PHASER 3200MFP
WORKCENTRE PE220

SERVICE MANUAL

XEROX®

Service Documentation

708P88744

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This manual is an update of the Workcentre PE220 service manual (708P88337). It is also available in hard copy format, part number 708P88745.

Introduction

1. Service Call Procedures

2. Repair Analysis Procedures

3. Image Quality

4. Repairs/Adjustments

5. Parts List

6. General Procedures/Information

7. Wiring Data

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Introduction

How To Use This Manual

Differentiating Between Machine Variants

The Phaser 3200MFP/B and 3200MFP/N will be identified in this manual by the identifier **Phaser 3200**.

The Workcentre PE220 will be identified in this manual by the identifier **Workcentre PE220**.

When a procedure, parts list description or other reference is common to both the Phaser 3200 and Workcentre PE220, no identifier will be given. Artwork used in these procedures will show either the Phaser 3200 or Workcentre PE220, not both.

When a procedure, parts list description or other reference is unique to either Phaser 3200 or Workcentre PE220, the appropriate identifier will be quoted and any artwork will also be specific.

Precautions

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

Safety Warning

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

High voltage and lasers inside the 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. This could cause the machine to malfunction and create an 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 in the machine is designed to never have any human access to laser radiation above a Class I level during normal operation, user maintenance, or prescribed service condition.

<div align="center">

WARNING

</div>

Never operate or service the machine with the protective cover removed from the Scanner assembly. The reflected beam, although invisible, can damage your eyes. When using this product, these basic safety pre-cautions should always be followed to reduce risk of fire, electric shock, and injury to person.

CAUTION - INVISIBLE LASER RADIATION WHEN THIS COVER OPEN. DO NOT OPEN THIS COVER.

VORSICHT - UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GE FFNET. NICHT DEM STRAHL AUSSETZEN.

ATTENTION - RAYONNEMENT LASER INVISIBLE EN CAS D OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.

ATTENZIONE - RADIAZIONE LASER INVISIBILE IN CASO DI APERTURA. EVITARE L ESPOSIZIONE AL FASCIO.

PRECAUCION - RADIACION LASER IVISIBLE CUANDO SE ABRE. EVITAR EXPONERSE AL RAYO.

ADVARSEL. - USYNLIG LASERSTR LNING VED BNING, N R SIKKERHEDSBRYDERE ER UDE AF FUNKTION. UNDG UDSAETTELSE FOR STR LNING.

ADVARSEL. - USYNLIG LASERSTR LNING N R DEKSEL PNES. STIRR IKKE INN I STR LEN. UNNG EKSPONERING FOR STR LEN.

VARNING - OSYNLIG LASERSTR LNING N R DENNA DEL R PPNAD OCH SP RREN R URKOPPLAD. BETRAKTA EJ STR LEN. STR LEN R FARLIG.

VARO! - AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA N KYM TT M LLE LASER- S TEILYLLE L KATSO S TEESEEN.

注 意 - 严禁渴开此盖, 以免激光泄露灼伤

주   의 - 이 덮개를 열면 레이저광에 노출될 수 있으므로 주의하십시오.

Caution for safety

Toxic material

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

1. If the LCD control panel is damaged, it is possible for the liquid inside to leak. This liquid is toxic. Contact with skin should be avoided, wash any splashes from eyes or skin immediately and contact your doctor. If the liquid gets into the mouth or is swallowed, see a doctor immediately.

2. Please keep toner cartridges away from children. The toner contained in the toner cartridge may be harmful.Contact a doctor if swallowed.

Electric Shock and Fire Safety Precautions

Failure to follow the 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 an electric shock. Do not allow paper clips, pins or other foreign objects to fall into the machine. This 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 leading 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 be 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. Exposed cables can also cause an electric shock. Replace a damaged power cable immediately, do not reuse or repair the damaged cable. Some chemicals can corrode the insulator of the power cable. Weakening of the insulator or exposing cables can cause 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 recommends 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 and 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 and possibly lead to the machine failing to work properly and in extreme conditions, could lead to a fire.

12. Do not insert any metal objects into the machine through the ventilator fan or other parts of the casing, contact with a high voltage conductor could occur inside the machine and cause an electric shock.

Handling Precautions

The following instructions are for your own personal safety, to avoid injury and to prevent damage to 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 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. If spilled, liquid could get into the machine and cause damage, electric shock or a potential 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. This could potentially 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 re-placed 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 note of any user settings. These will be erased if the main board is replaced.
2. Ensure that power is disconnected before servicing or replacing any electrical parts.
3. Disconnect printer interface cables and power cables.
4. Only use approved spare parts. Ensure part numbers, product names, any voltage, current or temperature ratings are correct.
5. Do not use excessive force when removing or re-fitting any parts, especially when fitting screws into plastic.
6. Take care not to drop any small parts into the machine.
7. Handling of the OPC Drum

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

   Take care not to expose the OPC Drum either to direct sunlight, fluorescent or incandescent room lighting. Exposure for as little as 5 minutes can damage the surface 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 any other lightproof container. Take care when working with the covers (especially the top cover) open as light will be admitted into the OPC area and can damage the OPC Drum.

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

   If the green surface of the Drum Cartridge is scratched or touched, the print quality will be compromised.

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, gently pull the hook of the latch away from the part which it is latched on to.

Figure 1

Disregarding this warning may cause bodily injury

1. Be careful with high temperature parts. 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 rotating parts (paper feeding entrance, motor, fan, etc.). Doing so may cause injury.
3. This machine weighs 10.4kg (Workcentre PE220) / 11.2 (Phaser 3200) which includes the toner cartridge and cassette. Use safe lifting and handling techniques. Back injury could occur if you do not lift carefully.
4. Ensure the machine is installed safely. The machine weighs 10.4kg (Workcentre PE220) / 11.2 (Phaser 3200). 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 and possibly causing personal injury or damaging the machine.
5. Do not install the machine on a sloping or unstable surface. After installation, ensure that the machine is stable.

ESD Precautions

Certain semiconductor devices can be easily damaged by static electricity. Such components are commonly known as "Electrostatically Sensitive (ES) Devices" or ESDs. Examples of typical ESDs are: integrated circuits, certain 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.

<p style="text-align:center">**CAUTION**</p>

Ensure 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, 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 are not classified as "anti-static" and 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.

Super Capacitor or Lithium Battery Precautions

1. Exercise caution when replacing a super capacitor or Lithium battery. There could be danger of explosion and subsequent operator injury and/or equipment damage if incorrectly installed.

2. Be sure to replace the battery with the same or equivalent type recommended by the manufacturer.

3. Super capacitor or Lithium batteries contain toxic substances and should not be opened, crushed, or burned for disposal.

4. Dispose of used batteries according to the manufacturers instructions.

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 Print Cartridge

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

Service for the Life of Print Cartridge

If the printed image is light due to the low toner supply, you can temporarily improve the print quality by redistributing the toner (gently shake the toner cartridge). However, you should replace the toner 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 LCD displays the warning message, "Toner Low." You can temporarily re-establish the print quality by redistributing the remaining toner in the cartridge.

Standard of guarantee for consumable parts.

Please refer to User Manual or Instructions.

Identifying a refilled 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.

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1. Service Call Procedures

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SCP 1 Service Call Actions

Procedure

Throughout this manual, observe the following warnings:

<p style="text-align:center">**WARNING**</p>

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.

<p style="text-align:center">**WARNING**</p>

Do not touch the fuser while it is hot.

<p style="text-align:center">**WARNING**</p>

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. Ensure 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 on 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

Basic Check List

1. Check the Power.

- Does "Warming Up" appear on the display?
  --> If not, check the AC power cord, switch or SMPS.
  --> Does the wall socket work?
- Do the motors or other components initialize (listen for main motor, fan and LSU sounds)?
  --> If there are none of the normal startup sounds, check the power cord, switch or SMPS.
  --> Does the wall socket work?

2. Check the LCD Panel.

- Refer to General Procedures.
- Is there any display at all?
  --> If not check the power cord, switch or SMPS.
- Is the display a meaningful message. Are there any broken or badly formed characters?
- Is the message on the LCD Panel a standard error message?

Table 1: LCD Status Error Messages

STATUS	LCD Display	Descriptions
Document jam	Document Jam	An original document is jammed in the ADF.
Cover open	Front or Rear Cover Open	Front door or rear jam cover open.
No paper	[No Paper] Add Paper	No paper in the cassette tray.
Paper jam 0	Paper Jam 0 Open/Close Door	Jam in the paper pick up/feed area.
Paper jam 1	Paper Jam 1 Open/Close Door	Jam in the fuser or print cartridge area.
Paper jam 2	Paper Jam 2 Check Inside	Jam in the paper exit area.
Communication error	[COMM. Error]	Fax handshake communication error.
Line error	[Line Error]	Fax data reception error.
No answer	[No Answer]	No remote fax connection after designated redial attempts.
Incompatible	[Incompatible]	Remote fax does not have the requested feature, such as polling.
Line busy	Line Busy	Remote fax line is in use.
Power failure	Power Failure	When the machine user memory has not been backed up and there was power off / on. User documents, such as unprinted faxes will be lost.
Stop pressed	[Stop Pressed]	Operator pressed the stop key during transmission.
Memory full	Memory Full	Faxes received to memory failed to print.
Fuse error	CRU Fuse Error	Unable to initialize the new print cartridge.
LSU error	[Hsync Error]	Tech mode/laser failure or power loss.
LSU error	[LSU Error]	User mode/laser failure or power loss.
Toner low	[Toner Low]	Toner low warning.

Table 1: LCD Status Error Messages

STATUS	LCD Display	Descriptions
Toner empty	[Toner Empty]	Toner empty.
Bypass jam	[Bypass Jam]	Bypass paper feed failure.
Group dial blocked	Group Not Available	Only single number location may be used.
Retry redial?	Retry Redial?	Fax redial delay interval allows job cancel.
No. not assigned	Number Not Assigned	Fax speed dial location has no number assigned.
Load document	Load Document	Place original document in the ADF or on the platen glass.
Memory full and cancel the job	Cancel? 1:Yes 2:No	Press 1 to transmit scanned pages in memory.
No job created	Operation Not Assigned	Add/cancel job number not found.
Low heat error	[Low Heat Error]	Fuser has not warmed up within the time limit.
Open fuser error	Open Fuser Error	Fuser thermistor is open or disconnected.
Over heat error	[Over Heat]	Fuser temperature went over limit.
No print cartridge	[Jam 1] [No Cartridge]	Print cartridge is not installed.
Memory dial full	Memory Dial Full	Auto dial transmission limit is 15 jobs.

--> Does the wall socket work?

--> Check the main PBA and cable harness.

3. Check the Paper Path

- Is there a paper jam?
  --> Remove any paper fragments caught in the paper path, GP 7.
- Paper jam occurs repeatedly at a specific point in the paper path.
  --> Open the fuser cover and clear the jam, GP 7.
  --> Dismantle the machine and carefully inspect the region where the jam occurs.
  Check if paper fragments are caught in the fuser, refer to REP 16.

4. Print the System Data Page (Configuration).

- If internal printing is good, print a test page from a computer.
  --> If there is an error, check the 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.).

- Print a test pattern, GP 4.
  --> Check the status of the consumables, GP 1.
  Enter Tech mode, GP 4. Check the CRU print count. If necessary, install a new toner cartridge, PL 1.0 (Workcentre PE220) / PL1.1 (Phaser 3200).

Initial Inspection

1. Check the power.

1. The machine does not power on after a long period.
    - 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 the same voltage as the supply?
2. Does the Fan work when power is turned on?
    - Check the connectors on the SMPS.
    - Check the fuses on the SMPS.

2. Check the Installation Environment.

1. Ensure the installation surface is flat, level and free from vibration.
   Move the machine if necessary.
2. Ensure that the temperature and humidity of the surroundings are within specification
   If necessary move the machine.
3. Ensure that the machine is positioned away from any air conditioning or other heating or cooling equipment. Ensure that the machine is not positioned in a direct draft from any air conditioning, fan or open window.
   Move the machine if necessary.
4. Ensure the machine is not positioned in direct sunlight.
   If it is unavoidable, use a curtain to shade the machine.
5. Ensure the machine is installed in a clean and dust free environment.
   Move the machine if necessary.
6. Certain industrial or cleaning processes which emit fumes can damage the machine.
   Move the machine if necessary

3. Check paper type.

1. Use only paper which is of a suitable quality, weight and size.
   Check the user guide.
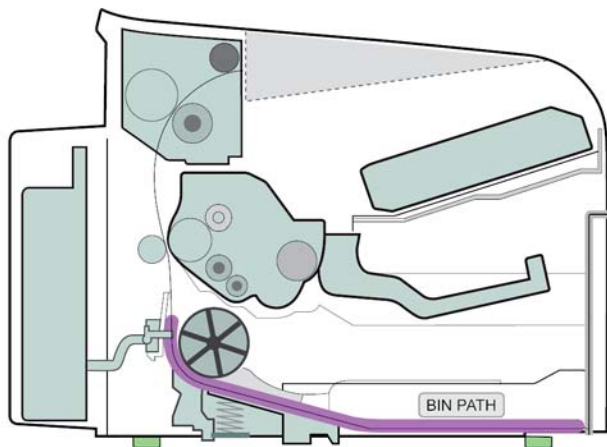
4. Check the overall condition of the machine

1. Clean the Paper Transport areas.
   Any rollers with dirt surfaces should be cleaned or replaced.

2 JAM 0 RAP

Description

Paper does not feed from the cassette.
Jam 0 occurs if the paper does not feed into the machine.

Check and Cause	Solution

1. Check the paper guides in the cassette.	1. Adjust the paper guides. Install new parts as necessary:
	    - PL 8.0 (Workcentre PE220)
	    - PL 8.1 (Phaser 3200)

2. The side-pad is loose due to poor sealing. (Phaser 3200 only)	2. Check the sponge, PL 1.2.

3. Check the surface of the pick up rubber:
    - PL 6.0 (Workcentre PE220)
    - PL 6.2 (Phaser 3200)
	3. Clean with soft cloth dampened with IPA (Isopropyl Alcohol) or water.

4. Check the solenoid by using Engine Test Mode, GP 6 - Pick up Test.	4. Check and install a new solenoid if necessary:
	    - PL 6.0 (Workcentre PE220)
	    - PL 6.1 (Phaser 3200)

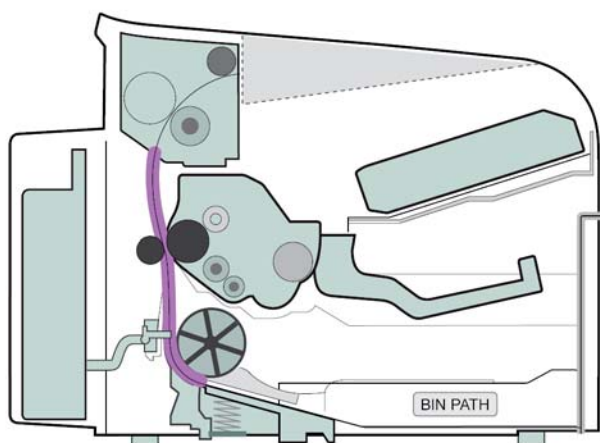| Check and Cause	Solution

5. If the paper feeds into the machine and Jam 0 occurs, perform Engine Test Mode, GP 6 - Feed Sensor Test.	5. Check and install new parts as necessary:
	• Feed sensor actuator,
	  - PL 6.0 (Workcentre PE220)
	  - PL 6.1 (Phaser 3200).
	• SMPS
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)
	• HVPS
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)

3 JAM 1 RAP

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 Actuator-Feed.

