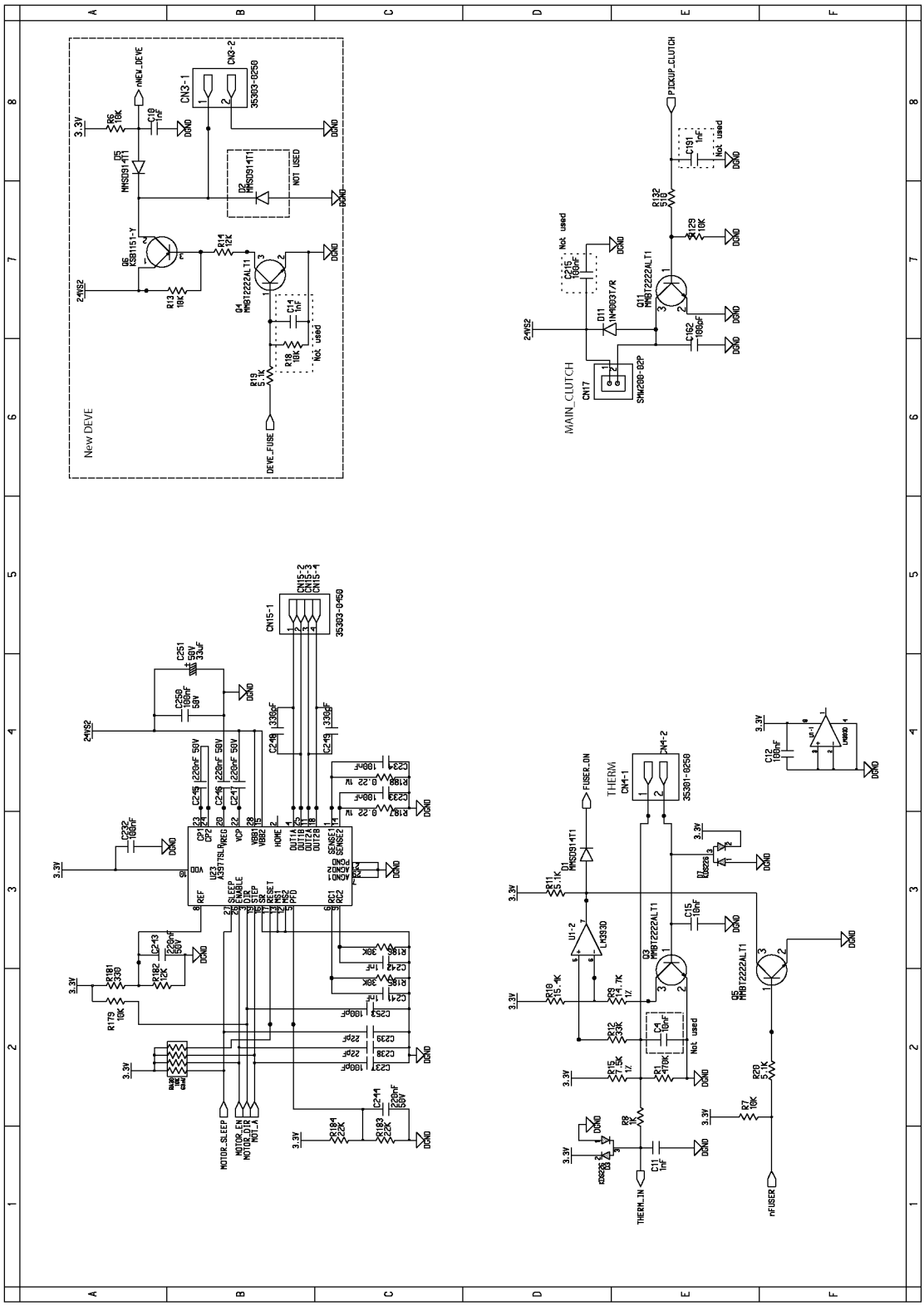

Figure 18

WD 19 Phaser 3125 Main PBA (9/11)

