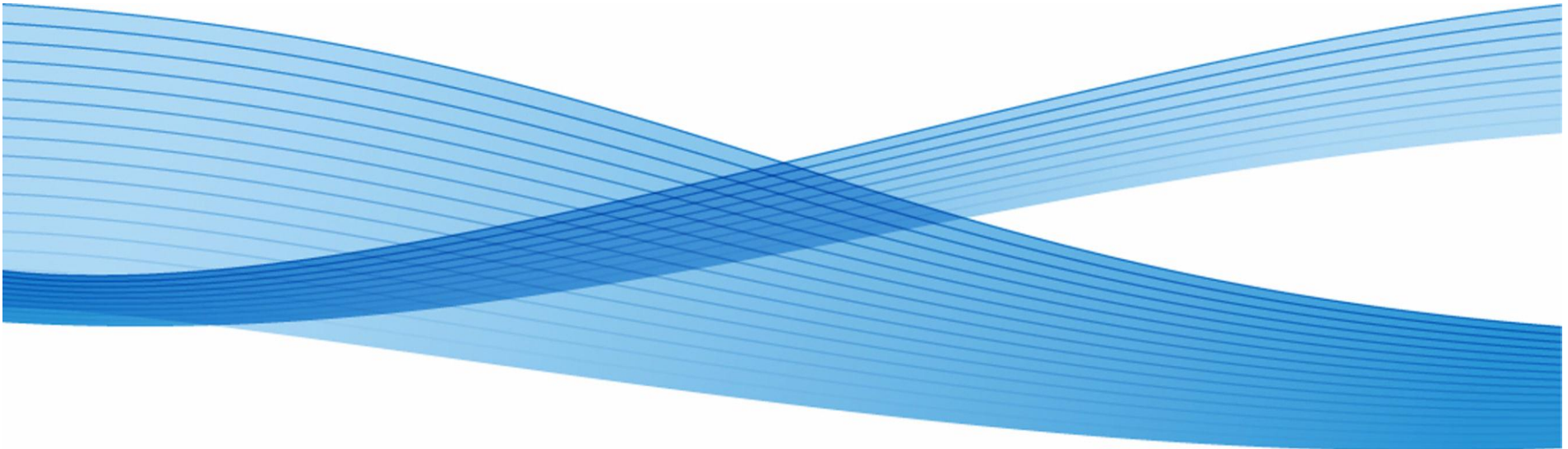# Xerox® Phaser® 3020
Service Manual

Xerox® Phaser® 3020 Printer Service Manual

Service Documentation

Xerox® Phaser® 3020 Printer Service Manual

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While Xerox has tried to make the documentation accurate, Xerox will have no liability arising out of any inaccuracies or omissions.

WARNING

This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions documentation, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to subpart J of part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user, at his own expense, will be required to correct the interference.

DANGER: Cet équipement génère, utilise et peut émettre des fréquences radio, et, s'il n'est pas installé et utilisé selon les recommandations du manuel d'instructions, peut causer des interférences aux communications radio. Il a été testé et jugé conforme aux limites des systèmes de catégorie A, conformément à la partie 15 de l'alinéa J des règlements FCC, établis pour protéger contre de telles interférences pendant le fonctionnement en milieu commercial. Dans une zone résidentielle, il peut causer des interférences; dans ce cas, l'utilisateur devra corriger le problème à ses propres frais.

Introduction

About This Documentation

Introduction

The Xerox® Phaser® 3020 Service Manual is part of the multinational documentation for the Xerox® Phaser® 3020 Printer. It is structured in standard Xerox service documentation format. This manual is the primary document used for diagnosing, repairing, maintaining, and troubleshooting these systems. The Service Manual is the controlling publication for a service call. Information on using this document is found in the Introduction section. To ensure understanding of this product, complete the Xerox Service Training Program for this particular printer.

Organization

The Xerox® Phaser® 3020 Printer Service Manual is organized and defined within the following sections:

Section 1 Service Call Procedures

This section contains procedures that determine what actions are to be taken during a service call on the machine and in what sequence they are to be completed. This is the entry level for all service calls.

Section 2 Status Indicator RAPs

This section contains the diagnostic aids for troubleshooting the Fault Code and non-Fault Code related faults (with the exception of image quality problems).

Section 3 Image Quality Repair Analysis Procedures

This section contains the diagnostic aids for troubleshooting any image quality problems, as well as image quality specifications and image defect samples.

Section 4 Repairs and Adjustments

This section contains the Adjustment and Repair procedures.

Repairs include procedures for removal and replacement of parts which have the following special conditions:

- When there is a personnel or machine safety issue.
- When removal or replacement cannot be determined from the exploded view of the Parts List.
- When there is a cleaning or a lubricating activity associated with the procedure.
- When the part requires an adjustment after replacement.
- When a special tool is required for removal or replacement.

Use the repair procedures for the correct order of removal and replacement, for warnings, cautions, and notes.

Adjustments include procedures for adjusting the parts that must be within specification for the correct operation of the system.

Use the adjustment procedures for the correct sequence of operation for specifications, warnings, cautions and notes.

Section 5 Parts List

This section consists of a series of illustrations and an associated parts listing. Any part that is spared or any part that must be removed to access a spared part is illustrated. Common hardware is shown as a letter callout.

Section 6 General Procedures and Information

This section contains general information, change tag information, and general procedures.

Section 7 Wiring Data

This section contains Block Schematic Diagrams (BSDs), Plug/Jack locations, Voltage Specifications, and I/O Module locations and information.

Component Names

Names of parts that appear in the procedures may not be exactly the same as the names that appear on the part or listed in the Parts List. For example: a part called the Registration Assembly may appear on the Parts List as Assembly, REGI.

How to Use this Manual

Always start with Service Call Procedures, Section 1. Perform Initial Actions and verify the problem, then follow the directions given.

How to Differentiate Between Machine Variants

The machine configuration will be identified in this manual by the configuration identifier 3020BI.

The Phaser® 3020 is Blue Angel certified with software configuration for up to 29 ppm capability. Refer to the User Guide, Parts List and Procedures for information specific to printer configuration.

When a procedure, parts list description or other reference is unique amongst different configurations of the machine, the appropriate configuration designator is indicated. Any artwork is also specific.

NOTE: This manual services all configurations of the machine. Ignore references to options not installed on 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.

A translated version of all warnings is in Translation of Warnings.

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.

Service Safety Summary

General Guidelines

For qualified service personnel only: Refer also to Electrical Safety.

Avoid servicing alone: Do not perform internal service or adjustment of this product unless another person capable of rendering first aid or resuscitation is present.

Use care when servicing with power applied: Dangerous voltages may exist at several points in this product. To avoid personal injury, do not touch exposed connections and components while power is on. Disconnect power before removing the power supply shield or replacing components.

Do not wear jewelry: Remove jewelry prior to servicing. Rings, necklaces and other metallic objects could come into contact with dangerous voltages and currents.

Electrical Safety

- Use the Power Cord supplied with the printer.
- Plug the Power Cord directly into a properly grounded electrical outlet.
- Do not use a ground adapter plug to connect the printer to an electrical outlet that does not have a ground connection terminal.
- Do not use an extension cord or power strip.
- Do not place the system in an area where people might step on the power cord.
- Do not place objects on the power cord.
- Do not block the ventilation openings. These openings are provided to prevent overheating of the printer.
- Do not drop paper clips or staples into the printer.

Operational Safety

The printer and supplies were designed and tested to meet strict safety requirements. These include safety agency examination, approval, and compliance with established environmental standards.

Pay attention to these safety guidelines to ensure the continued, safe operation of the printer.

- Use the supplies specifically designed for your system. The use of unsuitable materials may cause poor performance and a possible safety hazard.
- Follow all warnings and instructions marked on, or supplied with, the system, options and supplies.

NOTE: The Total Satisfaction Guarantee is available in the United States and Canada. Coverage may vary outside these areas; please contact your local representative for details.

Maintenance Safety

- Do not attempt any maintenance procedure that is not specifically described in the documentation supplied with the printer.
- Do not use aerosol cleaners. The use of supplies that are not approved may cause poor performance and could create a hazardous condition.
- Do not burn any consumables or routine maintenance items. For information on Xerox supplies recycling programs, go to www.xerox.com/gwa.

Warning Labels

Read and obey all posted warning labels. Throughout the printer, warning labels are displayed on potentially dangerous components. As you service the printer, check to make certain that all warning labels remain in place.

Safety Interlocks

Make sure all covers are in place and all interlock switches are functioning correctly after you have completed a printer service call. If you bypass an interlock switch during a service call, use extreme caution when working on or around the printer.

Electrostatic Discharge (ESD) Field Service Kit

The purpose of the ESD Protection Program is to preserve the inherent reliability and quality of electronic components that are handled by the Field Service Personnel. This program is being implemented now as a direct result of advances in microcircuitry technology, as well as a new acknowledgment of the magnitude of the ESD problem in the electronics industry today.

This program will reduce Field Service costs that are charged to PWB failures. Ninety percent of all PWB failures that are ESD related do not occur immediately. Using the ESD Field Service Kit will eliminate these delayed failures and intermittent problems caused by ESD. This will improve product reliability and reduce callbacks.

The ESD Field Service Kit should be used whenever Printed Wiring Boards or ESD sensitive components are being handled. This includes activities like replacing or re-seating of circuit boards or connectors. The kit should also be used in order to prevent additional damage when circuit boards are returned for repair.

The instructions for using the ESD Field Service Kit can be found in GP 8 in the General Procedures section of the Service Manual.

Product Safety Certification

This product is certified by various NRTLs/NCBs to the safety standards listed below:

UL60950-1/CSA22.2, No. 60950-1 (USA/Canada)

IEC60950-1 (CB Scheme)

Reference Symbology

Safety Symbols and Terminology

The following are examples of the terminology and symbols that are used in this documentation for an Electrostatic Device Caution, Laser Warning, and general Warnings, Cautions, or Notes.

WARNING
Improper operation may result in injury to a person.

CAUTION
Improper operation may result in machine damage.

Laser

Indicates that Laser safety precautions must be used.

Hot Surface

Indicates that a surface can be hot. Use caution when reaching in the machine to avoid touching the hot surface.

Electrical Current

Danger label indicates where electrical currents travel when the machine is closed and operating. Use caution when reaching in the machine.
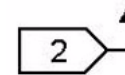

ESD

Certain components in this product are susceptible to damage from Electrostatic Discharge. Observe all ESD procedures to avoid component damage.

The following reference symbols are used throughout the Xerox® Phaser® 3020 Service Manual.

1. Flag
   • This symbol indicates a reference point into a circuit diagram from a RAP.

2. Note
   • This symbol is used to refer to notes that are found on the same page of a circuit diagram. A note is used whenever it is necessary to highlight an operating or maintenance procedure, a practice, condition, or statement.
   • Hints or other information that may assist the user.

3. Parts List
   • This symbol, example **(PL2.1)**, refers to the Parts List exploded view page where the part can be found.

4. Adjustment
   • This symbol refers to an adjustment procedure in the Repair/Adjustments section.

5. Test Point, Test Hole, Test Stake
   • This symbol is used to indicate that a test point, test hole, or test stake is available for accessing the signal line. The prefix indicates whether the access is a test point (TP), test hole (TH), or test stake (TS).

6. Commoning Point
   • This symbol is used to refer to a location in the machine wiring where more than two wires a connected together at a single point.

7. Arrow
   • This symbol points to the location to install, gain access to, or to release a component.

Voltage Specifications

AC and DC Voltages

Measurements of DC voltage must be made with reference to the specified DC Common, unless some other point is referenced in a diagnostic procedure. All measurements of AC voltage should be made with respect to the adjacent return or ACN wire ([unresolved]).

Table 1 Voltage Measurement and Specifications

VOLTAGE	SPECIFICATION
110 to120 VAC 60Hz	100 to 132 VAC
Neutral to Ground VAC	0 VAC (+/- 5VAC)
+5 VDC	+5.05 VDC TO +5.25 VDC
+12 VDC	+11.4 VDC TO +12.6 VDC
-12 VDC	-11.4 VDC TO -12.6 VDC
+24 VDC	+22.8VDC TO +25.2 VDC
+36 VDC	+34.2 VDC TO +37.8 VDC

Logic Voltage Levels

Measurements of logic levels must be made with reference to the specified DC Common, unless some other point is referenced in a diagnostic procedure (Table 2).