Check and Cause	Solution

1. Check for small pieces of paper jammed in the fuser.	1. Clear paper from the fuser:
	   - PL 7.0 (Workcentre PE220)
	   - PL 7.1 (Phaser 3200)

2. If paper is jammed in the discharge roller and the fuser just after passing through the Actuator Feed.	2. Check the feed sensor actuator for damage:
	   - PL 6.0 (Workcentre PE220)
	   - PL 6.1 (Phaser 3200)

3.Paper is jammed in front of or inside the fuser.	3. Check and install a new SMPS if necessary:
	   - PL 1.0 (Workcentre PE220)
	   - PL 1.1 (Phaser 3200)

4 JAM 2 RAP

Description

Paper is jammed inside the fuser.

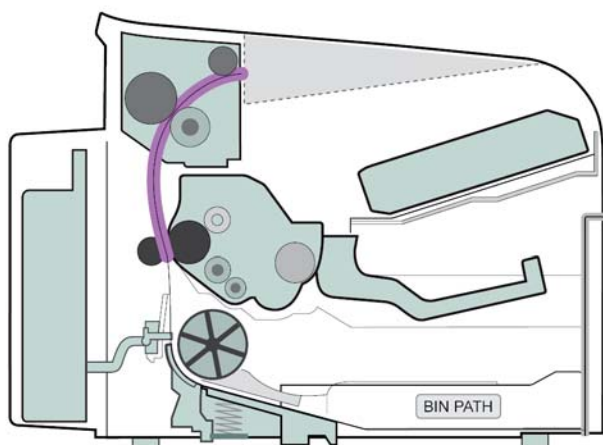Paper is jammed in the discharge roller and in the fuser just after passing through the Actuator-Feed.

Check and Cause	Solution

1. If the paper is completely fed out of the machine, but Jam 2 occurs, the exit sensor actuator may be defective.	1. Check the exit sensor actuator:
	    - PL 7.0 (Workcentre PE220)
	    - PL 1.4 (Phaser 3200).

2. Concertina jam occurs in the fuser.	2. Remove any paper jammed in the fuser:
	    - PL 7.0 (Workcentre PE220)
	    - PL 7.1 (Phaser 3200)
	Clean and check the parts as necessary:
	• Pressure roller
	    - PL 7.0 (Workcentre PE220)
	    - PL 7.1 (Phaser 3200)
	• Main Frame Assembly
	    - PL 8.0 (Workcentre PE220)
	    - PL 8.1 (Phaser 3200)

Check and Cause	Solution

3. Paper is rolled in the Fuser
• This occurs when a stripper finger or stripper finger spring is damaged.
• It occurs when the Heat-Roller or Pressure-Roller is seriously contaminated.
	3. Clean the surface of the pressure roller, heat roller and the stripper fingers:
	   - PL 7.0 (Workcentre PE220)
	   - PL 7.1 (Phaser 3200).
	Check and install a new fuser if necessary:
	   - PL 7.0 (Workcentre PE220)
	   - PL 7.1 (Phaser 3200).

5 Multi-Feeding RAP

Description

Multiple sheets of paper are fed together.

Check and Cause	Solution
1. Bad quality paper.	1. Fan the paper. Recommend the use of good quality paper.
2. Pad-Friction is contaminated.	2. Clean the pad friction with soft cloth, dampened with IPA (Isopropyl Alcohol).
3. Solenoid malfunction (the solenoid does not work properly): Perform Engine Test Mode, GP 6 - Pick up Test.	3. Check and install a new solenoid if necessary: - PL 6.0 (Workcentre PE220) - PL 6.1 (Phaser 3200)

6 Fuser Jam RAP

Description

Constant Jam where paper is entering Fuser unit.
Fuser rollers do not turn.

Check and Cause	Solution

1. The fuser stripper fingers are misaligned	1. Check the stripper fingers:
	   - PL 7.0 (Workcentre PE220)
	   - PL 7.1 (Phaser 3200).

2. Check if the fuser has overheated and melted the fuser gear. Check for heat damage to the heat roller and pressure roller:
   - PL 7.0 (Workcentre PE220)
   - PL 7.1 (Phaser 3200)
	2. Check the following parts:
	• Heat Lamp
	   - PL 7.0 (Workcentre PE220)
	   - PL 7.1 (Phaser 3200)
	• Thermostat
	   - PL 7.0 (Workcentre PE220)
	   - PL 7.1 (Phaser 3200)
	• Thermistor
	   - PL 7.0 (Workcentre PE220)
	   - PL 7.1 (Phaser 3200)
	Perform Engine Test Mode - THERM ADC 120, GP 6.
	Check and install new parts as necessary:
	• SMPS
	   - PL 1.0 (Workcentre PE220)
	   - PL 1.1 (Phaser 3200)
	• Main PBA
	   - PL 1.0 (Workcentre PE220)
	   - PL 1.1 (Phaser 3200)
	• Fuser
	   - PL 7.0 (Workcentre PE220)
	   - PL 7.1 (Phaser 3200)

7 Paper Rolled in the Print Cartridge (OPC Drum) RAP

Description
Paper is rolled up in the OPC.

Check and Cause	Solution
1. Paper is too thin.	1. Recommend use normal paper. Use paper within specification. Refer to the User Guide.
2. Paper curl.	2. Remove the paper while turning the OPC Drum against the feed direction. Turn the paper over. Recommend the use of good quality 'long grain' paper.

8 Control Panel RAP

8A LCD Defect

Description

Strange characters are displayed in the LCD Window and OPE Panel keys do not work.

Check and Cause	Solution
1. Clear the memory, GP 3.	1. Restart the machine and try again after clearing the memory.

2. Ensure the OPE HARNESS is connected to the Connection Board.	2. Check and install new parts as necessary:
	• OPE Unit, PL 5.0
	• Main PBA
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)

8B Defective OPE Keypad

Description

Pressing keys does not cause the set to respond correctly.

Check and Cause	Solution
1. Clear the memory, GP 3 and restart the machine.	1. Check and replace new parts as necessary • Membrane, PL 5.0 • Keypad assembly, PL 5.0

2. Check if there is an audible clicking sound when a key is pressed.	2. Check and install new parts as necessary:
	• OPE assembly, PL 5.0
	• Main PBA
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200).

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. Check the following parts: • Heat lamp - PL 7.0 (Workcentre PE220) - PL 7.1 (Phaser 3200) • Thermostat - PL 7.0 (Workcentre PE220) - PL 7.1 (Phaser 3200) • Thermistor - PL 7.0 (Workcentre PE220) - PL 7.1 (Phaser 3200)	1. Perform Engine Test Mode to test the Fuser - THERM ADC 120, GP 6. Check and install new parts as necessary: • Halogen lamp - PL 7.0 (Workcentre PE220) - PL 7.1 (Phaser 3200) • Fuser assembly - PL 7.0 (Workcentre PE220) - PL 7.1 (Phaser 3200) • SMPS - PL 1.0 (Workcentre PE220) - PL 1.1 (Phaser 3200) • Main PBA - PL 1.0 (Workcentre PE220) - PL 1.1 (Phaser 3200)

10 Paper Empty RAP

10A Paper empty with indication error RAP

Description

Paper Empty is displayed in the LCD panel even when paper is loaded in the cassette.
The paper empty message does not appear in the LCD when the paper cassette is empty.

Check and Cause	Solution
1. Faulty cables or connectors.	1. Check the cables and connectors.

2. The paper empty sensor actuator is defective.	2. Check and install a new paper empty sensor actuator:
	   - PL 8.0 (Workcentre PE220)
	   - PL 8.1 (Phaser 3200)

3. Memory error.	3. Perform clear all memory, GP 3.

4. The SMPS PBA or Main PBA is defective.	4. Check and install new parts as necessary:
	• SMPS PBA
	   - PL 1.0 (Workcentre PE220)
	   - PL 1.1 (Phaser 3200)
	• Main PBA
	   - PL 1.0 (Workcentre PE220)
	   - PL 1.1 (Phaser 3200)

10B Paper empty with no indication error RAP

<div align="center">**WARNING**</div>

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 empty actuator, PL 8.0 (Workcentre PE220) / PL 8.1 (Phaser 3200) is damaged.	1. Check and install a new paper empty sensor actuator: - PL 8.0 (Workcentre PE220) - PL 8.1 (Phaser 3200) if necessary.
2. The SMPS or main PBA may be defective.	2. Check and install new parts as necessary: • SMPS - PL 1.0 (Workcentre PE220) - PL 1.1 (Phaser 3200) if necessary. • Main PBA - PL 1.0 (Workcentre PE220) - PL 1.1 (Phaser 3200) if necessary.

11 Cover Open RAP

11A Cover Open with indication error RAP

Description

The Cover Open message appears on the LCD even when the print cover is closed.
The Cover Open message does not appear on the LCD even when the print cover is open.

Check and Cause	Solution

1. The 'Open Cover' microswitch may be faulty.
 	
Note: *The front cover microswitch is on the HVPS, PL 1.0 (Workcentre PE220) / PL 1.1 (Phaser 3200). The rear cover microswitch is on the SMPS, PL 1.0 (Workcentre PE220) / PL 1.1 (Phaser 3200).*
	1. Use TECH mode ("cover sensor test"), GP 4, to check the relevant cover switch operation. Check and install a new switch if necessary:
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200).

2. The tab on the front cover, PL 1.0 (Workcentre PE220) / PL 1.3 (Phaser 3200) may be damaged.	2. Check and install a new front cover,
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.3 (Phaser 3200)

3. Check the connector and cables between HVPS and Main PBA, SMPS and Main PBA.	3. Install a new harness if necessary, PL 1. Reseat the connectors.
	Check and install new parts as necessary:
	• Main PBA
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)
	• HVPS
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)
	• SMPS
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)

11B Cover Open with no indication 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

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 1.0 (Workcentre PE220) / PL 1.1 (Phaser 3200) while the exit cover open switch is mounted on the SMPS, PL 1.0 (Workcentre PE220) / PL 1.1 (Phaser 3200).*	1. Use Engine Test Mode mode, GP 6 - cover sensor test to check cover switch operation. Check and install a new switch if necessary

2. Check the connector and cables between the HVPS and main PBA
    - PL 1.0 (Workcentre PE220)
    - PL 1.1 (Phaser 3200).
	2. Check and install new parts as necessary:
	• SMPS
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200)
	• HVPS
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200)

12 Faulty Motor RAP

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 may be defective.	1. Check the operation using Engine Test Mode, GP 6.
	 Check and install new parts as necessary:
	 • Main drive assembly,
	   - PL 8.0 (Workcentre PE220)
	   - PL 8.1 (Phaser 3200)
	 • Main PBA
	   - PL 1.0 (Workcentre PE220)
	   - PL 1.1 (Phaser 3200)

13 No Power RAP

Description

When system power is turned on the LCD panel does not come on.

Check and Cause	Solution

1. Check if the power input and SMPS output are normal.	1. Check and install new parts as necessary:
	• Power supply cord
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)
	• SMPS
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)

2. LCD panel does not come on but normal start up sounds are heard.	2. Check and install a new OPE unit, PL 5.0

3. The OPE unit display does not come on and no start up sounds are heard.	3. Check and install a new Main PBA if necessary:
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)

14 Bad Software Environment RAP

14A The machine is not working (1)

Description

While Power turned on, the machine is not working in the printing mode.

Check and Cause	Solution
1. Ensure that the customer knows how to install the correct printer driver and to select the PE220 or Phaser 3200 as the default printer.	1. Refer the customer to the PE220 or Phaser 3200 User Guide.
2. Perform Pattern Test, GP 4.	2.Check the power of the machine and perform the Pattern Test, GP 4. If the test printing works, that means no problems in the machine itself. If the test printing does not work, that means bad functioning of the machine (not because of software).
3. Check if the PC and the machine is properly connected and the print cartridge installed.	3. Replace the printer cable. If the problems is not solved even after replacing the cable, check the amount of remaining toner.
4. Printing is not working in Windows.	4. Check if the connection between PC and printer port is correct. Uninstall the driver, then re-install new drivers. Refer to Xerox.com. Ask the customer to check the BIOS of the PC to ensure that there are no IRQ conflicts and to check that the input/output range is 0378.
5. Check if the printer cable is directly connected to peripheral devices	5. If the scanner needs to be connected to the machine, remove the scanner from the PC to see if the machine is working alone properly.

14B The machine is not working (2)

Description
After receiving the printing order, no response at all or the low speed of printing occurs due to wrong setup of the environment rather than malfunction of the machine itself.

Check and Cause	Solution
1. Ensure that the customer knows how to install the correct printer driver and to select the PE220 or Phaser 3200 as the default printer.	1. Refer the customer to the PE220 or Phaser 3200 User Guide.
2. Secure more space on the hard disk.	2. Not working with the message 'insufficient printer memory' means hard disk space problem rather than the RAM problem. Ask the customer to provide more space for the hard disk, using the disk utilities program.
3. Printing error occurs even if there is enough space in the hard disk.	3. The connection of the cable and printer port is not correct. Check if the connection is correct. Ask the customer to check the BIOS of the PC to ensure that there are no IRQ conflicts and to check that the input/output range is 0378.
4. Check the parallel-port-related items in the BIOS	4. Ask the customer to select ECP or SPP. SPP (Normal), ECP, and EPP modes (increase printing speed). SPP normal mode supports 8-bit data transfer. ECP mode supports 12-bit data transfer.
5. Reboot the system to print.	5. If the regular font is not printing, the cable or the print driver may be defective. Turn the PC and machine off, and reboot the system to print again. If not solved, double-click the printer in my computer. If the regular fonts are not printing again, the cable must be defective. Replace the cable with new one.

15 Abnormal Printing RAP

Description

The machine is not working correctly even when there is no problem with the printer cable.
If the machine will not work at all or the strange fonts are repeated, the printer driver may be defective or wrong setup in the BIOS Setup.

Check and Cause	Solution
1. Set up the parallel port in the BIOS.	1. Ask the customer to select SPP (Normal) or ECP LPT Port in the BIOS.
2. Printer Driver Error.	2. Uninstall the driver. Re-install the latest driver. Refer to Xerox.com
3. Error message from insufficient memory. (The printing job sometimes stops or due to insufficient virtual memory, but it actually comes from the insufficient space of the hard disk.)	3. Ask the customer to delete the unnecessary files to secure enough space of the hard disk and start printing job again.

16 SPOOL Error RAP

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. If the previous printing error not solved.	2. Inform the customer. 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. Refer to 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. Check the print queue.	6. Ask the customer to manage the print queue.
7. Insufficient memory.	7. 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.

17 Fax & Phone Problems RAP

17A No Dial Tone

Description
There is no dial tone when the Manual Dial key is pressed.

Check and Cause	Solution

1. Check that the telephone line cord supplied with the set is connected to TEL LINE correctly.	1. If the telephone cord is OK but there is no dial tone, try plugging a normal telephone into the wall socket. If this is OK then replace the LIU PBA:
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200).

2. Listen for a CLICK sound when the Manual Dial key is pressed. *Note: Key sound must be set to "on" in GP 3, User Mode.*	2. If you cannot hear the Manual Dial CLICK sound, the OPE Assembly may be defective. Check and install a new OPE assembly, PL 5.0 if necessary.

3. Check the connection of the HARNESS between the LIU and the Main Board.	3. Check the Speaker connection and the harness between the LIU and the Main PBA. Install new cables as necessary:
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200).

4. Ensure the speaker is connected correctly.	4. Perform Tech mode, GP 4 - Modem Test. Check and install new parts as necessary
	• Speaker
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.2 (Phaser 3200)
	• Main PBA
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200)

17B Defective MF DIAL

Description

The MF DIAL is not functioning.