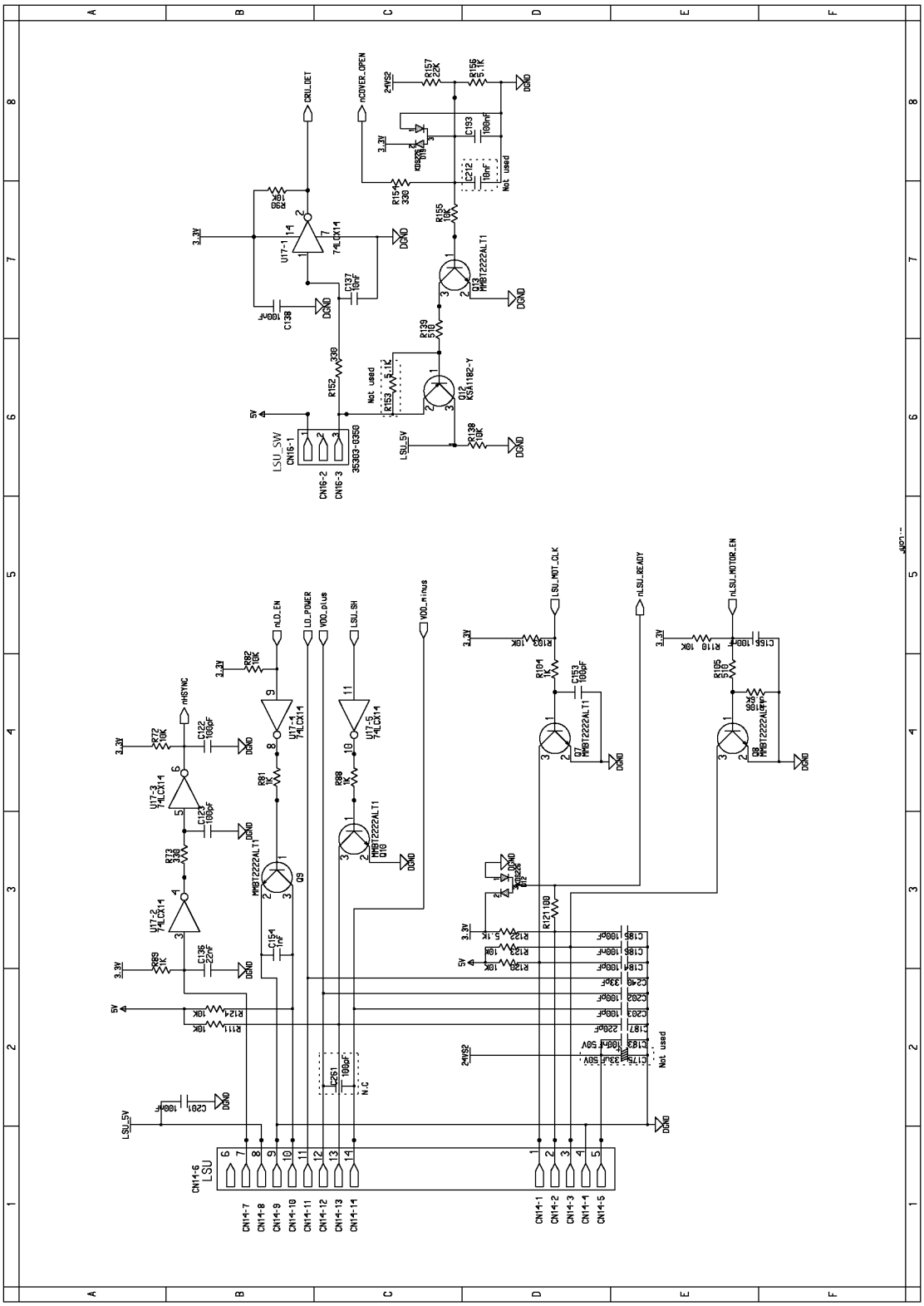

Figure 19

WD 20 Phaser 3125 Main PBA (10/11)