Table 2 Logic Levels

VOLTAGE	H/L SPECIFICATIONS
+5 VDC	H= +3.00 TO +5.25 VDC, L= 0.0 TO 0.8 VDC
+24 VDC	H= +23.37 TO +27.06 VDC, L= 0.0 TO 0.8 VDC

DC Voltage Measurements in RAPs

The RAPs have been designed so that when it is required to use the DMM to measure a DC voltage, the first test point listed is the location for the red (+) meter lead and the second test point is the location for the black meter lead. For example, the following statement may be found in a RAP:

There is +5 VDC from TP7 to TP68.

In this example, the red meter lead would be placed on TP7 and the black meter lead on TP68.

Another example of a statement found in a RAP might be:

There is -15 VDC from TP21 to TP33.

In this example, the red meter lead would be placed on TP21 and the black meter lead would be placed on TP33.

If a second test point is not given, it is assumed that the black meter lead may be attached to the copier frame.

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 organizations 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: USA.XEROX.EHS@xerox.com.
     - Fax Xerox EH&S at: 1-585-216-8817 [intelnet 8*219-68817].
   - 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 [intelnet 8*668 3434]
     - Electronic mail Xerox EH&S at: EH&S-Europe@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.
2. 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.
3. 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.

Regulatory Specifications

Xerox has tested this product to electromagnetic emission and immunity standards. These standards are designed to mitigate interference caused or received by this product in a typical office environment.

United States (FCC Regulations)

The Xerox® Phaser® 3020 has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial installation. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with these instructions, it may cause harmful interference to radio communications. Operation of Class A equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense. There is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment Off and On, the user is encouraged to try to correct the interference by one or more of the following measures:

•   Reorient or relocate the receiver.

•   Increase the separation between the equipment and receiver.

•   Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

•   Consult the dealer or an experienced radio/television technician for help.

Any changes or modifications not expressly approved by Xerox could void the user's authority to operate the equipment. To ensure compliance with Part 15 of the FCC rules, use shielded interface cables.

Canada (Regulations)

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

European Union

CE Mark

The CE mark applied to this product symbolizes Xerox's declaration of conformity with the following applicable Directives of the European Union as of the dates indicated:

Figure 1 CE Symbol

December 12, 2006: Low Voltage Directive 2006/95/EC

December 15, 2004: Electromagnetic Compatibility Directive 2004/108/EC

This product, if used properly in accordance with the user's instructions, is neither dangerous for the consumer nor for the environment.

To ensure compliance with European Union regulations, use shielded interface cables.

A signed copy of the Declaration of Conformity for this product can be obtained from Xerox.

Translation of 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.

DANGER : Mettez la machine hors tension. Déconnectez le cordon d'alimentation de l'alimentation du client lorsque vous réalisez des tâches qui ne nécessitent pas d'électricité. L'électricité peut être à l'origine de blessures, voire d'un accident mortel. Les pièces amovibles peuvent être à l'origine de blessures.

AVVERTENZA: Spegnere la macchina. Scollegare il cavo di alimentazione dall'alimentatore quando si eseguono attività che non richiedono elettricità. L'elettricità può causare morte o lesioni personali. Le parti in movimento possono causare lesioni personali.

VORSICHT: Schalten Sie die Stromversorgung der Maschine ab. Ziehen Sie das Stromkabel ab, wenn Sie Aufgaben ausführen, für die keine Stromversorgung benötigt wird. Stromschläge können Todesfällen oder Verletzungen verursachen. Bewegliche Teile können zu Verletzungen führen.

AVISO: Apague la electricidad de la máquina. Desconecte el cable de alimentación eléctrica de la toma de pared mientras esté realizando tareas que no necesiten corriente. La electricidad puede causar daños o la muerte. Las partes móviles pueden causar daños.

WARNING

Do not work in a confined space. 1 m (39 inches) space is needed for safe working.

DANGER : Ne pas travailler dans un espace restreint. 1 mètre d'espace est nécessaire pour un dépannage en toute sécurité.

AVVERTENZA: Non lavorare in uno spazio limitato; è necessario uno spazio di almeno un metro attorno alla macchina per la sicurezza dell'operatore.

VORSICHT: Nur mit ausreichendem Bewegungsspielraum (1 m) arbeiten.

AVISO: No trabaje en un espacio reducido. Se necesita 1 metro de espacio para trabajar con seguridad.

WARNING

Use safe handling procedures when removing the module. Refer to GP 16. The module is heavy.

DANGER: Conformez-vous aux procédures de manipulation de sécurité pour le retrait du module. Reportez-vous à GP 16. Le module est lourd.

AVVERTENZA: Utilizzare procedure di gestione sicure durante la rimozione del modulo. Vedere GP 16. Il modulo è pesante.

VORSICHT: Verwenden Sie sichere Vorgehensweisen zum Entfernen des Moduls. Siehe auch GP 16. Das Modul ist sehr schwer.

AVISO: Utilice los procedimientos de seguridad cuando elimine el módulo. Consulte el GP 16. El módulo es pesado.

WARNING

Follow the service procedure exactly as written. Use of controls or adjustments other than those specified in this manual, may result in an exposure to invisible laser radiation. During servicing, the invisible laser radiation can cause eye damage if looked at directly.

DANGER : Les procédures de dépannage doivent être suivies à la lettre. Si les réglages ou vérifications ne sont pas effectués suivant les instructions de ce manuel, il peut y avoir un risque d'exposition dangereuse au faisceau laser. Celui-ci peut provoquer des lésions oculaires s'il est observé directement.

AVVERTENZA: Eseguire le procedure di servizio esattamente come descritto. L'utilizzo di dispositivi di controllo o di registrazione diversi da quelli riportati in questo manuale potrebbe comportare un'esposizione a radiazioni laser invisibili. Tali radiazioni possono danneggiare gli occhi se si guarda direttamente il fascio laser durante gli interventi di servizio.

VORSICHT: Die Wartungsarbeiten genau den Anweisungen entsprechend durchführen. Der Umgang mit Steuer- oder Bedienelementen, deren Verwendung nicht ausdrücklich in diesem Handbuch angewiesen wurde, kann dazu führen, dass unsichtbare Laserstrahlung frei gesetzt wird. Direkter Blickkontakt mit dem Laserstrahl kann bleibende Augenschäden verursachen.

AVISO: Siga los procedimientos de mantenimiento tal como están descritos. El uso de controles o ajustes no especificados en este manual puede tener como resultado la exposición a radiación láser invisible. Durante las operaciones de mantenimiento, la radiación de láser invisible puede causar daños en los ojos si se mira directamente a ella.

WARNING

USA and Canada. Do not install this machine in a hallway or exit route that does not have 1.12 m (44 inches) of space additional to the normal space requirements in front of the machine. To conform with fire regulations this additional 1.12 m (44 inches) of space is needed in front of the machine in hallway and exit routes.

DANGER : États-Unis et Canada. Si cette machine est installée dans un couloir ou une voie de sortie, 1,12 m (44 pouces) d'espace supplémentaire à l'espace normal doit être disponible devant la machine conformément aux normes de sécurité d'incendie.

AVVERTENZA: N/A

VORSICHT: N/A

AVISO: Estados Unidos y Canadá. No instale esta máquina en un corredor o ruta de salida que no tenga 1.12 m (44 pulgadas) de ancho delante de la máquina, sin incluir el espacio que ocupe la máquina. Este espacio adicional de 1.12 m (44 pulgadas) delante de la máquina en corredores y rutas de salida es necesario para cumplir los requisitos de las normas sobre incendios.

WARNING

Use only Xerox materials and components. This product is safety certified using Xerox materials and components. The use of non Xerox materials and components may invalidate the safety certificate.

DANGER : N'utilisez que des matières premières et des composants Xerox. La sécurité du produit est assurée dans le cadre de son utilisation avec des matières premières et des composants Xerox. L'utilisation de matières premières et de composants autres que ceux de Xerox risque d'invalider le certificat de sécurité.

AVVERTENZA: Utilizzare solo materiali e componenti Xerox per avvalersi della certificazione di protezione. L'utilizzo di materiali e componenti non Xerox può rendere nulla la certificazione di protezione.

VORSICHT: Verwenden Sie nur Materialien und Komponenten von Xerox. Dieses Produkt besitzt die Sicherheitszertifizierung bei Verwendung von Xerox-Materialien und -Komponenten. Die Verwendung von Materialien und Komponenten anderer Hersteller setzt möglicherweise das Sicherheitszertifikat außer Kraft.

AVISO: Utilice solo los materiales y componentes Xerox. Este producto dispone de un certificado de seguridad si se utilizan los materiales y componentes Xerox. Este certificado de seguridad no será válido si se utilizan materiales y componentes que no sean de Xerox.

WARNING

Do not touch the fuser while it is hot.

DANGER : Ne pas toucher au four pendant qu'il est encore chaud.

AVVERTENZA: Non toccare il fonditore quando è caldo.

VORSICHT: Fixierbereich erst berühren, wenn dieser abgekühlt ist.

AVISO: No toque el fusor mientras está caliente.
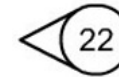
Tag Usage

Tags

If different parts or actions exist because of a modification, the Tag number will identify the appropriate part or action.

- Example 1). Tag xx: PWB. . .
- Example 2) PWB (Tag xx) . . .

Tag Symbols

This symbol is used to show a particular part or area of a figure that has been modified by the Tag number within the circle.

This symbol is used to show a particular part or area of a figure that has not been modified by the Tag number within the circle.

This symbol is used to show a Tag change has modified an area of the terminal.

This symbol is used to show a Tag change has not modified an area of the terminal.

Phaser® 3020 Overview

Refer to the Phaser® 3020 User Guide, Product Configuration Section 1 for detailed descriptions and illustrations of Control Panel functions, machine features and options.

Table 1 Product Configurations

Component	Phaser 3020BI
Paper Tray - 150 Sheets	Standard
Output Tray - 100 Sheets	Standard
AirPrint	Standard
Google Cloud Print	Standard
Network Printing	Not Applicable
USB Device	Standard
USB Host	Not Applicable
Wi-Fi	Standard
WI-FI Direct™	Standard

Additional Product Safety Information

Introduction

The following are examples of additional product safety information for the Xerox Phaser 3020 Printing System.

Product Safety Certification

This product is certified by various NRTLs/NCBs to the safety standards listed below:

UL60950-1/CSA22.2, No. 60950-1 (USA/Canada)

IEC60950-1 (CB Scheme)

Translated Warnings

All translated warnings for this book are located at point of need within the documentation.

WARNING

Do not touch a labeled area while the machine is operating. Your fingers can be injured by sharp paper edges.

DANGER: Ne touchez pas les zones apposées d'une étiquette lorsque la machine est en cours de fonctionnement, afin d'éviter de vous blesser les doigts avec les bords coupants du papier.

AVVERTENZA: Non toccare le aree con etichette quando la macchina è in funzione. I bordi taglienti della carta potrebbero causare lesioni alle mani.

VORSICHT: Mit Aufklebern gekennzeichnete Bereiche während des Betriebs des Geräts nicht berühren. Die scharfen Papierkanten können Verletzungen an den Händen verursachen.

AVISO: No toque ningún área marcada con etiquetas, mientras la máquina está en funcionamiento. Podría sufrir lesiones en los dedos, causadas por los bordes del papel.

Health and Safety Incident Reporting

Go to GSN website, Library #1789 for reporting fires or other incidents involving a Xerox product.

1 Service Call Procedures

Call Flow

Service Call Overview

This section provides an overview of actions a service technician should take when servicing a machine. Refer to the checklist below as a guide for steps to take when troubleshooting problems with the printer. Follow all precautions listed in the Safety Precautions section.