Check and Cause	Solution

1. Check that the telephone line cord supplied with the set is connected to TEL LINE correctly.	1. If the telephone cord is working and there is no dial tone, try plugging a normal telephone into the wall socket. If the telephone is working, then install a new LIU PBA:
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200)

2. Listen for a CLICK sound when a key is pressed. *Note: Key sound must be set to "on" in GP 3, User Mode.*	2. If you cannot hear the Manual Dial CLICK sound, the OPE Assembly may be defective. Check and install a new OPE Assembly, PL 5.0 if necessary.

3. Check the connection of the HARNESS between the LIU and the Main PBA.	3. Check the Speaker connection and the harness between the LIU and the Main PBA, Install new parts as necessary:
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200)

4. Ensure the speaker is connected correctly.	4. Perform Tech mode, GP 4 - Modem Test. Check and install new parts as necessary:
	• Speaker
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.2 (Phaser 3200).
	• LIU PBA
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200).
	• Main PBA
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200).
	Note: Product supports MF DIAL type only.

17C Defective FAX SEND/RECEIVE

Description
FAX SEND/RECEIVE is not functioning.

Check and Cause	Solution

1. Check that you can hear a dial tone by pressing Manual Dial.	1. Check and install a new LIU PBA if necessary:
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200)

2. Check that you can hear a RECEIVE tone when MODEM testing in TECH Mode, GP 4.	2. Check and install a new main PBA if necessary:
	Main PBA
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200)

17D Defective FAX SEND

Description
RECEIVE is functioning, but FAX SEND is not functioning or received data is corrupt.

Check and Cause	Solution
1. Check for NOISE on the line. Press Manual Dial and listen.	1. If the line is noisy, inform the customer.
2. Check the cable between the set and the wall socket for damage.	2. Check the telephone line cord.

3. Check that the destination fax machine can receive forwarded faxes by using a different sending fax machine (preferably from the same wall socket).	3. Check and install a new LIU PBA:
	    - PL 1.0 (Workcentre PE220)
	    - PL 1.1 (Phaser 3200)

17E Defective FAX RECEIVE (1)

Description

FAX SEND is functioning, but RECEIVE is not functioning or the received data is corrupt.

Check and Cause	Solution
1. Check for NOISE on the line. Press Manual Dial and listen.	1. If the line is noisy, inform the customer.

2. Use a different fax machine to receive from the same sender (if possible on the same wall socket).	2. Check and install a new LIU PBA:
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)

17F Defective FAX RECEIVE (2)

Description

Received data is corrupted.

Check and Cause	Solution
1. Check for NOISE on the line. Press Manual Dial and listen.	1. If you can hear a noisy line when using Manual Dial, replace or repair the telephone line.

2. Ask sender to send to another fax machine (if possible connected to the same wall socket)	2. Check and install new parts as necessary:
	• LIU PBA
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)
	• Main PBA
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)

17G Defective FAX RECEIVE (3)

Description

The phone is ringing continuously, but the machine does not answer the call.

Check and Cause	Solution

1. Check that the RECEIVE Mode is set to FAX MODE.	1. Check and install new parts as necessary:
	• LIU PBA
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)
	• Main PBA
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)

17H Defective FAX RECEIVE (4)

Description

Received data is reduced by more than 50% in the printing.

Check and Cause	Solution
Check the FAX status of the forwarding side.	This is a problem with the sending fax machine. Inform the customer.

17I Defective Automatic Receiving

Description

The automatic receiving function is not working.

Check and Cause	Solution

1. Check that the RECEIVE Mode is set to FAX MODE.	1. If the RECEIVE Mode is set to the TEL MODE, reset it to the FAX MODE.
	2. Check and install new parts as necessary:
	• LIU PBA
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)
	• Main PBA
	  - PL 1.0 (Workcentre PE220)
	  - PL 1.1 (Phaser 3200)

18 Abnormal Noise RAP

Description

There is noise from the ADF when copying.

Check and Cause	Solution
1. Check the Scanner Motor, gearbox and rollers.	1. Check for correct assembly of gears and motor. Ensure no parts are damaged and there are no foreign objects in the mechanism or scan path. Check and install new parts as necessary, PL 2.

2. Check the Motor Driver on Driver PBA.	2. Check and install new parts as necessary:
	• Main PBA
	   - PL 1.0 (Workcentre PE220)
	   - PL 1.1 (Phaser 3200) and
	• ADF PBA, PL 2.

19 Scanning RAP

19A PC Scanning Problems

Description

Unable to scan using a PC.

Check and Cause	Solution
1. Check the Cable (USB or Parallel) is properly connected and that the machine can print correctly.	1. Reconnect the PC and machine, replace any faulty cables. If using a parallel cable, check that the parallel port is properly configured. Ask the customer to check the BIOS of the PC to ensure that there are no IRQ conflicts and to check that the input/output range is 0378.
2. Check that the driver is installed properly.	2. If printing is OK check that the Scan driver is also installed (Refer to User's Manual.)

3. Check that the copy function operates normally.	3. Check and install new parts as necessary:
	• Main PBA
	   - PL 1.0 (Workcentre PE220)
	   - PL 1.1 (Phaser 3200) and
	• CIS, PL 4

19B Poor Quality of PC Scanned images

Description

Poor quality of scanned to PC images.

Check and Cause	Solution
1. Check if the resolution is set too low in PC Scan options. (Refer to the User Manual.)	1. Teach the user about scanner resolution – refer to the User Guide.
2. Use TECH mode, GP 4, to carry out a shading test and examine the waveform printout.	2. If the CIS waveform form is abnormal, check and install a new CIS, PL 4 if necessary.

20 Print Cartridge Problems RAP

This section explains messages on the LCD that are related to the data stored in the EEPROM in the print cartridge.

Toner Low

- Explanation: The amount of toner remaining is less than 10%. The print cartridge is almost empty or at end of life.
- Solution: Replace the toner cartridge.
- PL 1.0 - Workcentre PE220
- PL 1.1 - Phaser 3200

Toner Empty

- Explanation: The print cartridge is empty
- Solution: Replace the toner cartridge.
- PL 1.0 - Workcentre PE220
- PL 1.1 - Phaser 3200

Drum Warning

- Explanation: This message appears when the OPC drum is nearing the end of its life (14,000 pages). This means that the life of the mechanical parts in the print cartridge has expired (this is not an indication of toner remaining).
- Solution: After printing about 15,000 pages, in a worst case scenario, the waste toner collector might overflow and it may cause the system to fail. Also after 15,000 pages the OPC drum surface will be becoming worn and print quality will degrade, print images will become misty. It is therefore necessary to replace the print cartridge even though there may be toner left in it. When this message occurs there are approximately 1,000 pages left.

Replace Drum

- Explanation: The print cartridge mechanical life is expired.
- Solution: Replace the toner cartridge.
- PL 1.0 - Workcentre PE220
- PL 1.1 - Phaser 3200

21 Software Problems RAP

21A The machine is not working (1)

Description

While Power turned on, the machine is not working in print mode.

Check and Cause	Solution
1. Ensure that the customer knows how to install the correct printer driver and to select the machine as the default printer.	1. Refer the customer to the User Guide.
2. Perform the test, GP 4.	2. If the test print works that means there are no problems in the machine itself. If the test printing does not work that means the machine is faulty and the problem is not due to computer software or driver settings.
3. Check that the PC and the machine are properly connected and that the print cartridge is installed correctly.	3. Replace the printer cable. If the problem is not solved even after the cable is replaced, check the amount of the remaining toner.
4. Printing is not working in Windows.	4. Check if the connection between PC and printer port is correct. Uninstall the driver, then re-install new drivers. Refer to Xerox.com. Ask the customer to check the BIOS of the PC to ensure that there are no IRQ conflicts and to check that the input/output range is 0378.
5. Check that the printer cable is directly connected to the machine.	5. 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.

21B The machine is not working (2)

Description

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

Check and Cause	Solution
1. Ensure that the customer knows how to install the correct printer driver and to select the machine as the default printer.	1. Refer the customer to the User Guide.
2. Ensure you have sufficient free hard disk space for the temporary work files created during printing.	2. 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.
3. Printing error occurs even if there is enough space in the hard disk.	3. The connection of the cable and printer port is not correct. Check that the cable is properly connected. Ask the customer to check the BIOS of the PC to ensure that there are no IRQ conflicts and to check that the input/output range is 0378.
4. Check the parallel-port-related items in the BIOS.	4. For the printer port, select ECP. SPP and normal modes support 8-bit data transfer. ECP mode supports 12-bit data transfer.
5. Reboot the system to print.	5. If the regular font is not printing, the cable or the printer driver may be defective. Turn the PC and machine 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 the cable must be defective so replace the cable with new one.

21C Abnormal Printing

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 in the BIOS.	1. Ask the customer to ensure that ECP (best) or SPP is selected in the BIOS setup.
2. Printer Driver Error.	2. Ensure that the correct driver is loaded. Use the driver supplied on the CD or down-loaded from the 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 un-installed 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.

3. Image Quality

7. Wiring Data

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WD 1 System Block Diagram (Workcentre PE220)

WD 2 PJ Locations (Workcentre PE220)

HVPS

CN3

SW1
COVER_M_FRONT

CN1

ADF

CN1

CN2

SMPS

SW 2
COVER_M_JAM

CON 1

CON 2

OPE

CN4

CN3

CN2

CN1

LIU

CN1

MJ1

MJ2

MAIN

CN4   CN2   CN3   CN7   CN1   CN5   CN6

CN8

CN9

CN10

CN14   CN15   CN16   CN13

WD 3 Connection Diagram (1/2) (Workcentre PE220)

MAIN BOARD	CN1		ADF
	1	GND	
	2	+24V	
	3	+5V	
	4	GND	
	5	ADF_B_IN1	
	6	SCAN_MOT_PHB	
	7	SCAN_MOT_PHA	
	8	ADF_B_NO	
	9	ADF_A_NO	
	10	ADF_A_NI	
	11	GND	
	12	DOC_DET	
	13	GND	
	14	DOC_REG	
	15	GND	
	16	DOC_POS	

CN2 — FUSER / THERMISTOR
1 THERM 1
2 THERM 2

CN3 — DEV (SENSOR)
1 SENSE
2 GND

CN4 — HYPER
1 +3.3v
2 HYPER_TX
3 HYPER_RX
4 GND

CN5 — PLATEN MOTOR
1 OUT 1A
2 OUT 1B
3 OUT 2A
4 OUT 2B

CN6 — CIS
1 CIS_SIG
2 CIS_C5
3 GND
4 +3.3V
5 C25_C32
6 C25_SI
7 C25_CLK
8 +12V
9 B_LED
10 G_LED
11 R_LED
12 GND

CN8 — OPE
1 GND
2 +5V
3 OPE_RX
4 OPE_RESET
5 OPE_TX
6 HOME_DET
7 BAT

CN4 — BATTERY
1 POS
2 NEG

CN2 — HOME SENSOR
1 HOME_DET
2 GND
3 +5V

CN1 — DISPLAY
1 GND
2 +5V
3 RC
4 LCD_RS
5 LCD_RW
6 LCD_E
7 LCD_D0
8 LCD_D1
9 LCD_D2
10 LCD_D3
11 LCD_D4
12 LCD_D5
13 LCD_D6
14 LCD_D7

WD 4 Connection Diagram (2/2) (Workcentre PE220)

MAIN BOARD	CN9		
	1	OUT 1A	MAIN MOTOR
	2	OUT 1B	
	3	OUT 2A	
	4	OUT 2B	
	CN10		
	1	GND	LSU
	2	+5V	
	3	RC	
	4	LCD_RS	
	5	LCD_RW	
	6	LCD_E	
	7	LCD_D0	
	8	LCD_D1	
	9	LCD_D2	
	10	LCD_D3	
	11	LCD_D4	

CN13 — HVPS / CN3 — FAN

			CN3		
1	+24V S1	HVPS	1	CONTROL	FAN
2	+24V S1		2	N/C	
3	+24V S2		3	+24V	
4	+24V S2				
5	GND				
6	+3.3V				
7	P_EXIT				
8	+5V				
9	THV_EN				
10	THV_PWM				
11	THV_READ				
12	MHV_PWM				
13	FAN				
14	BIAS_PWM				
15	CRU_DET				
16	P_EMPTY				
17	+24V S2	SMPS			
18	+24V				
19	+24V S1				
20	+24V S1				
21	+5V				
22	GND				
23	GND				
24	P_FEED				
25	FUSER_ON				
26	N/C				

AC INPUT / MAIN SWITCH

			CN3		
			1	ACL	FUSER
			2	N/C	
			3	ACN	

CN14		
1	MODEM_RX	
2	GND	
3	MODEM_TX1	
4	MODEM_TX2	
5	GND	
6	REMOTE	
7	CML	
8	EXT_PHONE	
9	RING	
10	+5V	
11	DP	

CN15		
1	VO1	SPEAKER
2	VO2	

CN16		
1	+24V S2	CLUTCH
2	CLUTCH_ON	

CN17		
1	+5V	LSU SWITCH
2	N/C	
3	CRU_DET	

WD 5 Main Board (1/7) (Workcentre PE220)

WD 6 Main Board (2/7) (Workcentre PE220)

WD 7 Main Board (3/7) (Workcentre PE220)

WD 8 Main Board (4/7) (Workcentre PE220)

WD 9 Main Board (5/7) (Workcentre PE220)

WD 10 Main Board (6/7) (Workcentre PE220)

WD 11 Main Board (7/7) (Workcentre PE220)

WD 12 LIU (Workcentre PE220)