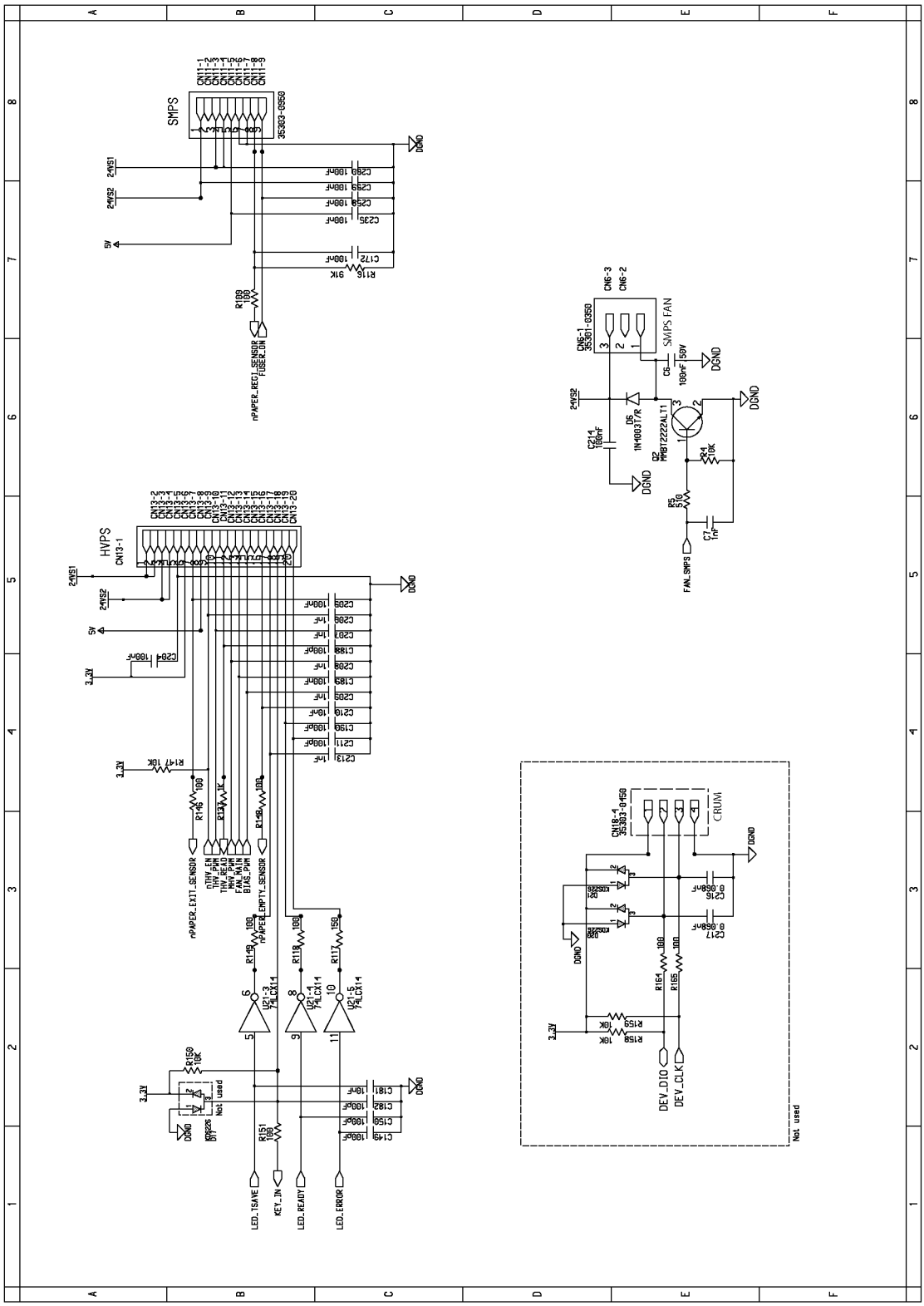

Figure 20

WD 21 Phaser 3125 Main PBA (11/11)