1. Identify the problem
   - Verify that the problem exists.
   - Record any error codes.
   - Print both customer and test prints.
   - Make note of any image quality problems in the test prints.
   - Observe if any unusual odors or noises coming from the printer.
   - Ensure that the AC input power is within specifications.
   - From the Diagnostics Mode, print an Error Information Report.
2. Inspect and clean the printer
   - Disconnect and inspect the power cord.
   - Inspect the interior of the printer. Remove any debris or contamination.
   - Inspect the printer for damaged wires, loose connections toner leakage or any other worn or damaged parts.
3. Find the cause of the problem.
   - Use troubleshooting procedures to find the root cause of the problem.
   - Use diagnostics to check the printer and components.
   - Use the BSDs and wiring diagrams to locate test points.
   - Take voltage readings as instructed in the troubleshooting procedure.
4. Correct the problem
   - Use the Parts List to locate part numbers.
   - Use the Repair Procedures to replace parts.
5. Final Actions
   - Test the printer to verify that the problem has been corrected and that there are no additional problems.

Diagnostic Mode

The Xerox® Phaser® 3020 printer has built-in diagnostics to test components, display status and some NVM access. The diagnostic tests are accessed through the Embedded Diagnostic Control (EDC) tool. Refer to the Xerox® Phaser® 3020 User Guide for detailed instructions on using the Control Panel buttons and menus. Refer to Section 6 for information regarding diagnostic testing

Safety Precautions

Ensure that all Cautions and Warnings in the service procedures are followed.

Failure to follow the following instructions could cause an electrical shock or fire hazard.
- Only use the Power Cord supplied with this product.
  Do not allow the Power Cord to become twisted, bent, or damaged.
- Do not allow liquids to spill on or into the machine.
- Do not allow paper clips, pins or other objects to fall into the machine.
- When replacing the LVPS PWB wait 5 minutes after unplugging the Power Cord before removing the PWB. This allows the PWB to discharge, preventing electrical shock.

Laser Safety
- The Laser system is designed so there is never human access to the Laser radiation during normal operation, user maintenance, or service maintenance.
- Do not bypass or disable any laser safety devices or attempt to service the Laser.

SCP 01 Introduction to Service Call Procedures

Purpose

Service Call Procedures (SCP) are the guide to performing a service call on the Xerox® Phaser® 3020.

The Operator has been trained in the use of the Customer Help Information located in the Xerox® Phaser® 3020 User Guide to help analyze the fault. The Problem Solving section directs the Operator in the following:

- Faults indicated by a Status Code or UI message
- Image quality defect initial actions
- Image quality defect diagnosis
- Image quality fault code problem solving

If the customer is unable to resolve the problem will initiate a service call by contacting The Xerox Support Center at www.xerox.com/support.

For XE, the customer will initiate a service call by contacting the Welcome Centre.

SCP 02 Initial Actions

The purpose of Initial Actions is to gather information and organize the service call. The customer is questioned, and the complaint is verified.

All anticipated service actions are classified as primary or secondary. Primary service actions are those actions that directly relate to the reason for the call.

SCP 03 Corrective Actions

Corrective Actions are the diagnostic and repair activities required to correct the problem that initiated the service call (primary actions), as well as any other problems or secondary actions identified in Initial Actions.

When performing maintenance actions, either scheduled or unscheduled, always consider the customer's print schedule and whether they are in a highly time-sensitive print run, or in a less time-sensitive print run. The customer's current mode of operation will determine the service actions on Unscheduled Maintenance (UM) calls. The objective of all service actions is to integrate the Xerox service process with the customer's printing process in a manner that maximizes customer equipment up-time and productivity during periods of time-sensitive print runs.

This is one of the tenets of Overall Equipment Effectiveness.

SCP 02 Initial Actions

Purpose

The purpose of the Initial Actions is to help organize the service call. Customer input, machine observations and print samples are all used to gather information about the condition of the system. Gather a list of symptoms, error codes, or other information concerning the problem that the customer may provide. This information may help identify and correct intermittent or unusual problems.

During each service call, perform all Primary Maintenance Activities, then decide if Secondary Maintenance Activities are needed.

- Primary Maintenance Activities are actions performed which relate to the customer's complaint.
- Secondary Maintenance Activities are any activities identified during the service call which are not related to the primary activity, but may lead to a future service call or otherwise negatively affect the customer's satisfaction.

    Before deciding to perform any secondary maintenance, first determine if the customer is in a time-sensitive print run. If so, perform only those actions required to ensure completion of the run, and defer all other actions-- including HFSI's that are not required to complete the print run. The objective of any service call during a time-sensitive print run is to return the system to production as soon as possible.

    Before performing any secondary maintenance actions, first inform the customer of what secondary actions are indicated and the system down time required. You may want to return on another, mutually agreeable time to perform the secondary maintenance activity/actions.

    Likewise, for any secondary maintenance actions deferred during a time-sensitive print run, inform the customer of what remaining secondary actions are indicated and the down time required. Coordinate with the customer's print schedule to determine a mutually-agreeable time frame to complete these activities.

Procedure

1. Discuss the problem with the customer.
2. If the problem is IQ related, run prints to verify that the problem is present.
3. Determine if there are any bulletins, or Eureka tips relating to the Customer's primary problem. Bulletins are on Eureka and are searchable with SearchLite.
4. When all information has been gathered, and all anticipated service actions have been classified as primary or secondary, proceed to SCP 03 Corrective Actions.

SCP 03 Corrective Actions

Purpose

The Corrective Actions procedure will direct you to the appropriate section of the service manual to diagnose and repair the primary problem, and provides you with the information required to identify any due HFSI items.

Procedure

1. Review the Customer Log Book, as well as the Service Log Book, to determine if any previously performed activities could be causing the problem.

2. Using the Customer Log Book and the Service Log Book, review the HFSI's to identify any due HFSI's. Clean/replace **only** components that are due and you think may be contributing to the problem.

System Fault Analysis

1. If the problem is a fault code, determine if the fault code is a Printer fault code or a DFE fault code.

   a. If the problem is a Printer fault code:

   • Check for associated fault codes that have the same or nearly the same timestamp as the primary fault code

   • Troubleshoot fault codes with the lowest chain number first

2. If the problem is IQ related, refer to Section 3 Image Quality Entry RAP.

3. When the primary problem is resolved, proceed to Final Actions.

SCP 04 Final Actions

Purpose

Final Actions verify total operation of the machine, ensures that the HSFI's are completed, and provides a Machine Site Checklist to complete the call.

Procedure

1. Print a Sample Job and verify with the operator the total operation of the machine. If any problems are identified, return to SCP 03 Corrective Actions.

2. Perform SCP Call Closeout in Diagnostics.

3. Complete the Machine Site Checklist:

   • Check the customer consumables.

   • Service tools are properly stored and secured.

   • Verify the access to the circuit breakers is clear.

   • Check that all the doors and panels are in place and interlock cheaters are removed and secured.

   • Verify that all mandatory retrofits have been installed. If required, set a time with the customer to install any mandatory retrofits.

HFSI's

Customer and Service HFSI's

As with other CSE actions, these actions should be performed according to customer run requirements. Some actions may be deferred to a Xerox Initiated activity, taking into consideration any risks with deferring those actions.

To track HFSI items, a tracking sheet is provided. The tracking sheets are located in a pocket inside the front cover of the:

- Printer Service Log Book (CSE) - tracking sheet **Service Maintenance Intervals**.

- Customer Maintenance Log Book (operator) - tracking sheet **Service Maintenance Interval**s.

If necessary, and if the customer agrees, clean/replace any secondary HFSI's that are due or may cause a return service call.

Be sure to continually update and review the Printer Service Log and Customer Maintenance Log for all maintenance actions, to avoid any unnecessary actions that increase customer equipment down times, service time, and costs.

Table 1 Customer/Service HFSI's

HSFI Item	Action	Customer	Service	Reference	Interval	Notes
Print Cartridge	Replace	X		N/A	1,500 standard / 3,000 high yield (approx. impressions)	Initial Print Cartridge yield is approximately 700 impressions.
Fuser	Replace		X	REP 1.14	30,000	
Transfer Roller	Replace		X	REP 1.13	30,000	
Pick-up Roller	Replace		X	REP 1.15	30,000	

2 Status Indicator RAPs

01-100 Top Cover Open Fault

The Top Cover is open or the Cover Open Switch is defective.

BSD-Reference: 1.1 AC / Low Voltage and High Voltage Power / Interlock

Initial Actions

Ensure that the front cover is completely closed.

Procedure

<p style="text-align:center"><strong style="color:red">WARNING</p>

Do not perform repair activities with the power on or electrical power supplied to the machine. The machine could activate and cause serious personal injury when the power is on or electrical power is supplied.

DANGER: Ne pas effectuer de dépannage avec le contact principal activé ou avec l'alimentation électrique appliquée à la machine: celle-ci pourrait démarrer et causer de graves blessures.

AVVERTENZA: Non effettuare alcuna riparazione con la macchina accesa o con l'alimentazione elettrica inserita. La macchina potrebbe avviarsi all'improvviso e causare gravi ferite.

VORSICHT: Es dürfen keine Reparaturarbeiten durchgeführt werden, solange das Gerät eingeschalten oder mit der Stromquelle verbunden ist. Das Gerät kann u.U in den Aktiv-Zustand übergehen und somit erhebliche körperliche Schäden verursachen.

AVISO: No realice reparaciones con la máquina encendida o conectada a la corriente. La máquina podría activarse y ocasionar daños personales graves.

Check the Top Cover Open Switch Actuator on the LVPS / HVPS PWB. **The   Actuator   is moves freely.**

Y   N
  Replace the LVPS / HVPS PWB (REP 1.5), PL 3.1.

Check the connection between the Main PWB and the HVPS PWB (BSD 1.1). **The connection is secure.**

Y   N
  • Check that there is no contamination present.
  • Check for broken and defective wires or cables.
  • Replace the Main PWB (REP 1.6), PL 1.1.

Replace the LVPS / HVPS PWB (REP 1.5), PL 3.1.

06-100 / 200 Laser Module (LSU) Motor Fault

06-100 - LSU Motor Lock Error: The machine has detected that the Laser Module Drive Motor is not working correctly.

06-200 - LSU HSync Error: The machine has detected that the Laser Module Drive Motor is not working correctly.

BSD-Reference: 6.1 Laser (ROS)

Procedure

<p style="text-align:center"><strong style="color:red">WARNING</p>

Do not perform repair activities with the power on or electrical power supplied to the machine. The machine could activate and cause serious personal injury when the power is on or electrical power is supplied.

DANGER: Ne pas effectuer de dépannage avec le contact principal activé ou avec l'alimentation électrique appliquée à la machine: celle-ci pourrait démarrer et causer de graves blessures.

AVVERTENZA: Non effettuare alcuna riparazione con la macchina accesa o con l'alimentazione elettrica inserita. La macchina potrebbe avviarsi all'improvviso e causare gravi ferite.

VORSICHT: Es dürfen keine Reparaturarbeiten durchgeführt werden, solange das Gerät eingeschalten oder mit der Stromquelle verbunden ist. Das Gerät kann u.U in den Aktiv-Zustand übergehen und somit erhebliche körperliche Schäden verursachen.

AVISO: No realice reparaciones con la máquina encendida o conectada a la corriente. La máquina podría activarse y ocasionar daños personales graves.

<p style="text-align:center"><strong style="color:red">WARNING</p>

Use eye protection when performing the following procedure. Failure to wear eye protection could result in serious personal injury.

DANGER: Porter des lunettes de sécurité pendant la procédure suivante. À défaut, de graves blessures peuvent se produire.

AVVERTENZA: Indossare occhiali di protezione durante la seguente procedura. In caso contrario, si possono provocare gravi ferite.

VORSICHT: Folgende Verfahren dürfen nicht ohne Schutzbrille angewandt werden. Die Nichteinhaltung dieser Regel kann zu ernsthaften körperlichen Verletzungen führen.

AVISO: Use gafas de protección para realizar el procedimiento siguiente. No proteger los ojos puede ocasionar daños personales graves.

Enter Diagnostic (EDC) Mode. Select: **[DC330 Component Control, 110 LSU, LSU Mot1 Run]** to test the LSU motor. **The motor runs.**

Y   N
  Check the Main Wire Harness and connectors between the Laser Module and Main PWB. **The connections are secure.**

  Y   N
    • Check that the connectors are secure and no contamination is present.
    • Check that there are no broken or defective wires.
    • Disconnect and securely reconnect the harness.