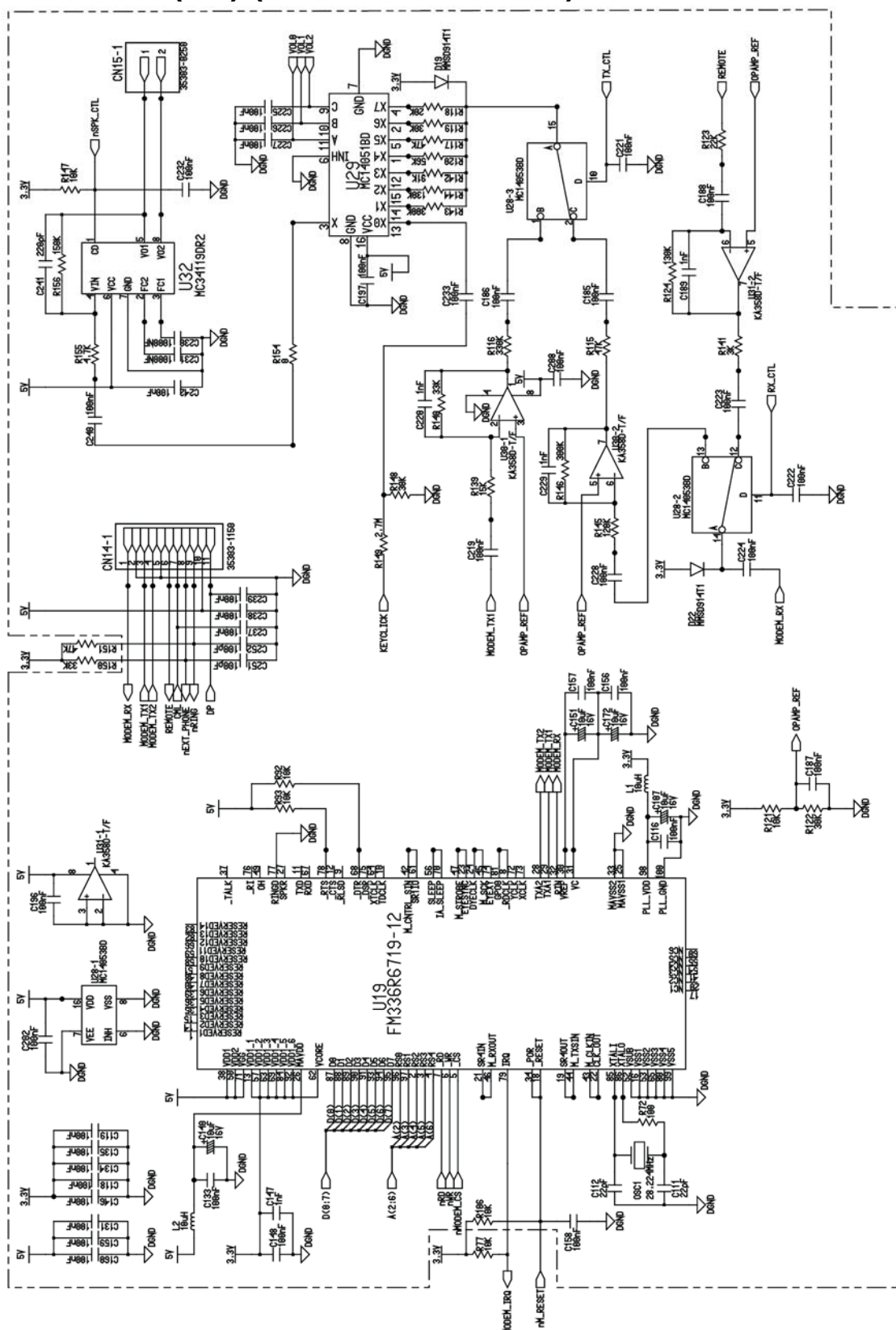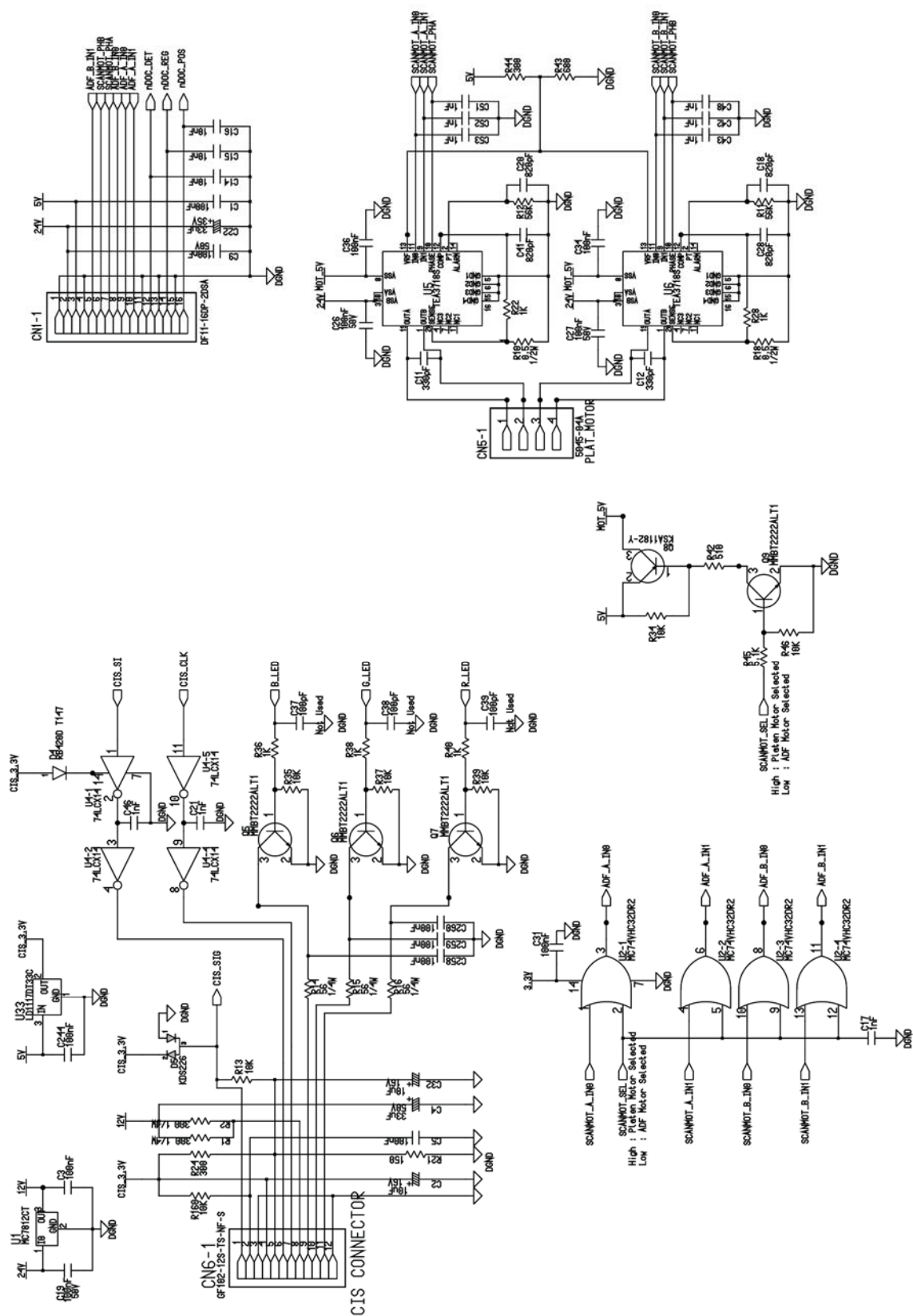| Location		EU/S-AFRICA	RUSSIA	Australia
PCB		JC41-00276A	JC41-00276A	JC41-00276A
PBA		JC92-01684A	JC92-01684B	JC92-01684C
C1		100nF/50V	100nF/50V	100nF/50V
C2		0.33uF/50V	4.7uF/50V	0.22uF/50V
C3		0.47uF/50V	NONE	0.47uF/50V
C8		2.2uF/50V	1uF/50V	0.33uF/50V
C19		10nF/500V	NONE	NONE
R4		680ohm,1/4W	300ohm,1/4W	1.2Kohm,1/4W
R7		100ohm, 1/4W	330ohm, 1/4W	330ohm, 1/4W
R9		200ohm,1/4W	300ohm,1/4W	100ohm,1/4W
R11		12ohm, 1/4W	47ohm, 1/4W	47ohm, 1/4W
R10		100ohm, 1/4W	NONE	NONE
Q3		KSC-945	NONE	NONE
L1		NONE	NONE	NONE
L2		JUMPER	NONE	NONE
L3		JUMPER	NONE	NONE
MIS2		NONE	NONE	NONE

WD 13 OPE (Workcentre PE220)