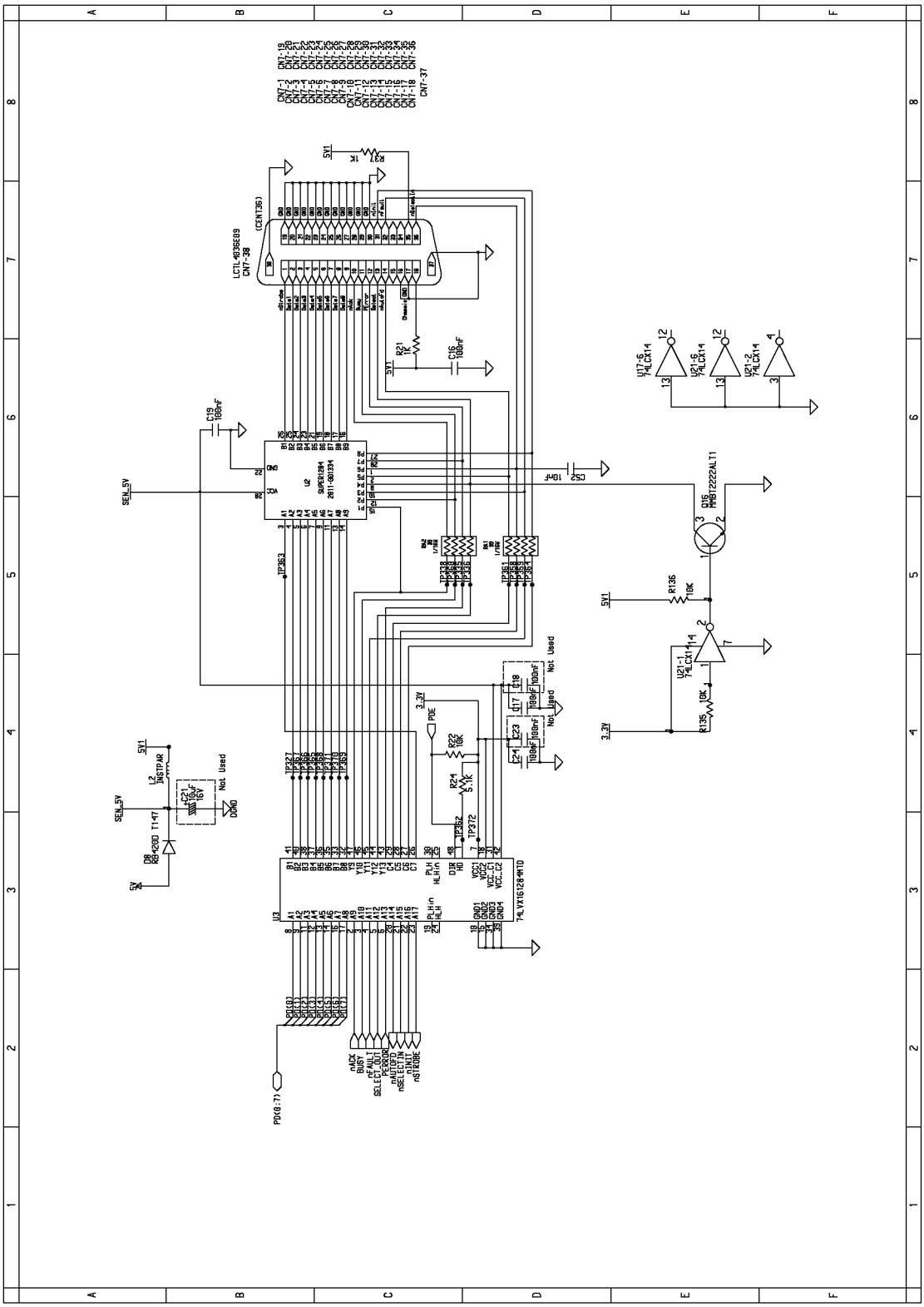

Figure 21

WD 22 Connector Circuit Diagram

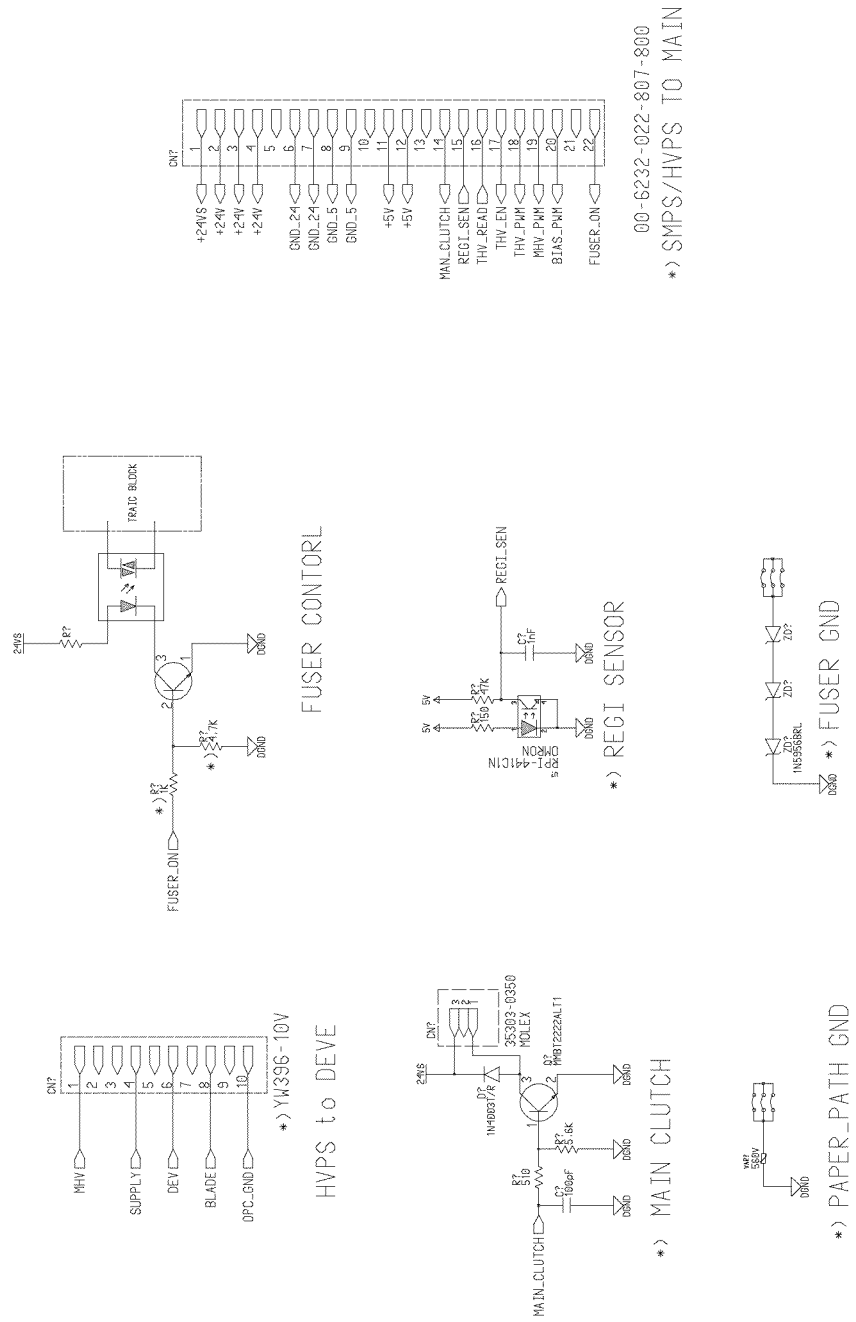

Figure 22

WD 23 SMPS