A   B

A   B

Check the harness for an open or short circuit.. **The Harness is OK**

Y   N

- Check that all connections are secure
- Check that there is no contamination
- Replace the Harness PL 3.1.

Replace the LSU Laser Module (REP 1.10), PL 3.6.

If the problem is intermittent, check all wiring for open or short circuit.

07-110 Paper Jam or Tray Empty Fault

The Tray Empty Sensor failed to detect paper in the tray.

BSD-Reference: 7.1 Paper Feed and Registration

Initial Actions

Ensure that no paper is loaded in the tray. Clear any jammed sheets. Refer to Section 7: Troubleshooting, in the Xerox® Phaser® 3020 User Guide for detailed instructions on clearing paper jams.

Procedure

Check the Feed and Width Sensor actuators for damage or binding. **The actuators moves freely and are undamaged.**

Y   N

Replace the Feed or Width Sensor Actuator, PL 3.3.

Enter Diagnostic (EDC) Mode. Select: **[DC330 Component Control, 102 Sensor, Tray 1 Empty**]. Block and clear the Feed and Width Sensors. **The sensors signals changes.**

Y   N

- Check the connection between the Main PWB and the Feed Sensor PWB for an open or short circuit and that no contamination is present.
- Repair or replace parts as necessary .

If the problem is intermittent, check the circuit of the Tray Empty Sensor.

08-100 Paper Feed Fault

The lead edge was not detected by the Paper Feed Sensor.

BSD-Reference: 1.1 AC Low Voltage and High Voltage Power / Interlocks

BSD-Reference: 7.1 Paper Feed and Registration

Initial Actions

NOTE: When clearing any jams, see if the Lead Edge of the Jammed Sheet reached the Retard Roller.

Clear any jammed sheets. Refer to Section 7: Troubleshooting, in the Xerox® Phaser® 3020 User Guide for detailed instructions on clearing paper jams.

Procedure

Check the Actuator on the Feed Sensor. **The Actuator moves freely.**
Y   N
> Replace the Feed Sensor Actuator (REP 1.12), PL 3.3.

Check the position of the jammed sheet **The Lead Edge reached the Retard Roller**
Y   N
> Enter Diagnostic (EDC) Mode. Select: **[DC330 Component Control, 101-Clutch, Tray 1 Pick up]** to engage the drive to pick up paper from tray 1 **The clutch engages.**
> **Y   N**
> > • Check the Feed Clutch connections on the Main PWBs for contamination. Clean as necessary.
> > • Check that the circuits from the Feed Clutch to the LVPS / HVPS for an open to short circuit.
> > • If the circuits are good, replace the Feed Clutch (REP 1.16), PL 3.3.
>
> In Diagnostics Mode. Select: **[102-Sensor, Feed Sensor]** to block and clear the Paper Feed Sensor. **The signal changes.**
> **Y   N**
> > • Check that the connection is secure and no contamination or damage is present.
> > • Check that there is no damage or contamination on any connectors from the Feed Sensor to the LVPS / HVPS PWB.   Repair as necessary.
> > • Replace the Paper Feed Sensor (REP 1.2), PL 3.3.
>
> Perform SCP Final Actions.

If the problem is intermittent, recheck the cables and look for a cable that is binding.

08-500 Paper Jam in Exit Area Fault

The machine has detected a paper jam in the Exit Area.

BSD-Reference: 7.1 Paper Feed and Registration

Initial Actions

• Open the Top Cover and remove jammed sheets from exit area. Refer to Section 7: Troubleshooting, in the Xerox® Phaser® 3020 User Guide for detailed instructions on clearing paper jams.
• Check the Paper Guides for proper position.
• Power Off the machine, then power On while holding the WPS button to reboot the machine.

Procedure

Enter Diagnostic (EDC) Mode. Select: **[DC330 Component Control, 102-Sensor, Exit Sens]** to block and clear the Exit Sensor. **The Exit Sensor is OK.**
Y   N
> • Check for an open or short circuit and that no contamination is present.
> • Replace the Exit Sensor PL 3.3.

In Diagnostics, go to **[102-Sensor, Registration]** to activate and deactivate the Registration Sensor. **The signal changes.**
Y   N
> • Check for an open or short circuit and that no contamination is present.
> • Replace the Feed Sensor PWB (REP 1.2), PL 3.3.

Inspect the Exit Roller and Drives for wear or damage. Replace if needed.

09-100 Print Cartridge Near End of Life Fault

The Print Cartridge life is less than 10%.

BSD-Reference: None

Procedure

1. Check the remaining life of the Print Cartridge by using one of the methods listed below:
    *   Print a Supplies Information Report. Refer to the Phaser 3020 User Guide, Section 1, Control Panel and Information Pages, for detailed information on using the Control Panel buttons to obtain reports. GP 2
    *   Open Easy Printer Manager, check Toner Life. **VERIFY 'PRINT' OR 'TONER'?
    *   Open the CWIS application. Select; [**Status, Supplies, Print Cartridge**].
2. Check the remaining life of the Print Cartridge.
3. If the Print Cartridge has reached end of life, switch Off the power and replace the Print Cartridge.

09-350 Print Cartridge End of Life Fault

The Print Cartridge has reached end of life.

BSD-Reference: None

Procedure

1. Check the remaining life of the Print Cartridge by using one of the methods listed below:
    *   Print a Supplies Information Report. Refer to the Phaser 3020 User Guide, Section 1, Control Panel and Information Pages, for detailed information on using the Control Panel buttons to obtain reports. GP 2
    *   Open Easy Printer Manager, check Toner Life.
    *   Open the CWIS application. Select; [**Status, Supplies, Print Cartridge**].
2. Check the remaining life of the Print Cartridge.
3. If the Print Cartridge has reached end of life, switch Off the power and replace the Toner Cartridge.

09-450 Print Cartridge At End of Life Fault

The Print Cartridge is empty.

BSD-Reference: None

Procedure

Switch Off the power and replace the Print Cartridge.

09-550 Print Cartridge Undetected Fault

The Print Cartridge has not been installed or machine software is unable to detect the Print Cartridge.

BSD-Reference: None

Initial Actions

Ensure that the Print Cartridge has been installed and the cover is fully closed and latched.

Procedure

1. Switch Off the power.
2. Remove the Print cartridge. Rotate the cartridge five to six rotations to distribute the toner evenly.
3. Check the CRUM contact area for contamination and clean if necessary.
4. Reinstall the Print Cartridge.
5. Check the connections on the HVPS for contamination. Clean as necessary.
6. If the problem continues, install a new Print Cartridge.

09-800 Incompatible Print Cartridge Fault

The Print Cartridge is not compatible with the printer.

BSD-Reference: None

Procedure

1. Check the Print Cartridge information by using one of the methods listed below:
   - Print a Supplies Information Report. Refer to the Phaser 3020 User Guide, Section 1, Control Panel and Information Pages, for detailed information on using the Control Panel buttons to obtain reports. GP 2.
   - Open the CWIS application. Select; [**Status, Supplies, Print Cartridge**].
2. Check the Print Cartridge information. Replace the Print Cartridge if is not a genuine Xerox® cartridge.

10-100 Fuser Temperature (Open) Fault

The temperature of the Fuser is outside of the normal operating range of 383°F ± 5°F (195°C ± 5°C.)

BSD-Reference: BSD 1.1AC / Low Voltage and High Voltage Power Supplies / Interlocks

BSD-Reference: BSD 10.1 Fuser

Initial Actions

Switch Off the power then switch On the power. If the error code returns, continue with this procedure.

Procedure

<div align="center"><strong style="color:red">WARNING</div>

Do not handle the fuser components until they have cooled. Some fuser components operate at hot temperatures and can produce serious personal injury if touched.

DANGER: Ne pas manipuler les éléments du four avant de les laisser refroidir. Certains éléments du four fonctionnent à des températures très élevées et peuvent causer de graves blessures s'ils sont touchés.

AVVERTENZA: Non maneggiare i componenti del fusore finché non sono raffreddati. Alcuni di questi componenti funzionano ad alte temperature e possono provocare gravi ferite se vengono toccati.

VORSICHT: Die Fixieranlage sollte erst gehandhabt werden, wenn diese genügend abgekühlt ist. Einige Teile der Fixieranlage erzeugen übermäßige Hitze und führen bei der Berührung zu schweren Verbrennungen.

AVISO: No manipule los componentes del fusor antes de que se enfríen. Algunos de los componentes del fusor funcionan a altas temperaturas y pueden ocasionar daños personales graves si se los toca.

Power Off the machine and check that the Fuser connection is fully seated, REP 1.14. **The Fuser connections are OK.**

Y   N
- Check the Fuser connections for contamination and clean as required.
- Firmly reconnect the Fuser Assembly. Switch the power ON.

Check for +3.3 VDC to the Thermistor at the P/J on the Main PWB. **The voltage is OK.**

Y   N
- Check the wires for an open, short circuit or contamination.
- Replace the Main PWB (REP 1.6), PL 1.1.

A

A
Check the voltage to the Over Heat Thermostat. **The voltage is present**
Y   N
- Check for AC line voltage to the LVPS / HVPS PWB.
- Check that the Connectors are tight and no contamination is present.
- Check the wiring harness from the LVPS / HVPS PWB for a short or open circuit.
- Replace the Main LVPS / HVPS PWB (REP 1.5), PL 3.1.

Check the circuits and connectors for the Fuser Module.
Check the Heat Lamp for an open circuit.
Replace the Fuser Assembly (REP 1.14), PL 3.2.

10-200/ 300 Fuser Under/ Over Temperature Fault

10-200: The temperature of the Fuser is below of the normal operating range of 383°F ± 5°F (195°C ± 5°C.)

10-300: The temperature of the Fuser is above of the normal operating range of 383°F ± 5°F (195°C ± 5°C.)

BSD-Reference: BSD 10.1 Fuser

Initial Actions

Switch Off the power. Remove and reinstall the Fuser Assembly. Switch On the power.

Procedure

WARNING

Do not handle the fuser components until they have cooled. Some fuser components operate at hot temperatures and can produce serious personal injury if touched.

DANGER: Ne pas manipuler les éléments du four avant de les laisser refroidir. Certains éléments du four fonctionnent à des températures très élevées et peuvent causer de graves blessures s'ils sont touchés.

AVVERTENZA: Non maneggiare i componenti del fusore finché non sono raffreddati. Alcuni di questi componenti funzionano ad alte temperature e possono provocare gravi ferite se vengono toccati.

VORSICHT: Die Fixieranlage sollte erst gehandhabt werden, wenn diese genügend abgekühlt ist. Einige Teile der Fixieranlage erzeugen übermäßige Hitze und führen bei der Berührung zu schweren Verbrennungen.

AVISO: No manipule los componentes del fusor antes de que se enfríen. Algunos de los componentes del fusor funcionan a altas temperaturas y pueden ocasionar daños personales graves si se los toca.

Enter Diagnostic (EDM) Mode. Select: **[DC330 Component Control, 109 Fuser Heat, Temp A]** to obtain a temperature reading from the Fuser. **The Fuser temperature is within normal operating range.**
Y   N
    Replace the Fuser Assembly (REP 1.14), PL 3.1.

If problem is intermittent, check the circuit of the Fuser Assembly for one of the following:
- All connectors are securely connected and no contamination is present
- Short Circuit or damaged wire. Repair as necessary

17-100 IP Conflict Error Fault

The IP address conflicts with that of another system causing a machine communication error.

BSD-Reference: None

Procedure

1.   Open the Easy Print Manager Application.
2.   From the menu, select: [**Machine Settings, Network Settings, Assign IP address**].
3.   Change the IP address.

If DHCP or BOOTP, reboot the machine to receive a new IP address.

17-310 Communication Error (Main PWB to Wireless PWB) Fault

The machine software has detected a communication error between the Main PWB and the Wireless PWB.

BSD-Reference: None

Initial Actions

•   Switch Off the power then switch On the power.

•   Check the machine network and data configuration settings.

Procedure

1.   Ensure that the connectors are fully seated between the Main PWB and the Wireless PWB.
2.   If the problem persists, replace parts in the following order:
     •   Flat Cable (Not Shown)
     •   Wireless PWB (REP 1.8), PL 1.1.
     •   Main PWB (REP 1.6), PL 1.1.