WD 14 LSU

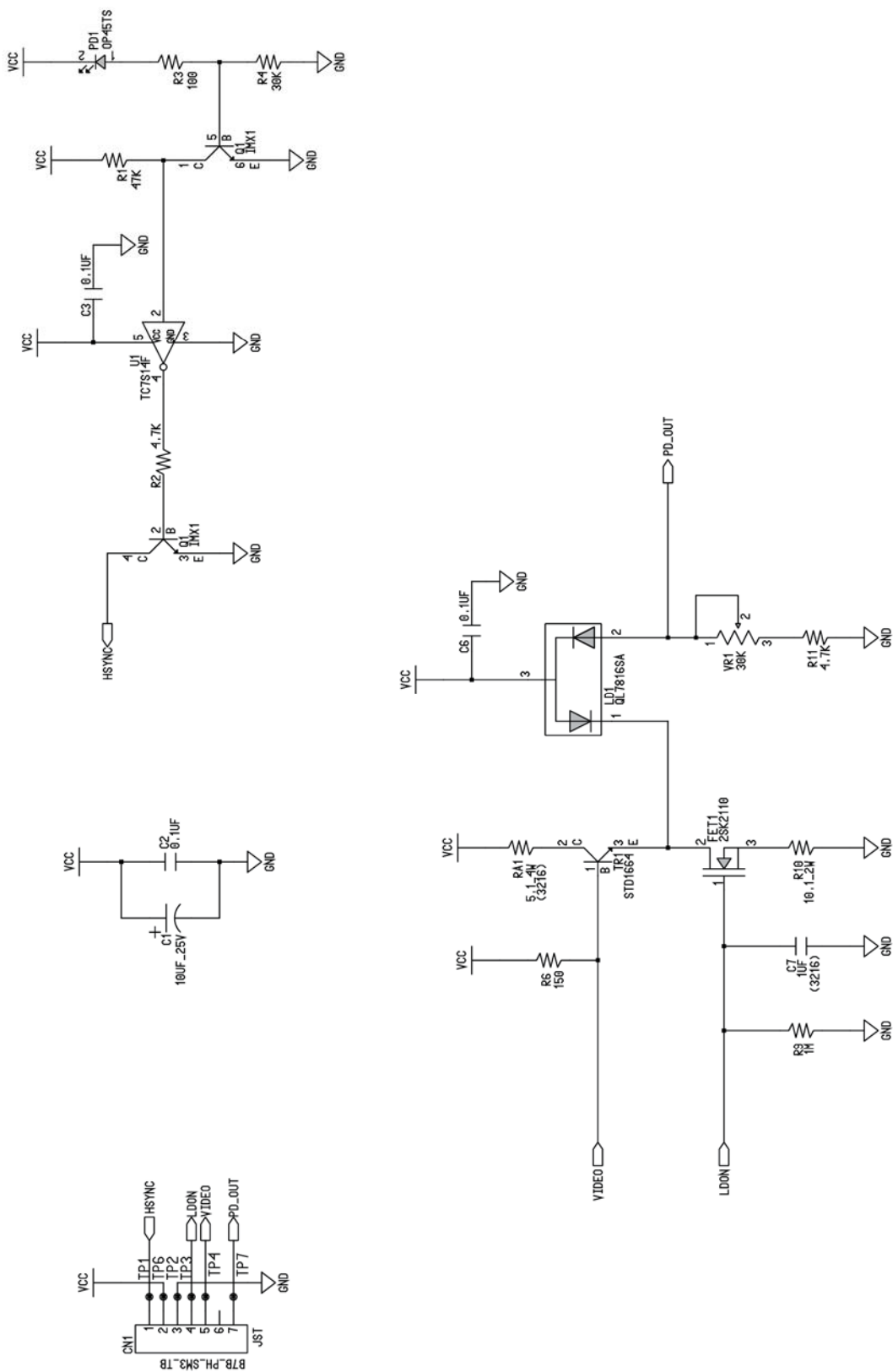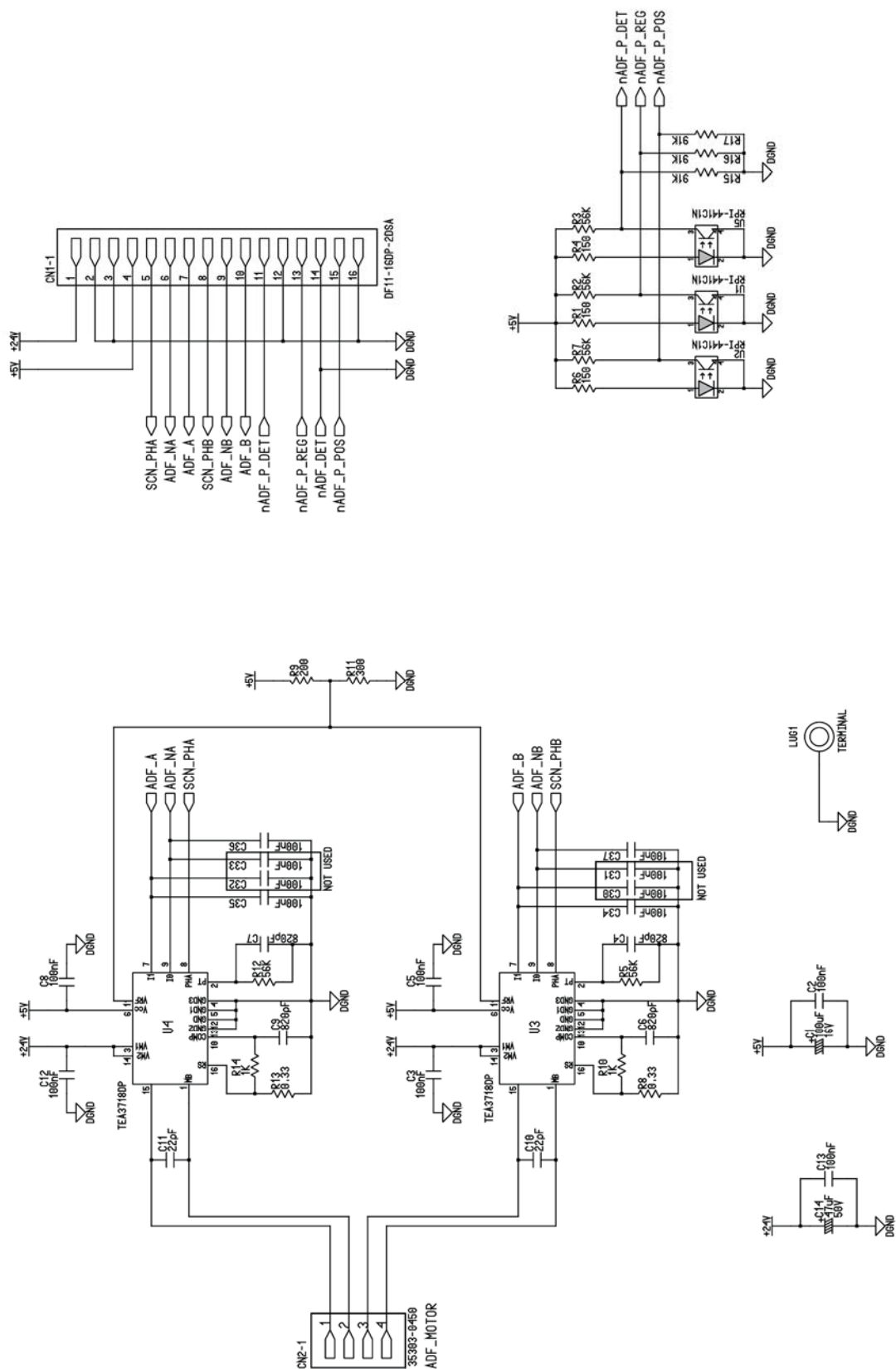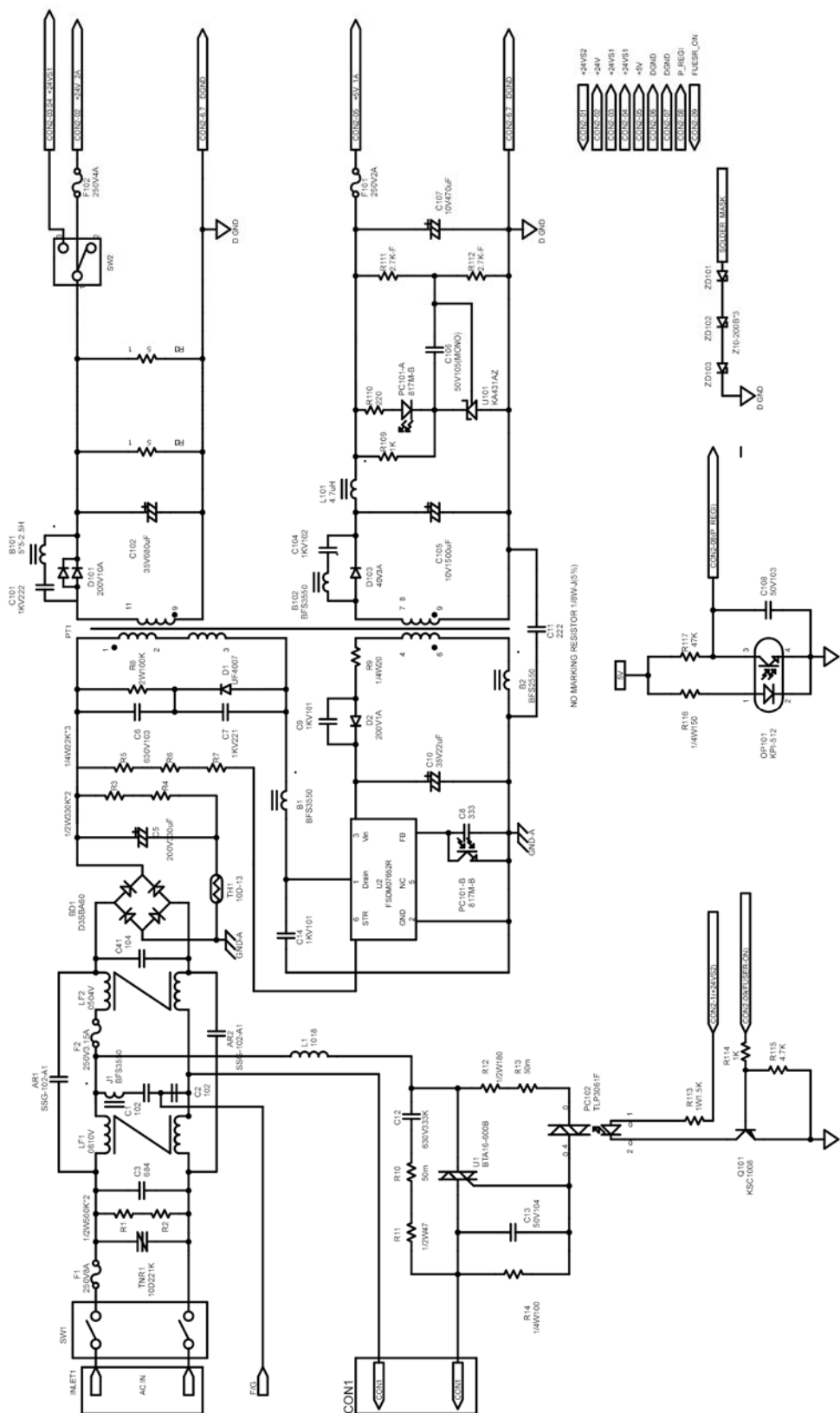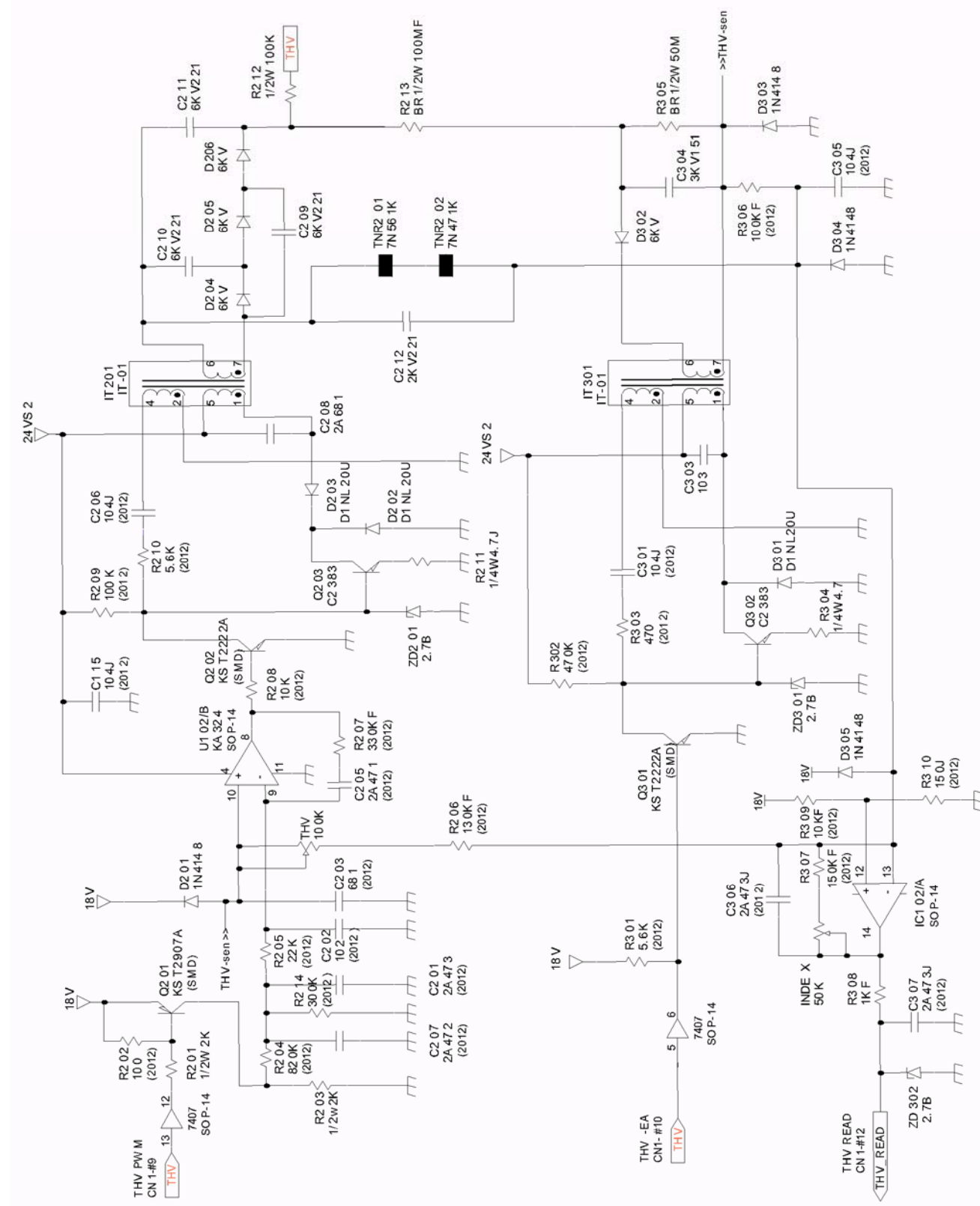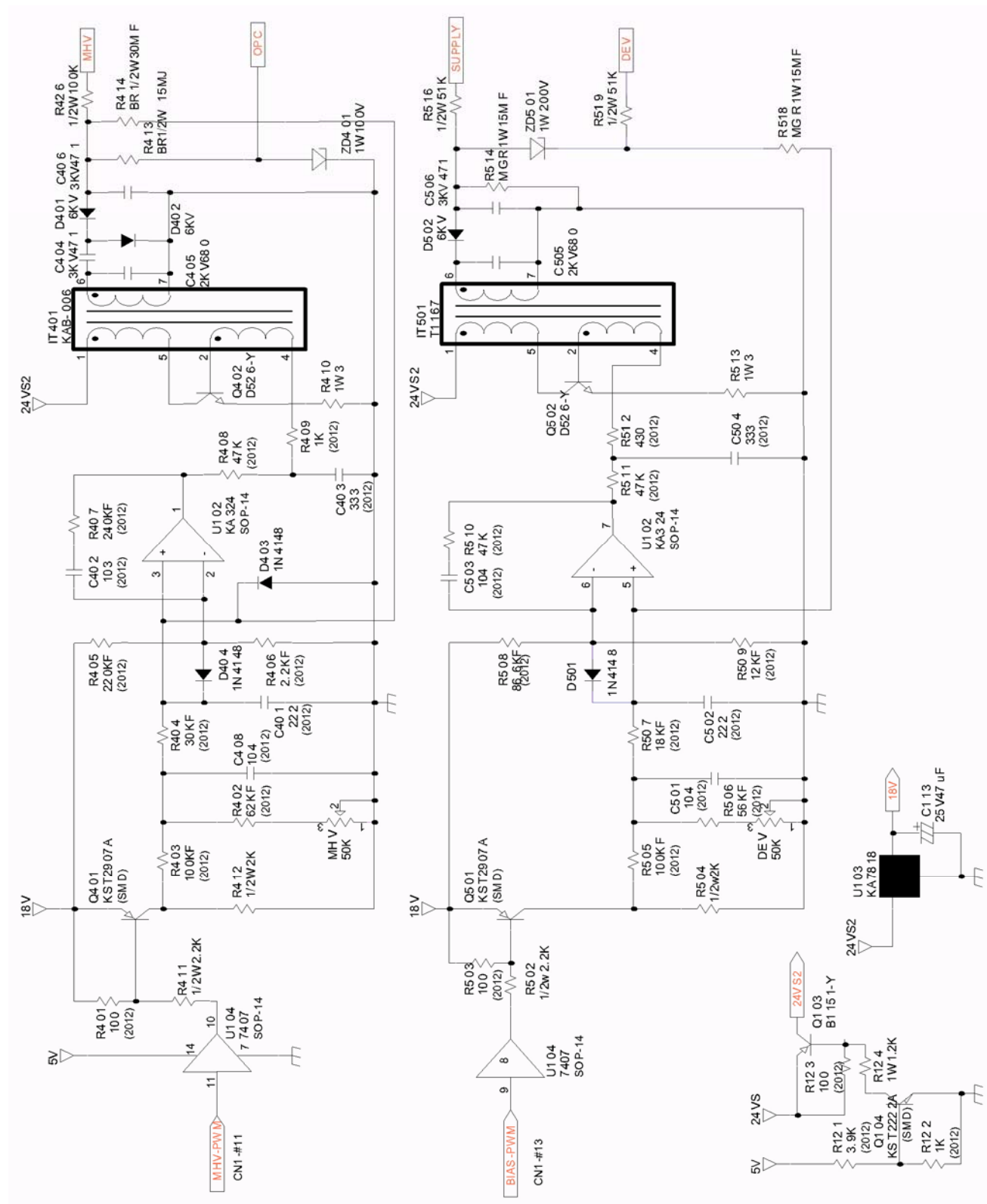# WD 15 ADF
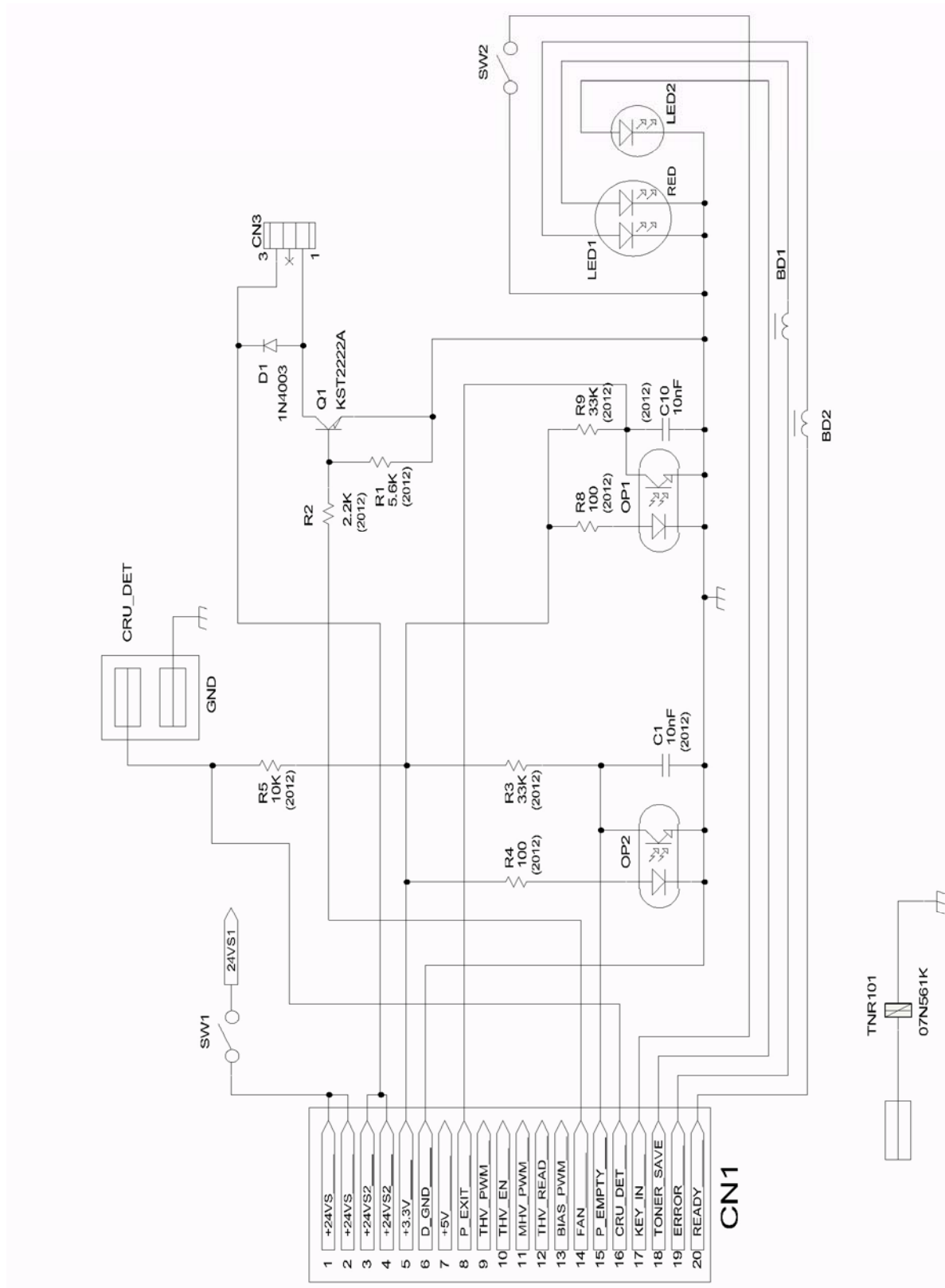
WD 16 SMPS (Workcentre PE220)
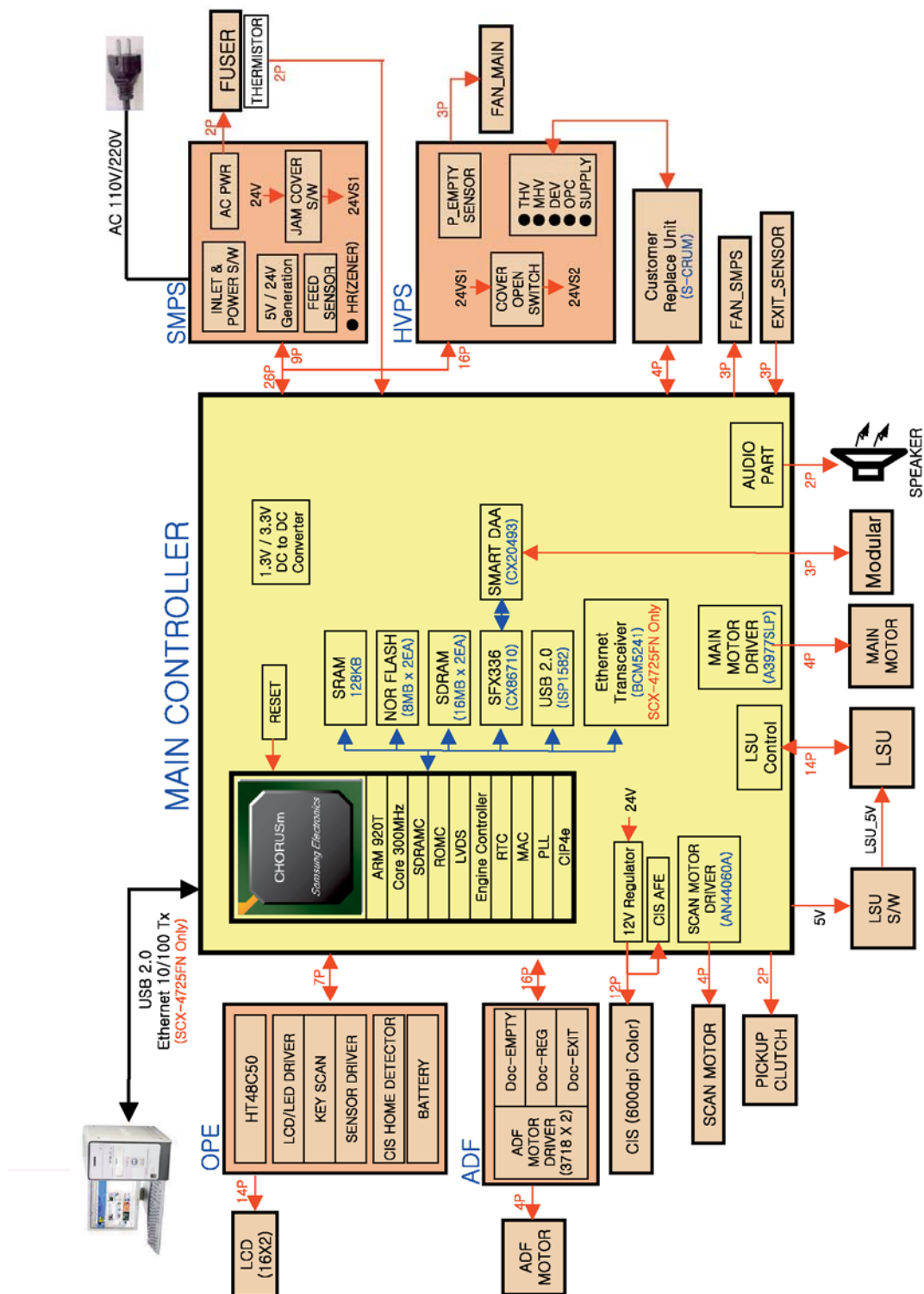
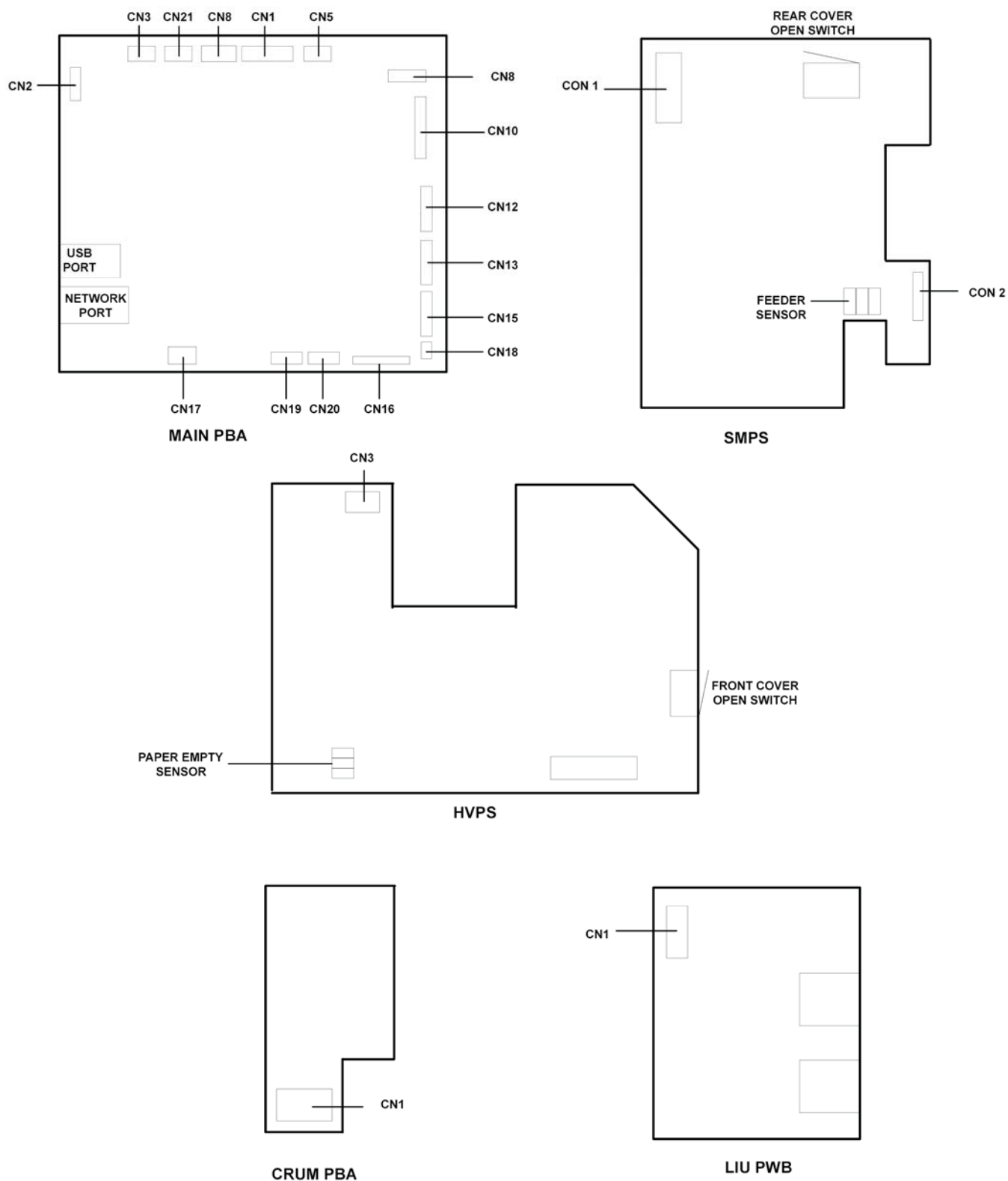# WD 17 HVPS (1/3) (Workcentre PE220)