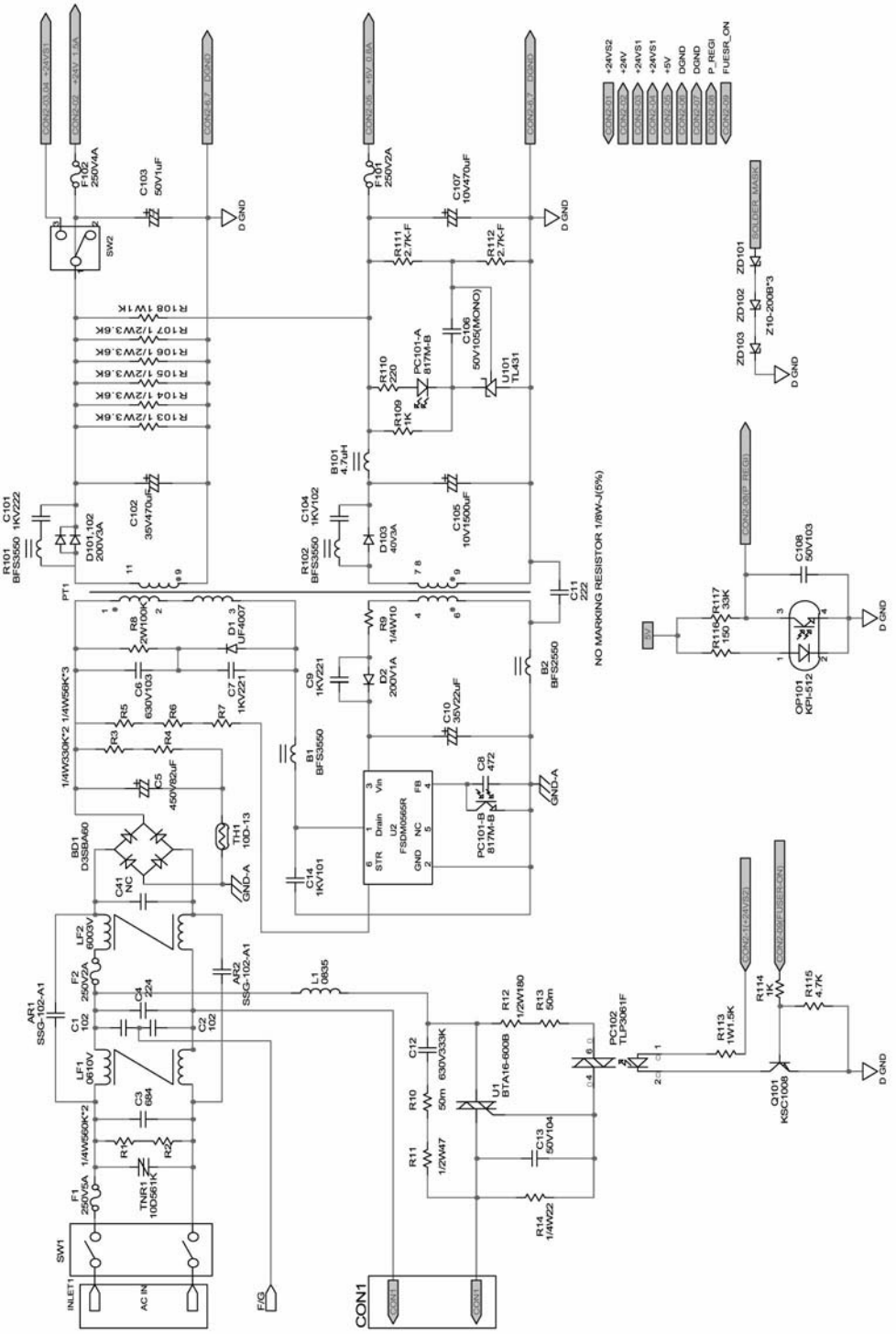

Figure 23

WD 24 HVPS (1/3)

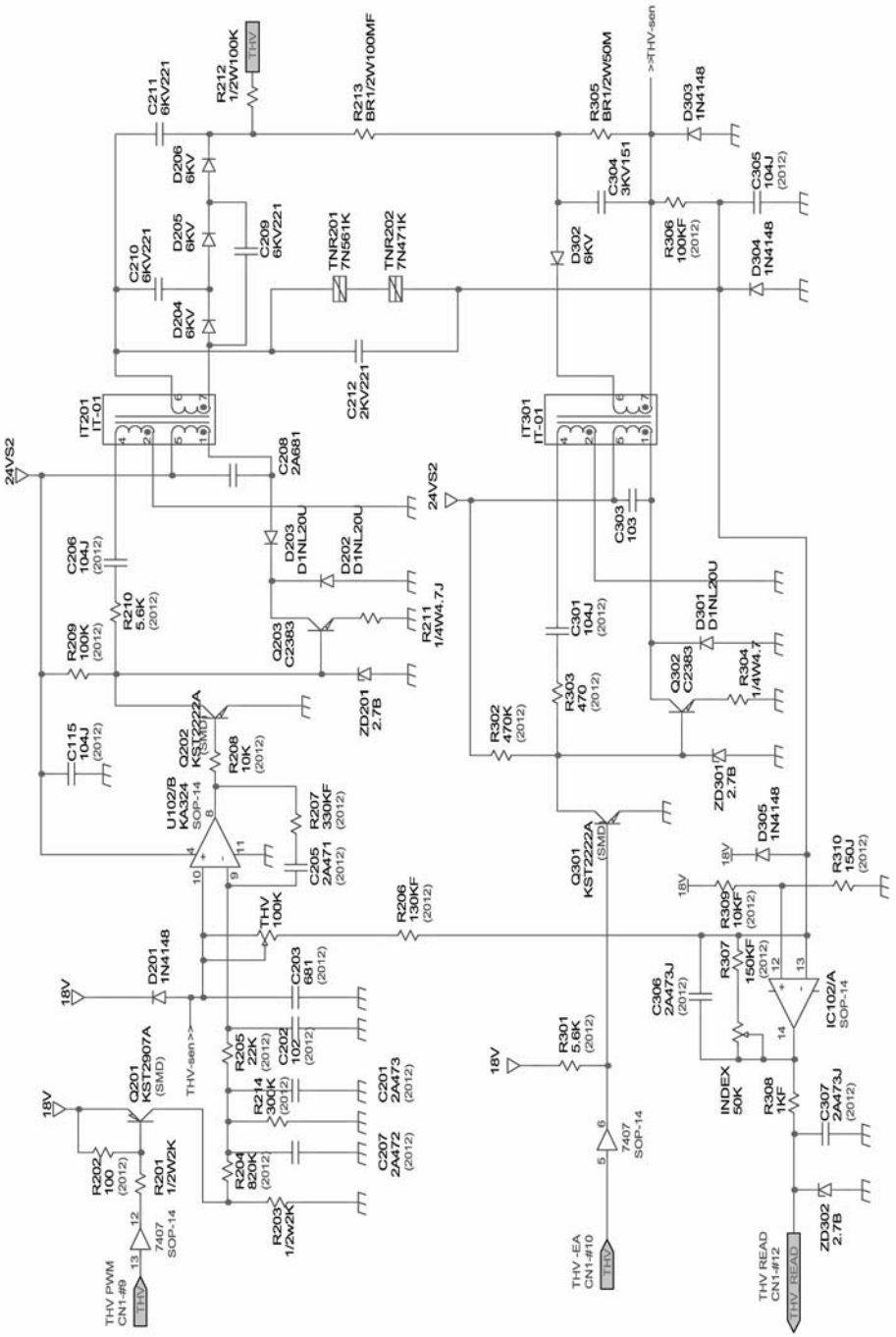

Figure 24

WD 25 HVPS (2/3)