17-700 / 710 BOOTP Error Fault

The machine displays the error message "DHCP, or BOOTP, causing a machine communication error.

BSD-Reference: None

Procedure

1. Switch Off the power then switch On the power.
2. Check BOOTP and network configuration.

17-800 / 810 DHCP Error Fault

The machine displays the error message "DHCP, or BOOTP, causing a machine communication error.

BSD-Reference: None

Procedure

1. Switch Off the power then switch On the power.
2. Check DHCP and network configuration.

17-910 Firmware Upgrade Fault

The firmware upgrade aborted due to an invalid file.

BSD-Reference: None

Initial Actions

1.   Check the USB connection.
2.   Verify that the correct firmware file is being used.

Procedure

Cycle the machine power and repeat upgrade procedure GP 5.

3 Image Quality

Image Quality Overview

Image quality defects can be attributed to printer components, consumables, media, internal software, external software applications, and environmental conditions. To successfully troubleshoot print-quality problems, eliminate as many variables as possible.

If the print-quality defect is still present after printing on approved media from an unopened ream of paper, investigate software applications and environmental conditions. Check the temperature and humidity under which the printer is operating. Compare this to the Environmental Specifications listed in Section 6.

When analyzing a imaging defect, determine if the defect is repeating or random. Check the Supplies Information Report for end of life conditions. Inspect the visible surfaces of all rollers for obvious defects. If a cursory inspection does not reveal any obvious defects, continue troubleshooting the defect.

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury.

DANGER: Ne pas effectuer de dépannnage avec le contact principal activé ou avec l'alimentation électrique appliquée à la machine. Certains éléments de la machine comportent des tensions électriques dangereuses qui peuvent causer un choc électrique et de graves blessures.

AVVERTENZA: Non effettuare alcuna riparazione con l'alimentazione elettrica inserita. Alcuni componenti contengono corrente ad alta tensione che può provocare forti scosse e gravi ferite.

VORSICHT: Es dürfen erst Reparaturarbeiten durchgeführt werden, wenn das Gerät ausgeschaltet ist oder der Netzstecker nicht mehr mit der Stromquelle verbunden ist. Einige Komponenten des Gerätes sind stromführend und können daher zu ernsthaften Verletzungen oder Stromschlägen führen.

AVISO: No realice reparaciones con la máquina encendida o conectada a la corriente. Algunos componentes de la máquina contienen voltajes eléctricos peligrosos que pueden producir una descarga eléctrica y causar daños graves.

Defects Associated with Specific Components

To aid with diagnosis, the list below outlines image defects associated with specific components.

ILaser Scanner Unit (LSU)
- Black Print
- Vertical White Lines

Transfer Roller:
- Uneven Density
- Background contamination
- Ghosting
- Vertical white lines
- Vertical black line or band
- Stains on the page back

Fuser:
- Ghosting
- Stains on the page back or front
- Poor image adhesion

Print Cartridge:
- Uneven density
- Background contamination
- Spots, smudges, or smears
- Ghosting
- Vertical white lines
- Vertical black line or band
- Stains on the page front
- Blank prints
- Black prints
- Horizontal Black lines or bands

After determining the defect type and possible source, match the defect with those listed in Table 1. Go to the RAP listed to correct the defect.

Image Defect Definitions

Table 1 lists image defect definitions and the RAP used to correct the problem.

Table 1 Image Defect Definitions

Defect	Definition	Go To
Vertical Black Line and Band	Vertical black lines or bands occur in the printed image.	IQ1
Vertical White Line and Band	Vertical white lines or bands occur in the printed image.	IQ2
Horizontal Black Band	Periodic dark or blurry horizontal bands in the printed image.	IQ3
Spots	Random or periodic dark areas in the low density areas of a print, or voids in the dark areas of a print.	IQ4
Low Image Density	Printed image is light with no ghosting.	IQ5
Black or Dark Image	Printed image is totally dark or black.	IQ6
Uneven Density	Print density is uneven between the left and right portion of the printed image.	IQ7
Background	Uniform toner contamination in most or all non-image areas.	IQ8
Residual Image (Ghosting)	The image from a previous print appears on the current print.	IQ9
Blank Page	The entire image area is blank.	IQ10
Partial Image Deletions	Areas of the printed image are light or missing entirely on limited areas of the paper.	IQ11

IQ1 Vertical Black Line and Band RAP

Thin black vertical lines or black vertical bands occur in the printed image.

Procedure

Switch Off the power.
Check the Transfer Roller, PL 3.1 for wear or damage. **The Transfer Roller is OK.**
Y   N
  Replace the Transfer Roller;(REP 1.13), PL 3.1.

Switch On the power and make a test print. If problem persists, replace the Drum Cartridge. (PL-XX). Refer to the Xerox® Phaser® 3020 User Guide, Section 6 Maintenance, General Care, for detailed instructions on how to replace the Drum Cartridge.
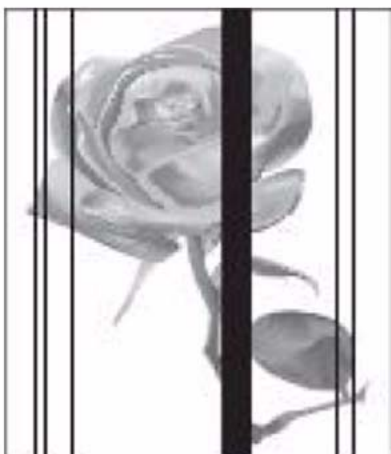
0300101bat

Figure 1 Black lines and bands

IQ2 Vertical White Line and Band RAP

Thin white vertical lines or white vertical bands occur in the printed image.

Initial Actions

Clean the surface of the LSU window with a clean cotton swab and recommended cleaner (IPA).

Procedure

From the Control Panel, check the life of the Print Cartridge. **The Print Cartridge has reached end of life.**
Y   N
  Switch Off the power. Replace the Print Cartridge. Refer to the Xerox® Phaser® 3020 User Guide, Section 6 Maintenance, General Care, for detailed instructions on how to replace the Print Cartridge.

Check the space between the LSU and Imaging Unit and remove any debris or blockage. **The defect is gone.**
Y   N
  Replace the Fuser Module; (REP 1.14), PL 3.2.

Switch on the power. Perform SCP 04, Final Actions.

0300102bat

Figure 1 White lines and bands

IQ3 Horizontal Black Bands RAP

Periodic dark of blurry horizontal stripes in the printed image (Figure 1).

Procedure

- Switch Off the power.
- Check high voltage contacts for contamination or damage.
- Switch On the power and make a test print.

The defect is still present.

Y   N

Go to Call Closeout.

- Replace the Print Cartridge.
- Refer to the Xerox® Phaser® 3020 User Guide, Section 6 Maintenance, General Care, for detailed instructions on how to replace the Print Cartridges.
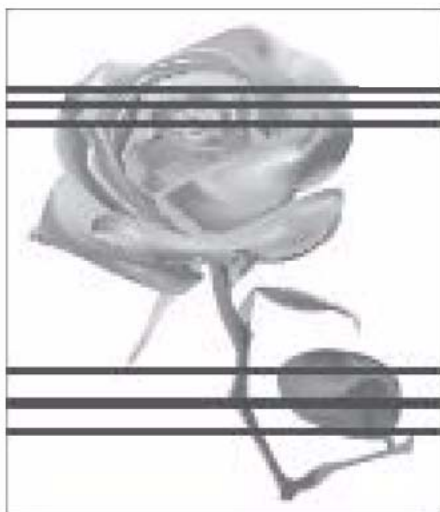
0300103bat

Figure 1 Horizontal black bands

IQ4 Spots RAP

Random or periodic dark areas in the low density areas of a print, or voids in the dark areas of a print (Figure 1).

Initial Actions

Ensure that the Imaging Unit is firmly seated.

Procedure

Check the Transfer Roller for wear, damage and remaining life. **The Transfer Roller is OK.**

Y   N

Replace the Transfer Roller; (REP 1.13), PL 3.1.

Clean the voltage terminals for the Print Cartridges:
Switch on the power and make a test print. **The test print looks OK.**

Y   N

Replace the Print Cartridge.
Refer to the Xerox® Phaser® 3020 User Guide, Section 6 Maintenance, General Care, for detailed instructions on how to replace the Print Cartridges.

If problem persists, replace the Fuser Module; (REP 1.14), PL 3.2.

0300104bat

Figure 1 Black spots

IQ5 Low Image Density RAP

The printed image is light, with no ghosting (Figure 1).

Initial Actions

Remove Print Cartridge. Rotate the cartridge 5-6 full rotations to redistribute the toner. Make a test print.

Check the life of the Print Cartridge, refer to GP 2 Machine Status and Reports. Replace the Print Cartridge if it has reached end of life.

If the problems continue, follow the procedure.

Procedure

- Switch off the power.
- Clean the contacts on the Print Cartridge and the LVPS / HVPS PWB.
- Switch on the power and make a test print.

The problem continues.

Y   N
    Go to SCP 04 Final Actions.

Replace the LVPS / HVPS PWB; PL 3.2, (REP 1.6).

0300105bat

Figure 1 Light Image

IQ6 Black or Dark Image RAP

The printed image is totally dark or black (Figure 1).

Procedure

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

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury.

DANGER: Ne pas effectuer de dépannnage avec le contact principal activé ou avec l'alimentation électrique appliquée à la machine. Certains éléments de la machine comportent des tensions électriques dangereuses qui peuvent causer un choc électrique et de graves blessures.

AVVERTENZA: Non effettuare alcuna riparazione con l'alimentazione elettrica inserita. Alcuni componenti contengono corrente ad alta tensione che può provocare forti scosse e gravi ferite.

VORSICHT: Es dürfen erst Reparaturarbeiten durchgeführt werden, wenn das Gerät ausgeschaltet ist oder der Netzstecker nicht mehr mit der Stromquelle verbunden ist. Einige Komponenten des Gerätes sind stromführend und können daher zu ernsthaften Verletzungen oder Stromschlägen führen.

AVISO: No realice reparaciones con la máquina encendida o conectada a la corriente. Algunos componentes de la máquina contienen voltajes eléctricos peligrosos que pueden producir una descarga eléctrica y causar daños graves.

- Switch Off the power.
- Clean the contacts on the Print Cartridge and the LVPS / HVPS PWB.
- Switch on the power and make a test print.

The problem continues.

Y   N
    Go to Call Closeout.

- If the image is Black, replace the LVPS / HVPS PWB; PL 3.1 (REP 1.5).
- The Charge Roller is likely defective, replace the Print Cartridge.

  Refer to the Xerox® Phaser® 3020 User Guide, Section 6 Maintenance, General Care, for detailed instructions on how to replace the Print Cartridges.

0300106bat

Figure 1 Dark or Black Image

IQ7 Uneven Density RAP

Print density is uneven between the left and right portion of the printed image (Figure 1).

Initial Actions

- Ensure that the printer is level.
- Remove the Print Cartridge. Rotate the Print Cartridge 5-6 full rotations to redistribute the toner.
- Check Supplies Life. Refer to GP 2 Machine Status and Reports.
  - Replace any components that have reached end of life.

Procedure

<div align="center">

WARNING

</div>

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury.

DANGER: Ne pas effectuer de dépannnage avec le contact principal activé ou avec l'alimentation électrique appliquée à la machine. Certains éléments de la machine comportent des tensions électriques dangereuses qui peuvent causer un choc électrique et de graves blessures.

AVVERTENZA: Non effettuare alcuna riparazione con l'alimentazione elettrica inserita. Alcuni componenti contengono corrente ad alta tensione che può provocare forti scosse e gravi ferite.

VORSICHT: Es dürfen erst Reparaturarbeiten durchgeführt werden, wenn das Gerät ausgeschaltet ist oder der Netzstecker nicht mehr mit der Stromquelle verbunden ist. Einige Komponenten des Gerätes sind stromführend und können daher zu ernsthaften Verletzungen oder Stromschlägen führen.

AVISO: No realice reparaciones con la máquina encendida o conectada a la corriente. Algunos componentes de la máquina contienen voltajes eléctricos peligrosos que pueden producir una descarga eléctrica y causar daños graves.