WD 18 HVPS (2/3) (Workcentre PE220)
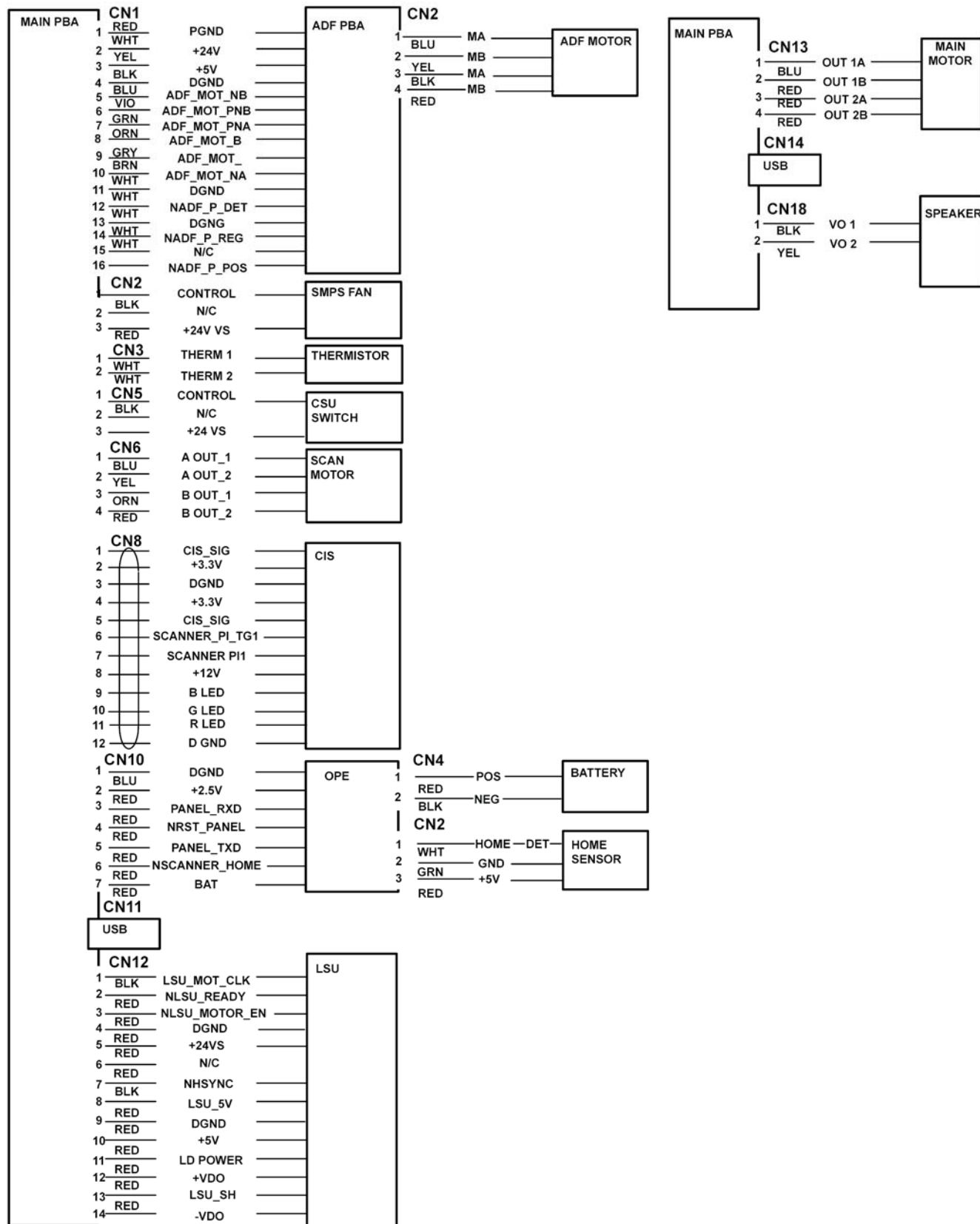
WD 19 HVPS (3/3) (Workcentre PE220)

WD 20 System Block Diagram (Phaser 3200)

WD 21 PJ Locations (Phaser 3200)

MAIN PBA

SMPS

HVPS

CRUM PBA

LIU PWB

WD 22 Connection Diagram (1/2) (Phaser 3200)

MAIN PBA	CN1			ADF PBA
	1	RED	PGND	
	2	WHT	+24V	
	3	YEL	+5V	
	4	BLK	DGND	
	5	BLU	ADF_MOT_NB	
	6	VIO	ADF_MOT_PNB	
	7	GRN	ADF_MOT_PNA	
	8	ORN	ADF_MOT_B	
	9	GRY	ADF_MOT_	
	10	BRN	ADF_MOT_NA	
	11	WHT	DGND	
	12	WHT	NADF_P_DET	
	13	WHT	DGNG	
	14	WHT	NADF_P_REG	
	15	WHT	N/C	
	16		NADF_P_POS	

CN2
1	BLU	MA
2		MB
3	YEL	MA
4	BLK	MB
	RED	

→ ADF MOTOR

MAIN PBA

CN13
1	BLU	OUT 1A
2	RED	OUT 1B
3	RED	OUT 2A
4	RED	OUT 2B

→ MAIN MOTOR

CN14 — USB

CN18
| 1 | BLK | VO 1 |
| 2 | YEL | VO 2 |

→ SPEAKER

CN2
2	BLK	CONTROL	SMPS FAN
		N/C	
3	RED	+24V VS	

CN3
| 1 | WHT | THERM 1 | THERMISTOR |
| 2 | WHT | THERM 2 | |

CN5
1		CONTROL	CSU SWITCH
2	BLK	N/C	
3		+24 VS	

CN6
1	BLU	A OUT_1	SCAN MOTOR
2	YEL	A OUT_2	
3	ORN	B OUT_1	
4	RED	B OUT_2	

CN8
1		CIS_SIG	CIS
2		+3.3V	
3		DGND	
4		+3.3V	
5		CIS_SIG	
6		SCANNER_PI_TG1	
7		SCANNER PI1	
8		+12V	
9		B LED	
10		G LED	
11		R LED	
12		D GND	

CN10
1		DGND	OPE
2	BLU	+2.5V	
3	RED	PANEL_RXD	
4	RED	NRST_PANEL	
5	RED	PANEL_TXD	
6	RED	NSCANNER_HOME	
7	RED	BAT	
	RED		

CN4
| 1 | RED | POS | BATTERY |
| 2 | BLK | NEG | |

CN2
1	WHT	HOME—DET	HOME SENSOR
2	GRN	GND	
3	RED	+5V	

CN11 — USB

CN12
1	BLK	LSU_MOT_CLK	LSU
2		NLSU_READY	
3	RED	NLSU_MOTOR_EN	
4	RED	DGND	
5	RED	+24VS	
6	RED	N/C	
7	RED	NHSYNC	
8	BLK	LSU_5V	
9	RED	DGND	
10	RED	+5V	
11	RED	LD POWER	
12	RED	+VDO	
13	RED	LSU_SH	
14	RED	-VDO	

WD 23 Connection Diagram (2/2) (Phaser 3200)

WD 24 Main Board (1/12) (Phaser 3200)

WD 25 Main Board (2/12) (Phaser 3200)