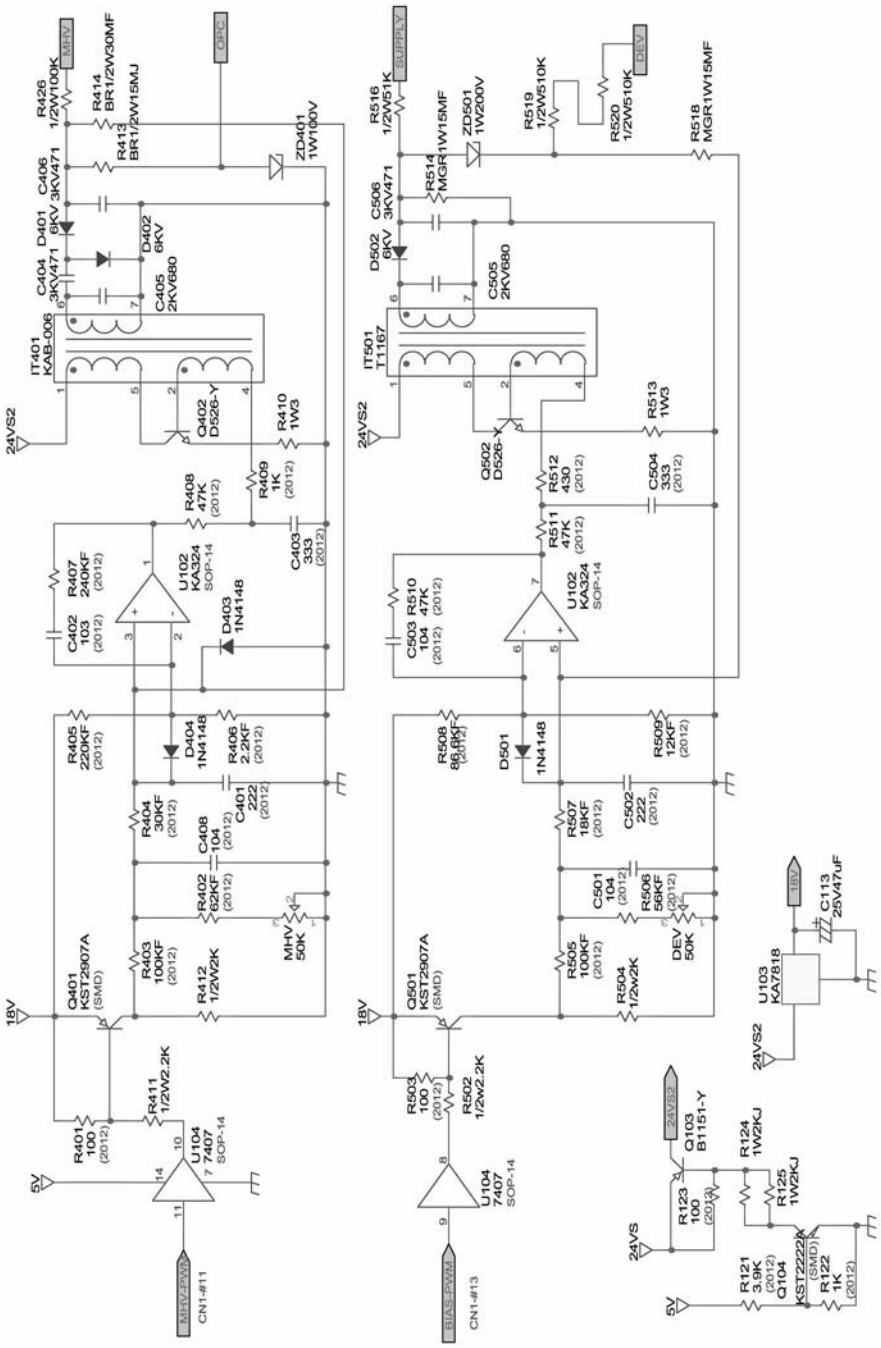

Figure 25

WD 26 HVPS (3/3)