Switch Off the Power. Check the contacts on the Print Cartridge. **The contacts are OK.**

Y   N
│   Replace the Print Cartridge.
│   Refer to the Xerox® Phaser® 3020 User Guide, Section 6 Maintenance, General Care,
│   for detailed instructions on how to replace the Print Cartridges.

Check the Transfer Roller for wear or damage. **The Transfer Roller is OK.**

Y   N
│   Replace the Transfer Roller; (REP 1.13), PL 3.1.

If problem persists, replace the LVPS / HVPS PWB; (REP 1.5), PL 3.1.

0300107bat

Figure 1 Uneven Density

IQ8 Background RAP

Uniform toner contamination appears in most or all non-image areas of the printed sheet (Figure 1).

Initial Actions

- Check that media type settings are correct.
- Check that the paper meets specifications. Refer to Section 6 for product specifications.
- Check the supplies life of the Print Cartridge, refer to GP 2 Machine Status and Reports. Replace the Print Cartridge if it has reached end of life.

Procedure

- Switch off the power.
- Clean the contacts on the Print Cartridge and the LVPS / HVPS PWB.
- Switch on the power and make a test print.

The test print looks OK.

Y   N

Replace the LVPS / HVPS PWB; (REP 1.5), PL 3.1.

Go to SCP 04 Final Actions.

0300108bat

Figure 1 Background

IQ9 Residual Image (Ghosting) RAP

The image from a previous print appears on the current print (Figure 1).

Procedure

Switch Off the Power.
Check the Transfer Roller for the following:
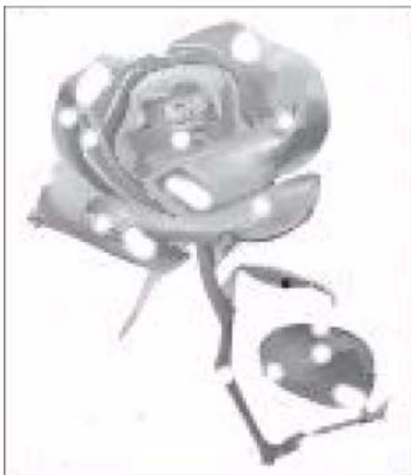- Wear or damage.
- The left and right tension springs for damage.
- Be sure all parts are installed correctly.

The Transfer Roller is OK.
Y   N
    Replace the Transfer Roller or parts as needed; (REP 1.13), PL 3.1.

If problem persists, Replace components in the following order:
- Print Cartridge, refer to the Xerox® Phaser® 3020 User Guide, Section 6 Maintenance, General Care, for detailed instructions on how to replace the Print Cartridges.
- Fuser; (REP 1.14), PL 3.2.
- LVPS / HVPS PWB; (REP 1.5), PL 3.1.

0300109bat

Figure 1 Ghost Image

IQ10 Blank Page RAP

The entire image area is blank (Figure 1).

Initial Actions

Replace any components at end of life.

Procedure

- Switch Off the power.
- Check the space between the LSU and the Print Cartridge for a blockage, remove any debris or blockage.
- Clean the contacts on the Print Cartridge and the LVPS / HVPS PWB.
- Switch on the power and make a test print.

The problem continues.
Y   N
    Go to Call Closeout.

Replace the Print Cartridge, refer to the Xerox® Phaser® 3020 User Guide, Section 6 Maintenance, General Care, for detailed instructions on how to replace the Print Cartridges. **The problem continues.**
Y   N
    Go to Call Closeout.

Check circuit between the Main PWB and the LVPS / HVPS PWB, BSD 1.1. **The   circuit   is OK.**
Y   N
    Replace any defective components:
    - Main PWB to LVPS / HVPS PWB Wire Harness.
    - Main PWB; (REP 1.6), PL 1.1.
    - LVPS / HVPS PWB; (REP 1.5), PL 3.1.

Replace the LSU; (REP 1.10), PL 3.6.

IQ11 Partial Image Deletions RAP

Areas of the printed image are light or missing entirely on limited areas of the paper (Figure 1).

Initial Actions

Be sure the printer is installed on a level surface.

Procedure

Procedure

- Switch Off the Power.
- Remove the Print Cartridge.
- Rotate the Print Cartridge side to side for 5 to 6 full rotations to redistribute the toner.
- Reinstall the Print Cartridge and print 10 test copies.

The problem continues.

Y   N

  Go to SCP 04 Final Actions.

Switch Off the Power.

Check the Transfer Roller for the following:

- Wear or damage.
- The left and right tension springs for damage.
- Be sure all parts are installed correctly.

The Transfer Roller is OK.

Y   N

  Replace the Transfer Roller or parts as needed; (REP 1.13), PL 3.1.

Check the supplies life of the Print Cartridge, refer to GP 2 Machine Status and Reports. Replace the Print Cartridge if it has reached end of life.

0300111bat

Figure 1 Blank Image

0300112bat

Figure 1 Image Deletions

4 Repairs

REP 1.1 Front Cover

Parts List on PL 1.1

Removal

1. Switch Off the Printer and disconnect the Power Cord.
2. Remove the Left and Right Side Covers (REP 1.2).
3. Remove the Front Cover screws (2) (Figure 1).

Latches

Screws

040403RBLJ
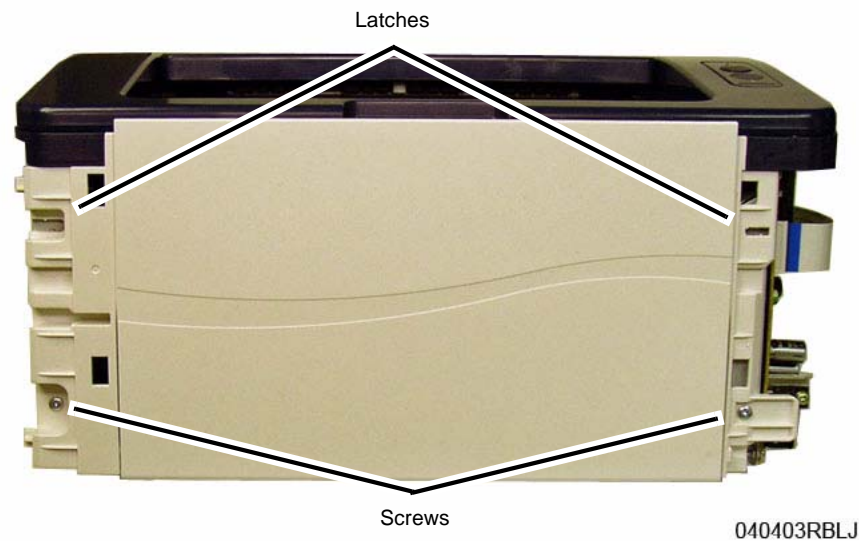
Figure 1 Front Cover Screws and latches (Front View)

4. Release the latches (2) at the sides of the cover, and remove the Front Cover (Figure 1).

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

Install the components in the reverse of removal.

REP 1.2 Left and Right Side Covers

Parts List on PL 1.1

Removal

1. Switch Off the Printer and disconnect the Power Cord.
2. The side covers are held in place with Plastic Latches, release them carefully to avoid breakage. To release the Latches press the hook end of the latch away from the part (Figure 1).

040401aRBAT

Figure 1 Plastic Latches

3. Left Cover removal:
   a. Release the upper rear latch.
   b. Release the bottom latches and lower the rear latch.
   c. Release the front latches and remove the cover.

4. Right Cover removal:
   a. Remove the Right Cover screw (1) at the rear of the printer (Figure 2).
   b. Release the upper rear latch.
   c. Release the bottom latches and the lower rear latch.
   d. Release the front latches and remove the cover.

Screw

040401RBLJ

Figure 2 Right Cover Screw (Rear View)

Replacement

Install the components in the reverse of removal.

REP 1.3 Rear Cover

Parts List on PL 1.1

Removal

1. Switch Off the Printer and disconnect the Power Cord.
2. Remove the Left and Right Side Covers (REP 1.2).
3. Remove the Rear Cover Screws (2) and the cover (Figure 1).

Screws

Data Plate Label

040402RBLJ

Figure 1 Rear Cover Screws

Replacement

Important: If the Rear Cover is being replaced, remove the Data Plate Label from the old Rear Cover and install it onto the new Rear Cover (Figure 1).

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

Install the components in the reverse of removal.

REP 1.4 Jam Clearance and Top Cover

Parts List on PL 2.1

Removal

Switch Off the Printer and unplug the Power Cord.

Jam Clearance Cover Removal

1. Remove the Left and Right Side Covers (REP 1.2).
2. Remove the Rear Cover (REP 1.3).
3. Open the Jam Clearance Cover, and release the cover support arms (2) on each side of the cover (Figure 1).
4. Release the Jam Clearance Cover from the pivots.
5. Release the left pivot first and remove the cover (Figure 1).

   IMPORTANT

   When the Jam Clearance Cover is being replaced, remove the Tag Matrix from the old cover and install it on to the new Cover (Figure 1).
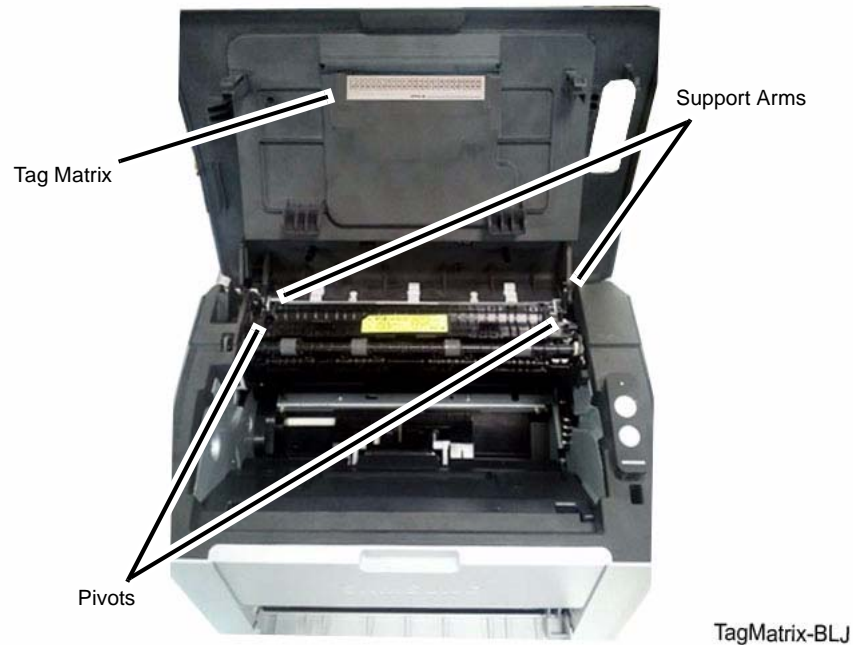
Figure 1 Jam Clearance Cover Support Arms and Pivots (Top View)

Top Cover Removal

1. Remove the Left and Right Side Covers (REP 1.2).
2. Remove the Rear Cover (REP 1.3).
3. Remove the Front Cover (REP 1.1).
4. Remove the Jam Clearance Cover.
5. Disconnect the Control Panel PWB connector from the Main PWB (Figure 2).
6. Remove the Top Cover.
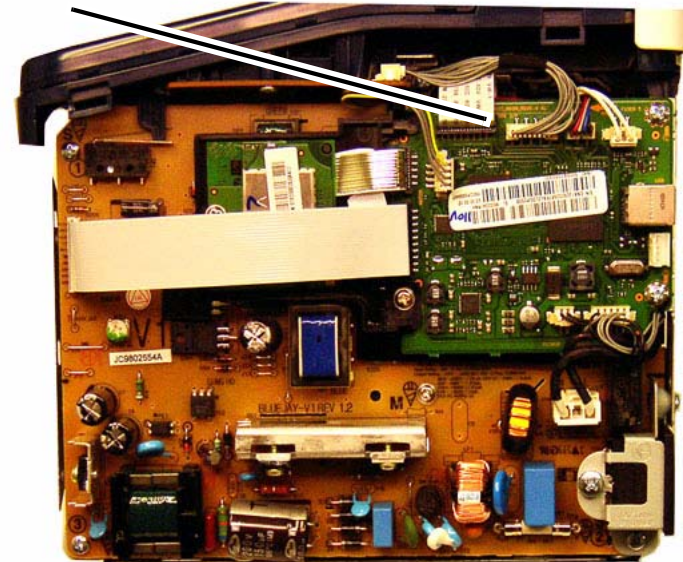
Figure 2 Control Panel PWB Connector

Replacement

NOTE: *Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.*

Install the components in the reverse of removal.