WD 26 Main Board (3/12) (Phaser 3200)
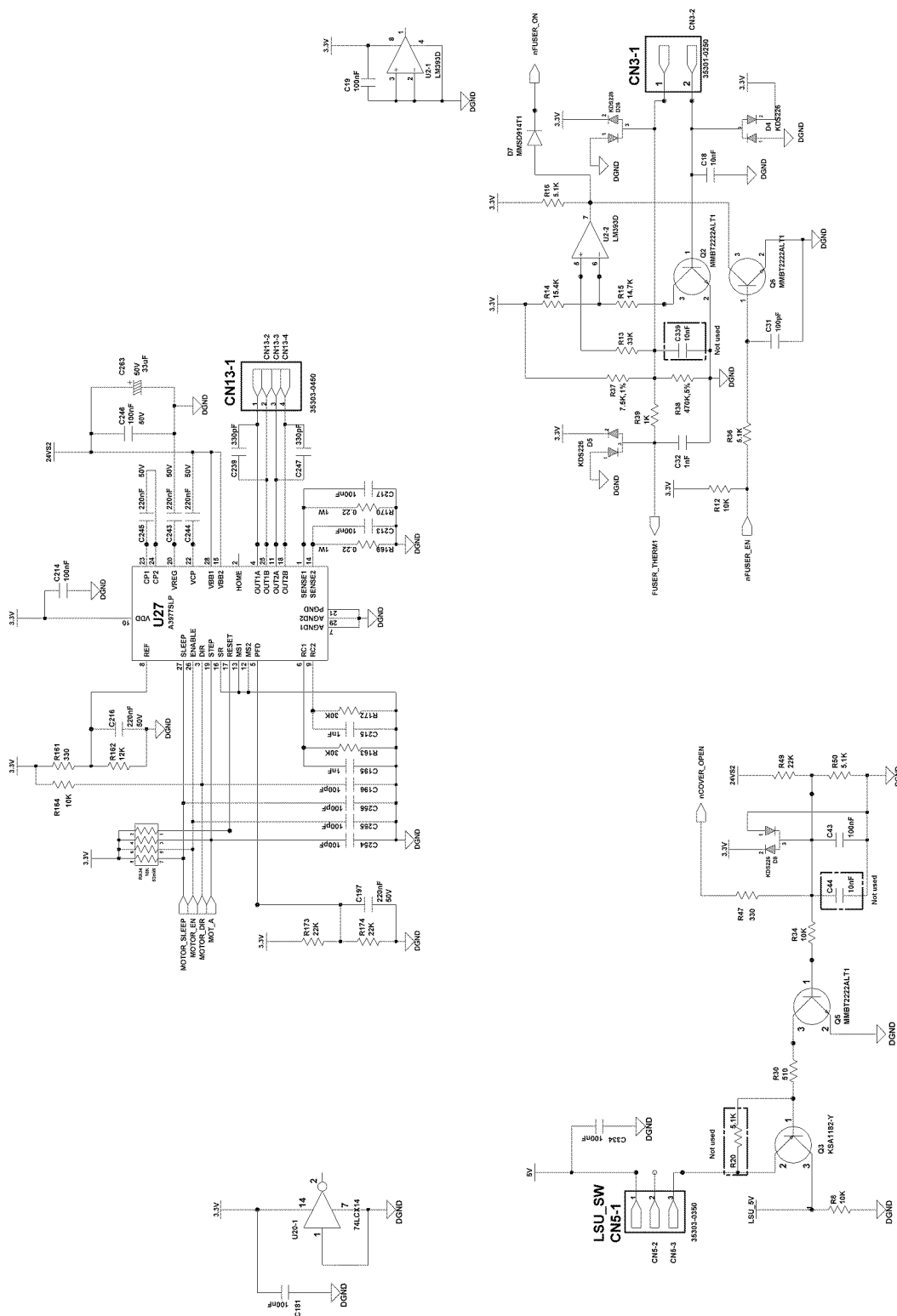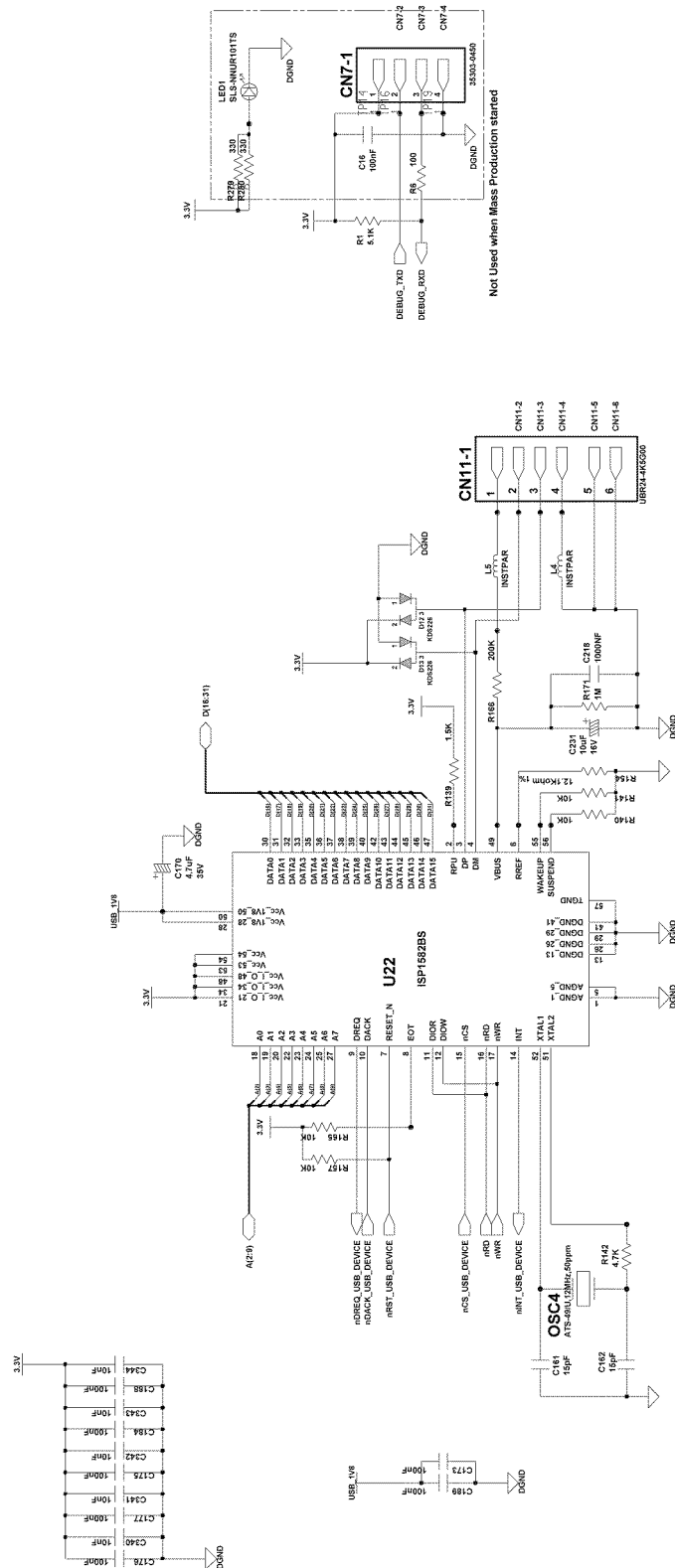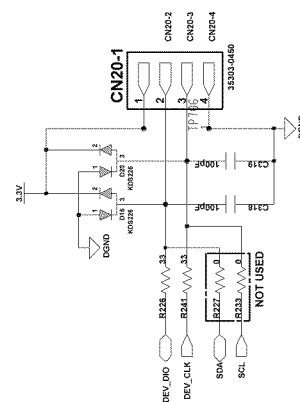
WD 27 Main Board (4/12) (Phaser 3200)
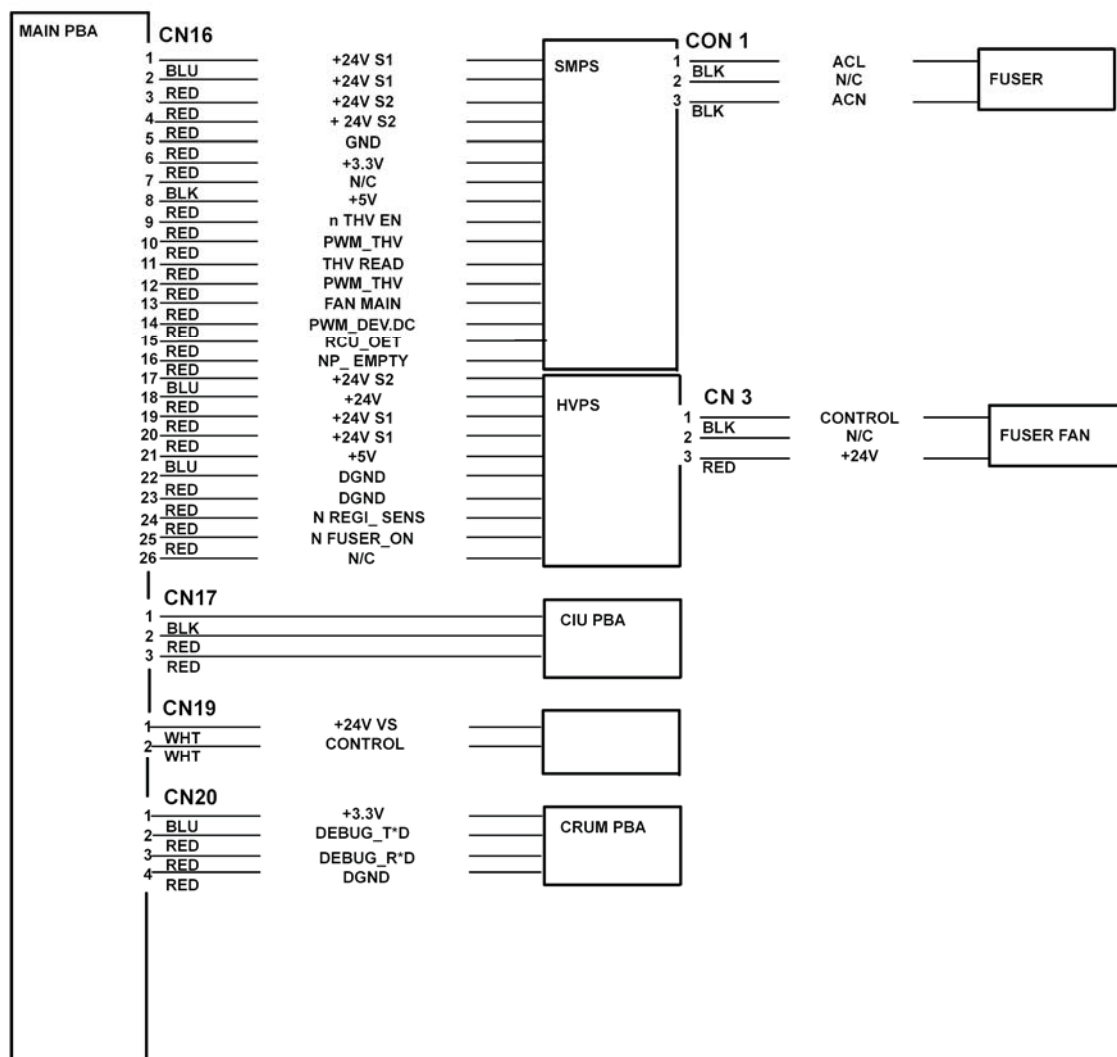
WD 28 Main Board (5/12) (Phaser 3200)
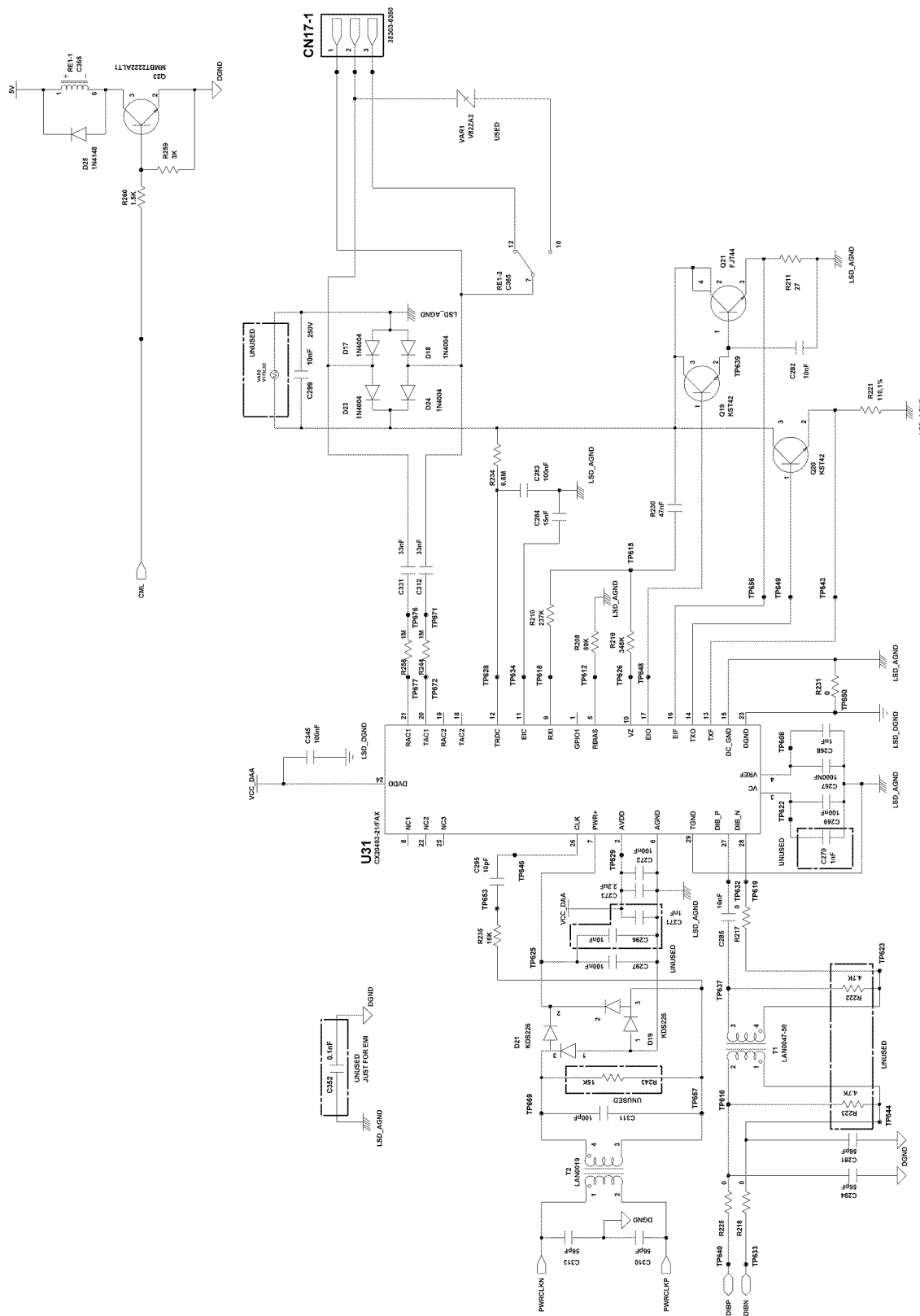
WD 29 Main Board (6/12) (Phaser 3200)

WD 30 Main Board (7/12) (Phaser 3200)

WD 31 Main Board (8/12) (Phaser 3200)

WD 32 Main Board (9/12) (Phaser 3200)

WD 33 Main Board (10/12) (Phaser 3200)