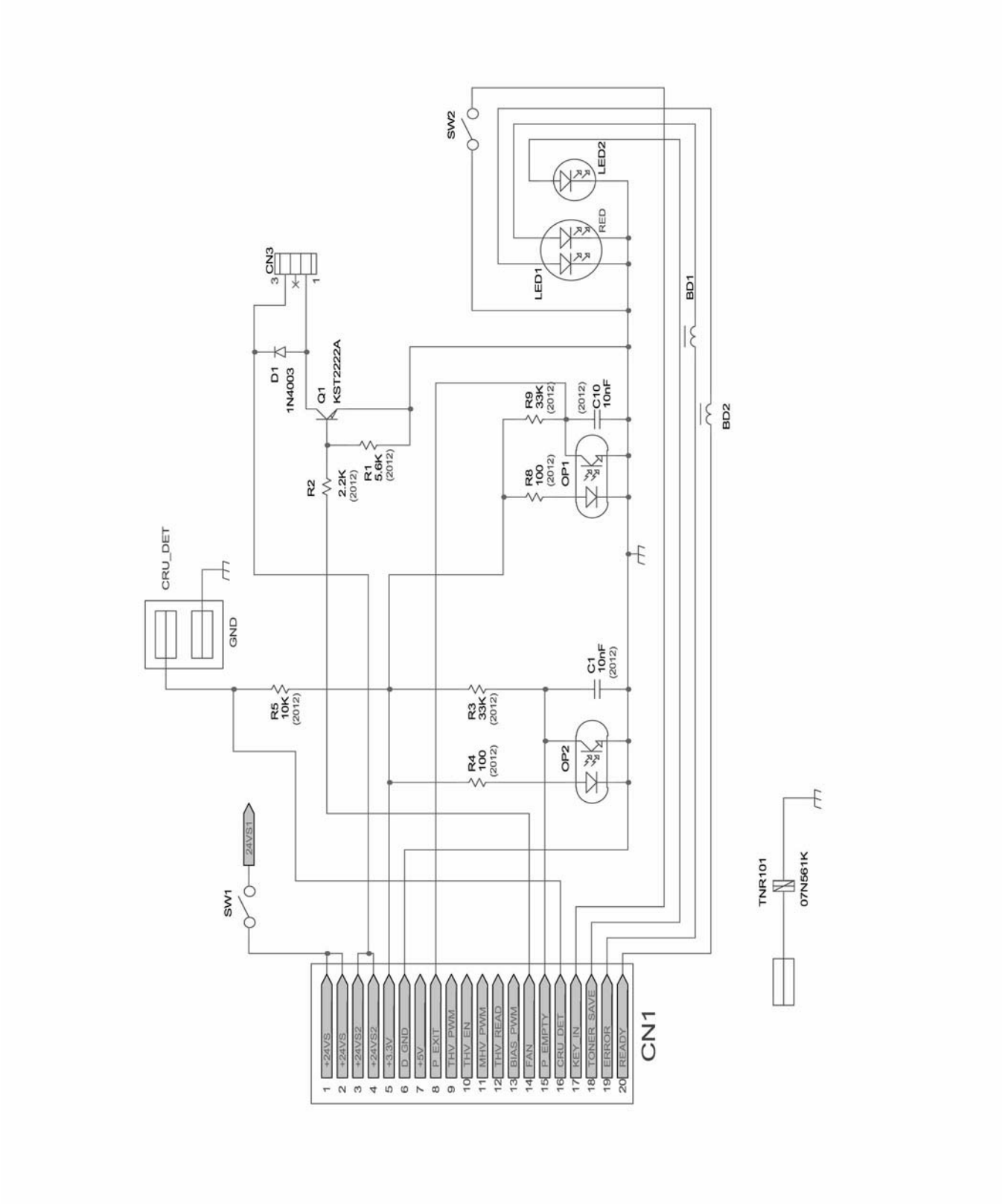

Figure 26

WD 27 Phaser 3124 Block Diagram

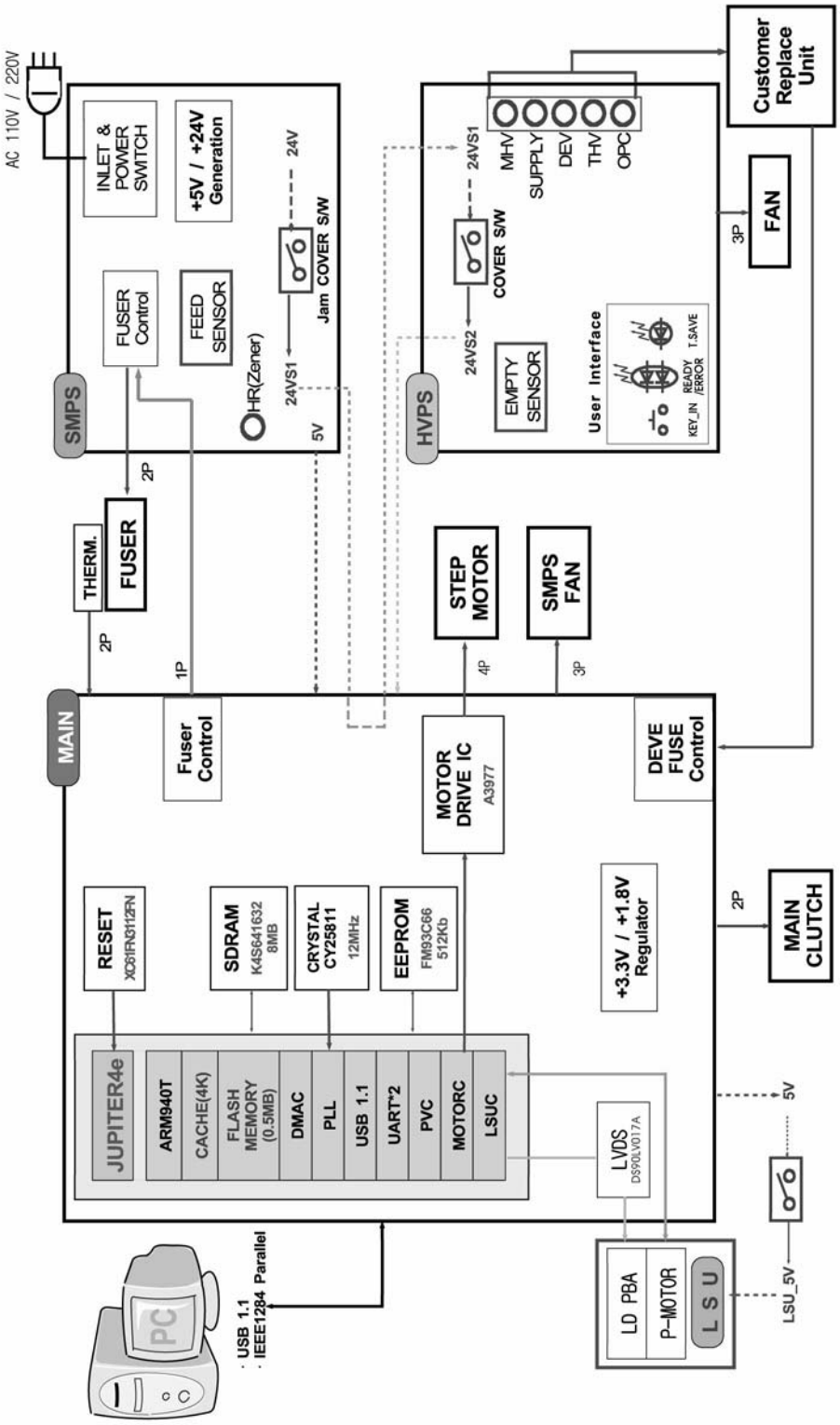

Figure 27

WD 28 Phaser 3125 Block Diagram

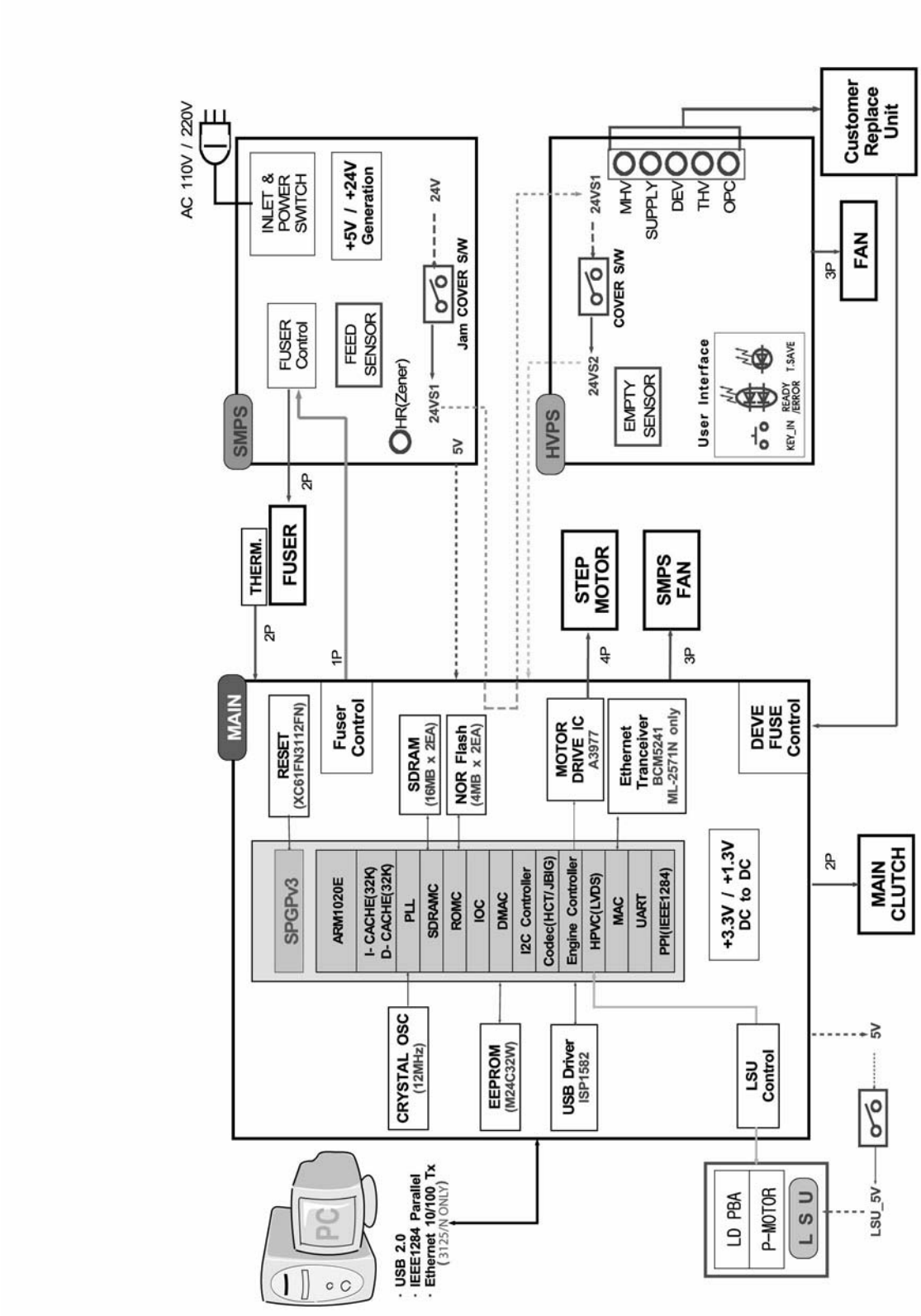

Figure 28

X

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)

☐ Excessive Smoke

Describe quantity and duration of smoke:

☐ Fire with open flames seen

☐ Electric shock to operator or service representative

☐ Physical injury/illness to operator or service representative

Describe:

☐ Other

Describe:

Any damage to customer property? No ☐ Yes ☐ Describe:

Did external emergency response provider(s) such as fire department, ambulance, and etc. respond?

No ☐ Yes ☐ 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: **Description**	**Part Number**
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@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@xerox.com or fax 585-422-6449 [Intelnet 8*222-6449]