REP 1.5 LVPS / HVPS PWB

Parts List on PL 3.1

Removal

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury.

DANGER: Ne pas effectuer de dépannnage avec le contact principal activé ou avec l'alimentation électrique appliquée à la machine. Certains éléments de la machine comportent des tensions électriques dangereuses qui peuvent causer un choc électrique et de graves blessures.

AVVERTENZA: Non effettuare alcuna riparazione con l'alimentazione elettrica inserita. Alcuni componenti contengono corrente ad alta tensione che può provocare forti scosse e gravi ferite.

VORSICHT: Es dürfen erst Reparaturarbeiten durchgeführt werden, wenn das Gerät ausgeschaltet ist oder der Netzstecker nicht mehr mit der Stromquelle verbunden ist. Einige Komponenten des Gerätes sind stromführend und können daher zu ernsthaften Verletzungen oder Stromschlägen führen.

AVISO: No realice reparaciones con la máquina encendida o conectada a la corriente. Algunos componentes de la máquina contienen voltajes eléctricos peligrosos que pueden producir una descarga eléctrica y causar daños graves.

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the following covers:
    a. Left and Right Side Covers (REP 1.2).
    b. Rear Cover (REP 1.3).
3. Open the Jam Clearance Cover.
4. Remove the Main PWB (REP 1.6).
5. Disconnect the Fuser connector and Main PWB ribbon cable (Figure 1).
    Remove the Insulator Strip (Black).
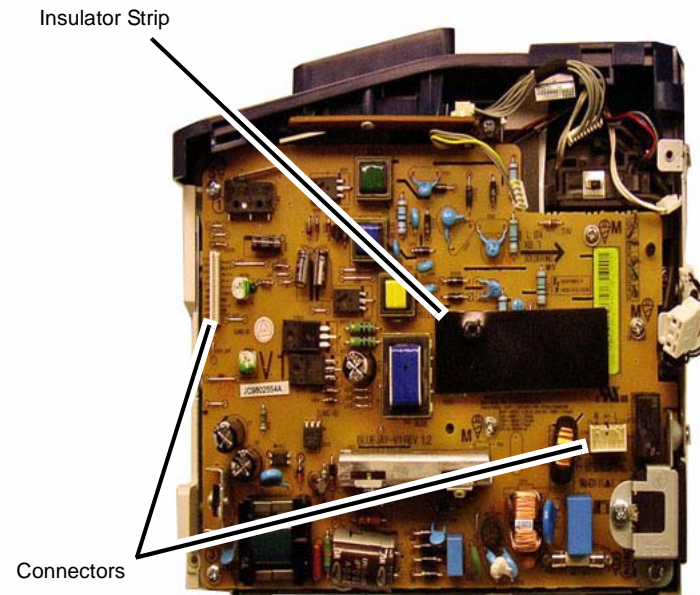
Figure 1 LVPS / HVPS PWB Connectors

NOTE: Be careful not to lose the High Voltage Spring Contacts when removing the LVPS / HVPS PWB from the Frame.

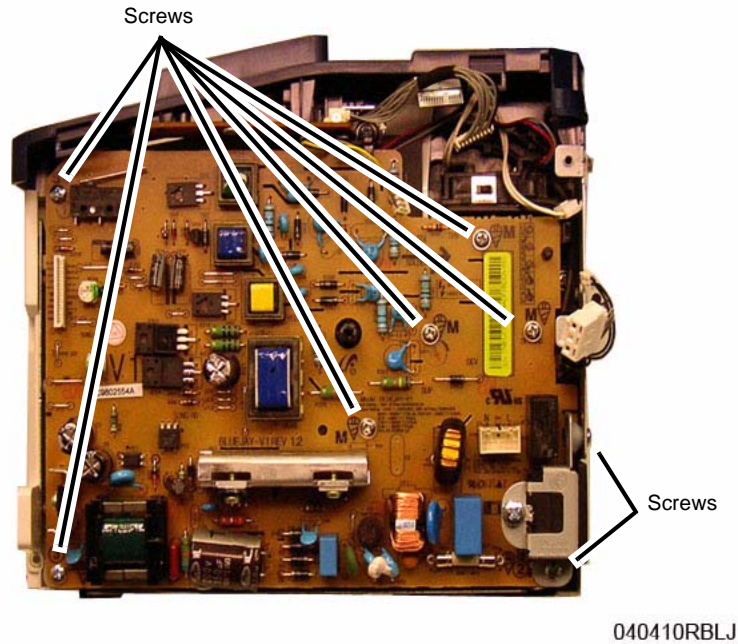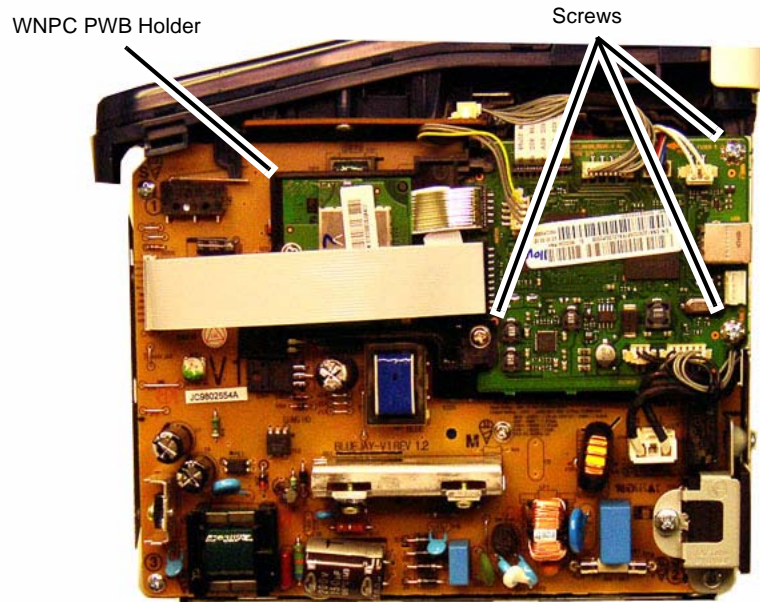6. Remove the screws (8) and the LVPS / HVPS PWB (Figure 2).

Figure 2 LVPS / HVPS PWB Screws

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

Install the components in the reverse of removal.

REP 1.6 Main PWB
Parts List on PL 1.1
Removal

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury.

DANGER: Ne pas effectuer de dépannnage avec le contact principal activé ou avec l'alimentation électrique appliquée à la machine. Certains éléments de la machine comportent des tensions électriques dangereuses qui peuvent causer un choc électrique et de graves blessures.

AVVERTENZA: Non effettuare alcuna riparazione con l'alimentazione elettrica inserita. Alcuni componenti contengono corrente ad alta tensione che può provocare forti scosse e gravi ferite.

VORSICHT: Es dürfen erst Reparaturarbeiten durchgeführt werden, wenn das Gerät ausgeschaltet ist oder der Netzstecker nicht mehr mit der Stromquelle verbunden ist. Einige Komponenten des Gerätes sind stromführend und können daher zu ernsthaften Verletzungen oder Stromschlägen führen.

AVISO: No realice reparaciones con la máquina encendida o conectada a la corriente. Algunos componentes de la máquina contienen voltajes eléctricos peligrosos que pueden producir una descarga eléctrica y causar daños graves.

1. Record the machine serial number from the Data Plate (located on the rear cover beneath the bar code) or from a Configuration Report printed prior to installing the new PWB. To print a Configuration Report, select from the PWS; **[Easy Print Manager, Machine Setting, Print Information, Configuration]**.

2. Switch Off the Printer and unplug the Power Cord.

3. Remove the Right Cover (REP 1.2).

4. Remove the Main PWB (Figure 1):
   a. Disconnect all the connectors on the Main PWB.
   b. Remove the screws (3).
   c. Remove the Main PWB and the WNPC (WiFi) PWB holder.

WNPC PWB Holder   Screws

040406RBLJ

Figure 1 Main PWB

5. Unlatch the WNPC (WiFi) PWB holder from the Main PWB.

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

Install the components in the reverse of removal.

After installing a new Main PWB, the following steps MUST be performed to write the machine serial number to the new Main PWB:

1. Reconnect the Power Cord. Power On the machine.
2. Connect the PWS to the printer via USB connection.
3. Run the USB Serial Number Writing Tool application. (Download the USB Serial Number writing application to the PWS from the GSN website). [GP 9].
   a. Double-click the executable file and follow the steps listed in the USB Serial application window to write the machine serial number to the new Main PWB. (Figure 2).

*NOTE: S*elect the [**Check USB**] button to ensure that there is a good USB connection BEFORE entering the serial number. If the connection is good, "USB Success," will display in the area above the button. If there is an problem with the USB connection, "USB Fail" will display.

040440RKB

Figure 2 PWB Serial Number Screen

   b. After successfuly entering the serial number, exit the PWB Serial Number writing application.
4. Print a Configuration Report and check that the original machine serial number is displayed under the "Device Profile" heading.

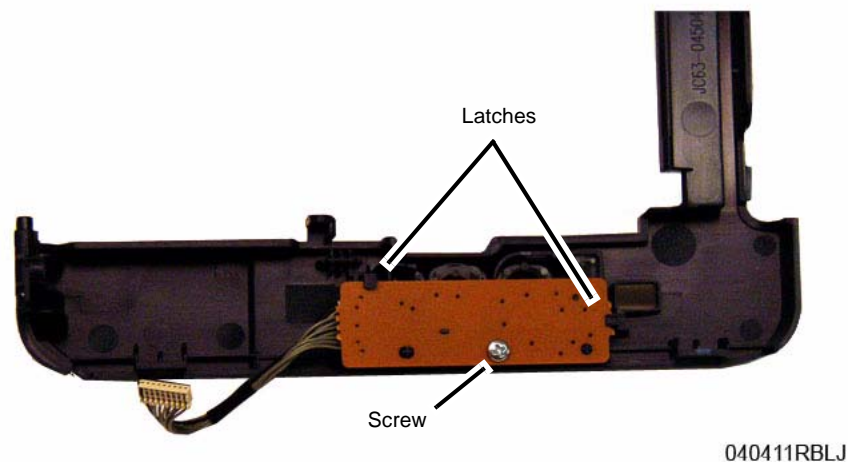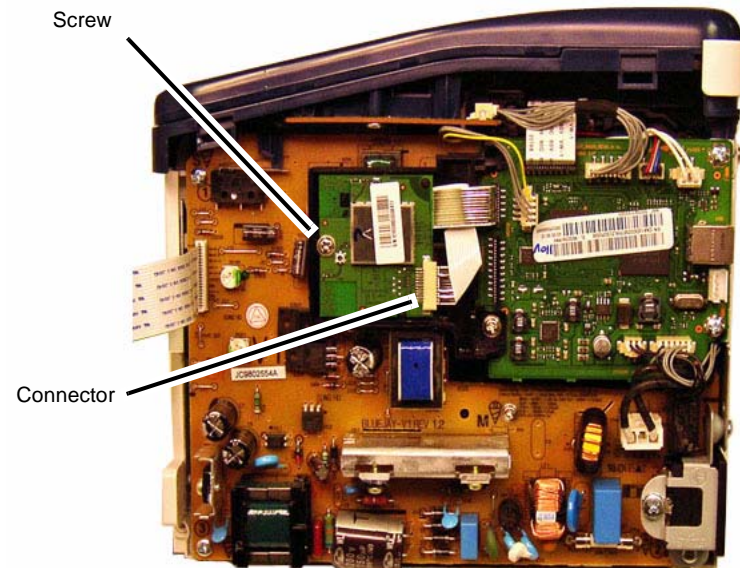# REP 1.7 Control Panel PWB