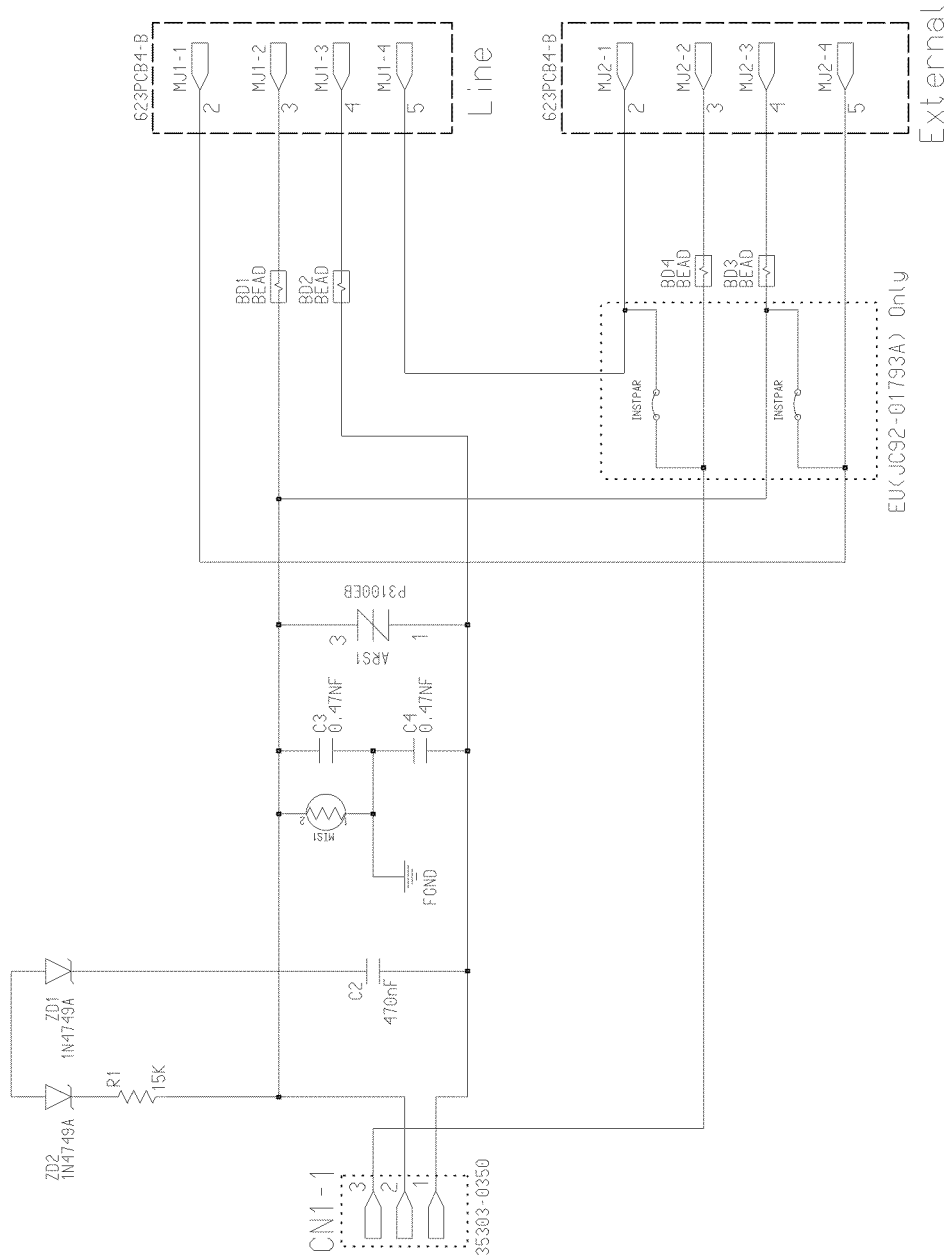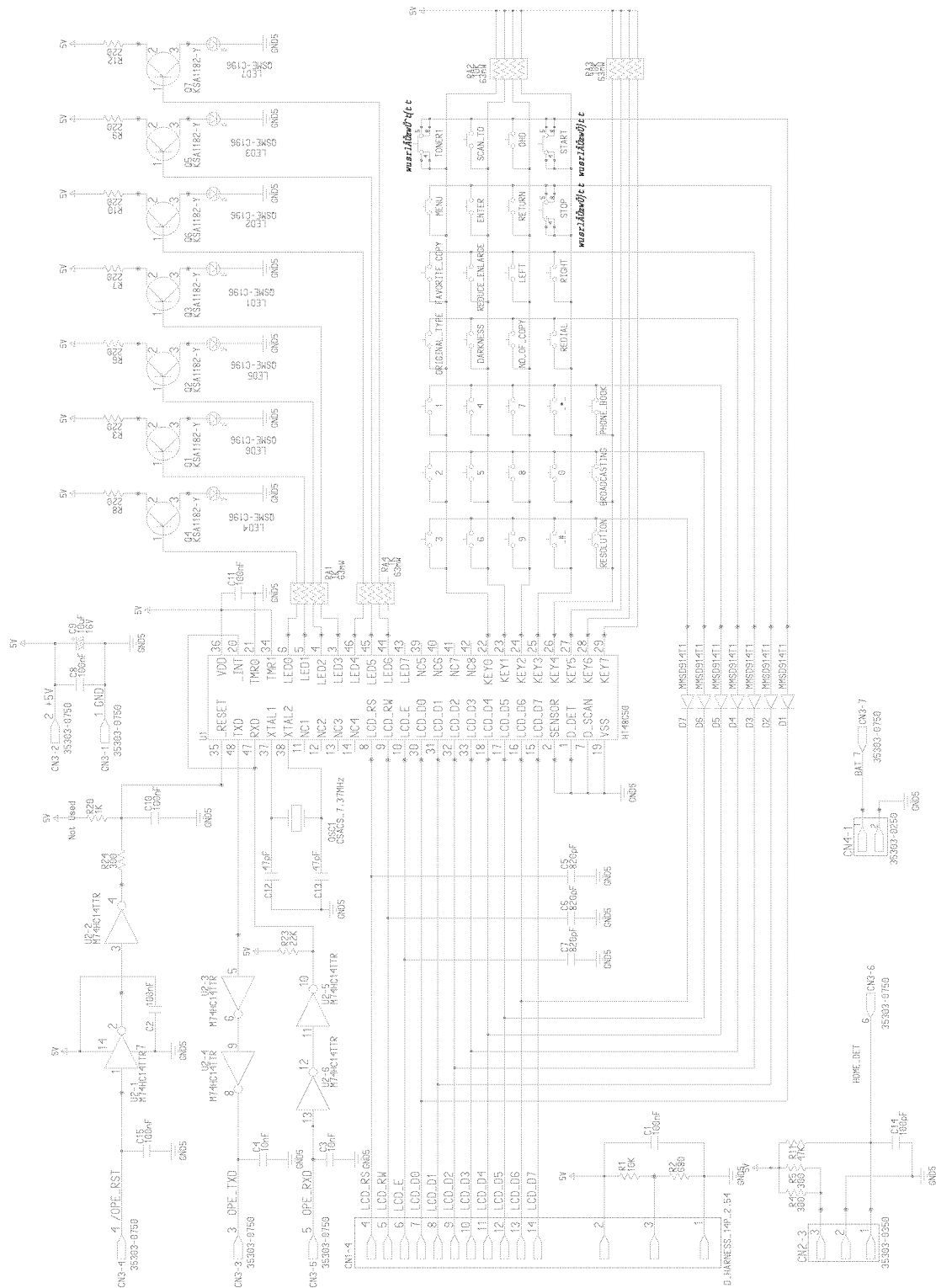# WD 34 Main Board (11/12) (Phaser 3200)

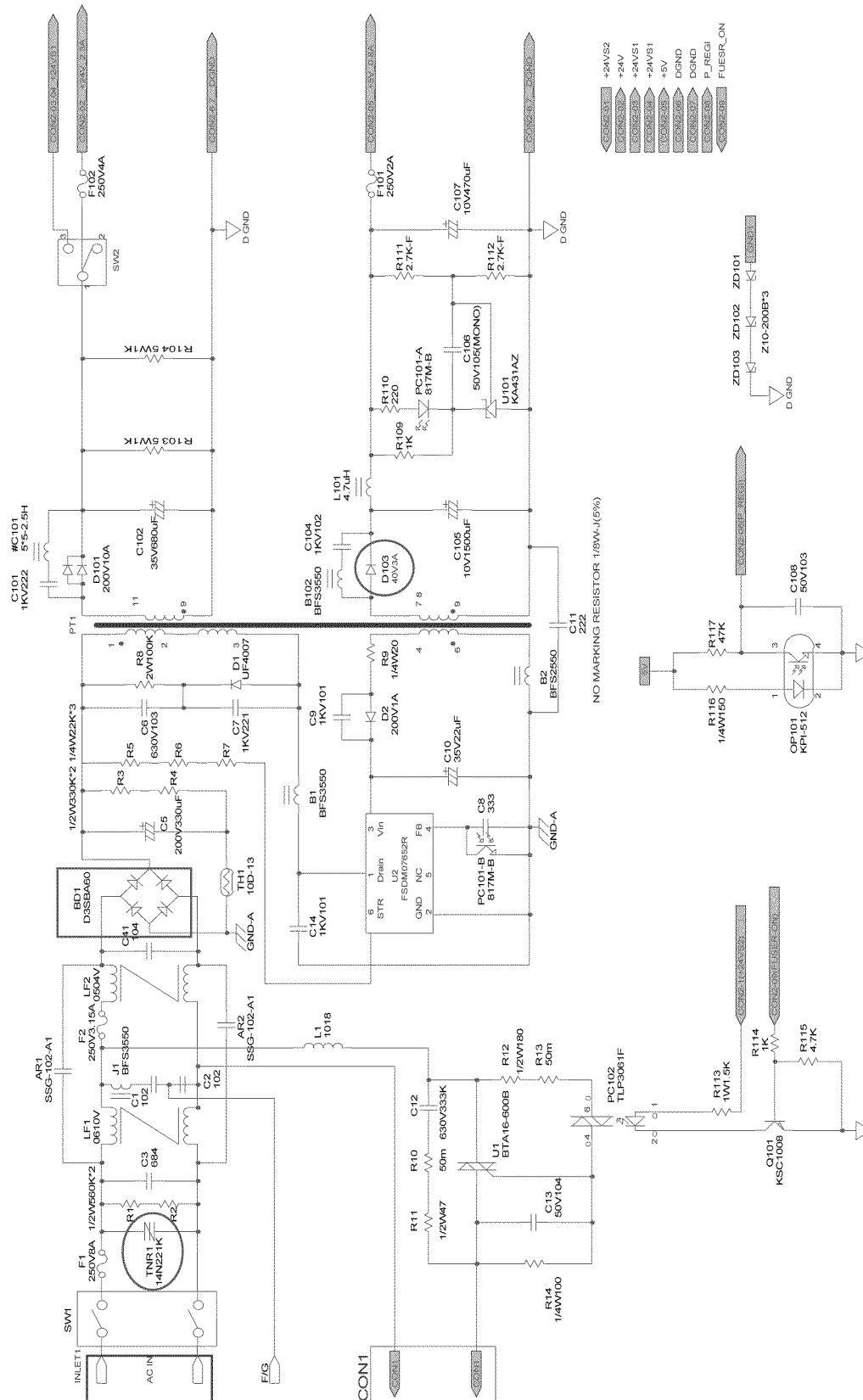# WD 35 Main Board (12/12) (Phaser 3200)
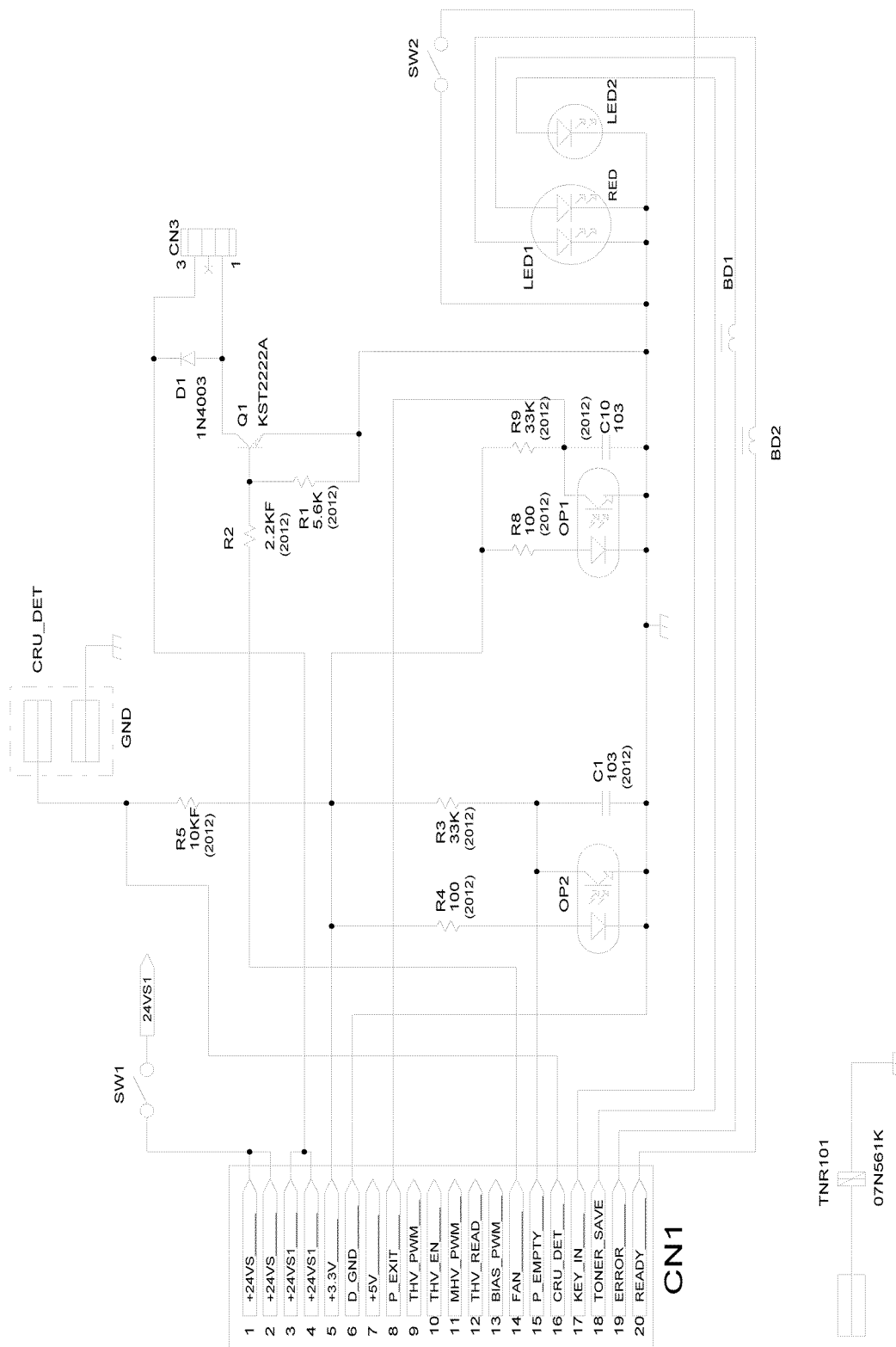
WD 36 LIU (Phaser 3200)

WD 37 OPE (Phaser 3200)

WD 38 SMPS (1/2) (Phaser 3200)

WD 39 SMPS (1/2) (Phaser 3200)

WD 40 HVPS (1/3) (Phaser 3200)
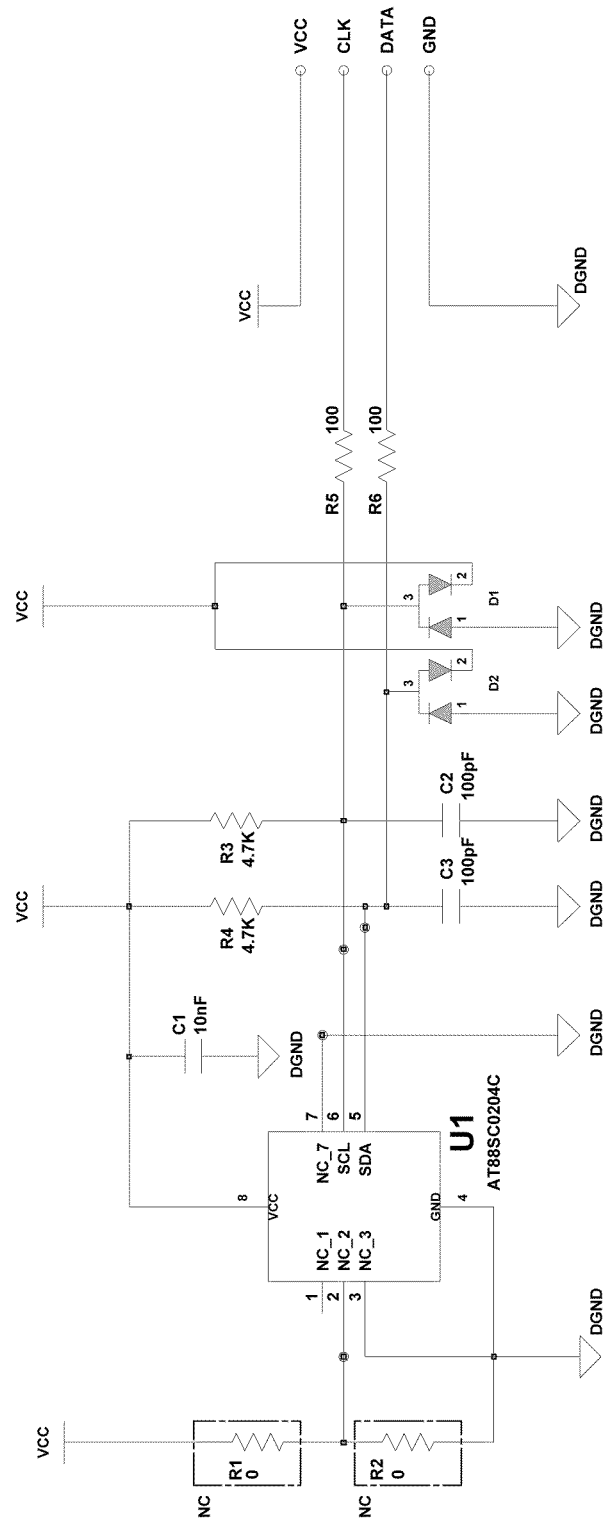
WD 41 HVPS (2/3) (Phaser 3200)

WD 42 HVPS (3/3) (Phaser 3200)

WD 43 CRUM PBA (Phaser 3200)

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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:

X

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]

Log Sheet

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