Parts List on PL 2.1

Removal

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the following covers:
   a. Left and Right Side Covers (REP 1.2).
   b. Rear Cover (REP 1.3).
3. Disconnect the Control Panel PWB connector on the Main PWB, and remove the Top Cover (Figure 1).
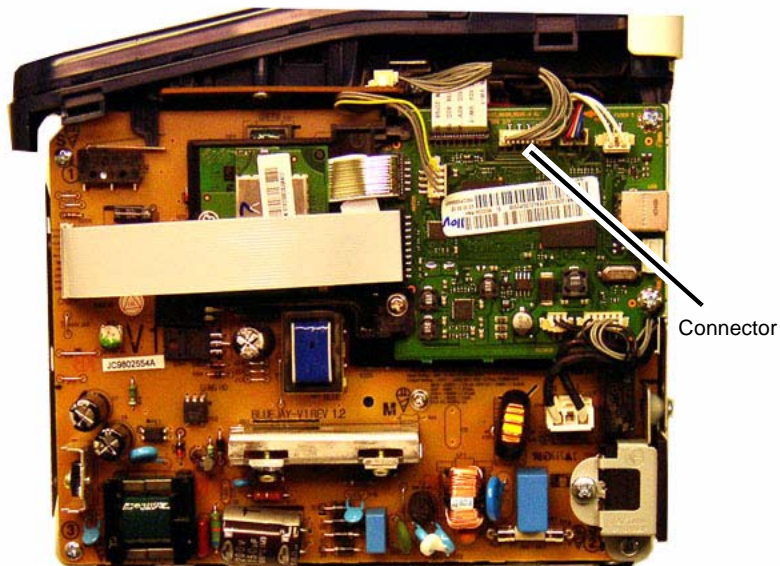
040406RBLJ

Figure 1 Control Panel PWB Connector

4. Remove the Control Panel PWB from the underside of the Top Cover (Figure 2).
   a. Remove the screw (1).
   b. Release the latches and remove the PWB.

040411RBLJ

Figure 2 Control Panel PWB (Bottom View)

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

Install the components in the reverse of removal.

REP 1.8 WNPC (WiFi) PWB

Parts List on PL 1.1

Removal

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the Right Side Cover (REP 1.2).
3. Disconnect the LVPS / HVPS PWB connector on the Main PWB (Figure 1).
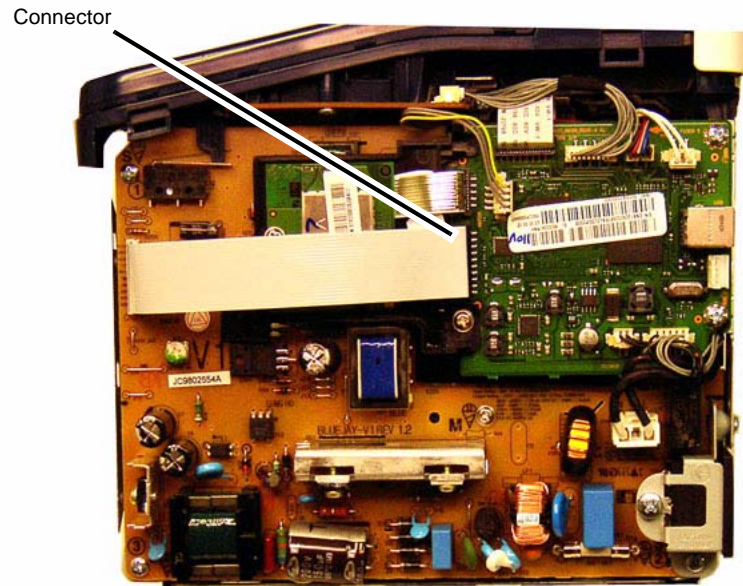
Figure 1 LVPS / HVPS PWB Connector

4. Remove the WLNPC (WiFi) PWB (Figure 2).
   a. Disconnect the connector on the WNPC (WiFi) PWB.
   b. Remove the screw (1) and the WNPC (WiFi) PWB

Figure 2 WLAN (WiFi) PWB

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

Install the components in the reverse of removal.

REP 1.9 Left Frame and Drive Motor

Parts List on PL 3.4

Removal

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the Print Cartridge.
3. Remove the following covers:
   a. Left and Right Side Covers (REP 1.2).
   b. Rear Cover (REP 1.3).
   c. Front Cover (REP 1.1).
   d. Top Cover (REP 1.4).
4. Disconnect the Drive Motor connector (Figure 1).

Connector
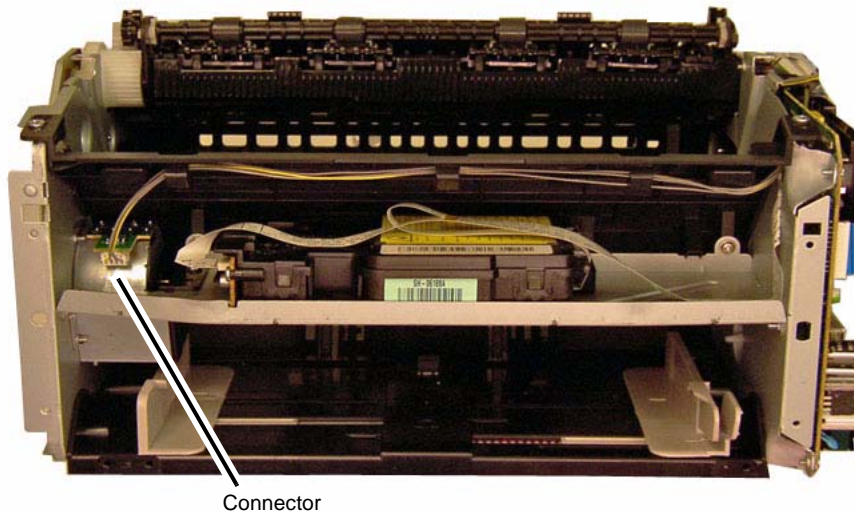
040417RBLJ

Figure 1 Drive Motor Connector (Front View)

5. Remove the Fuser Module (REP 1.14).

6. Remove the Main Drive Unit (4 screws) (Figure 2).
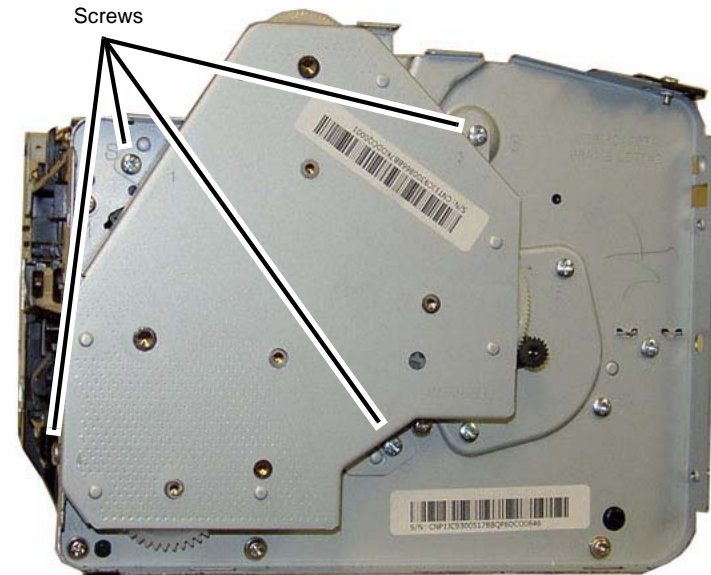
Screws

040431RBLJ

Figure 2 Main Drive Unit Removal (Left View)

7. Remove the Left Frame and Drive Motor (Figure 3):
   a. Remove the LSU Cover screw (1).
   b. Remove the screws (7) and the Left Frame.

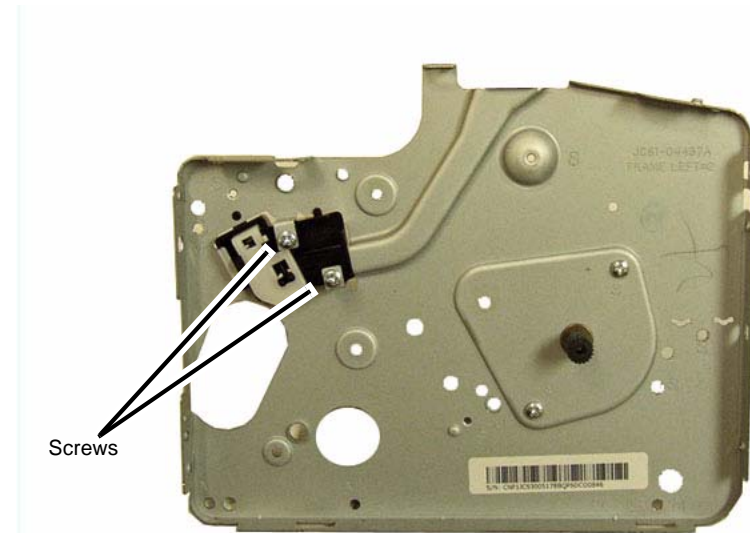b - Screws
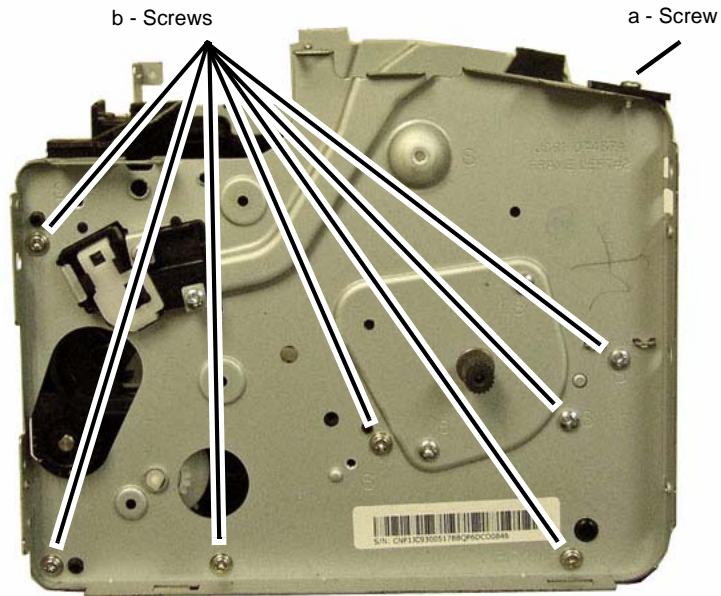
a - Screw

040432RBLJ

Figure 3 Left Frame Removal

8. Remove the Guide from the Left Frame (2 screws) (Figure 4).

Screws

040433RBLJ

Figure 4 Guide Removal

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

Install the components in the reverse of removal.

NOTE: The Frame is flexible and can be bowed out if the screws are not tightened in the correct order.

Reinstall the Frame as follows so it seats flush against the printer internal modules.

1. Align the Left Frame on to the internal modules.
2. Install, but do not tighten, the screws (7) (Figure 3).
3. Tighten the Frame screws from the center of the Frame:
   To the Front of the printer, then to the Rear of the Printer.

REP 1.10 LSU

Parts List on PL 3.6

Removal

Figure 1 LSU Connectors and Screws (Front View)

WARNING

Use extreme care when replacing the Raster Output Scanner / LSU (ROS) or touching the high vol

e lead. Discharge the laser assembly by touching the high voltage lead to the machine frame. The ROS utilizes a laser assembly that stores a high voltage charge after the power has been removed and represents a shock hazard that could cause serious personal injury if not discharged.

DANGER: Faire très attention lors du changement du générateur de balayage / LSU (ROS) ou lors de la manipulation du câble de haute tension. Décharger le système laser en touchant le câble HT au bâti machine: le ROS utilise un système laser qui retient une haute tension après la coupure de l'alimentation, représentant un risque de choc et de graves blessures.

AVVERTENZA: Fare estrema attenzione nel sostituire il Raster Output Scanner / LSU (ROS) o nel toccare il cavo di alta tensione. Scaricare il complessivo laser collegando il cavo di alta tensione col telaio della macchina. Il ROS utilizza un complessivo laser che ritiene una carica di alta tensione dopo il taglio dell'alimentazione con conseguente grave pericolo di scossa elettrica e serie ferite.
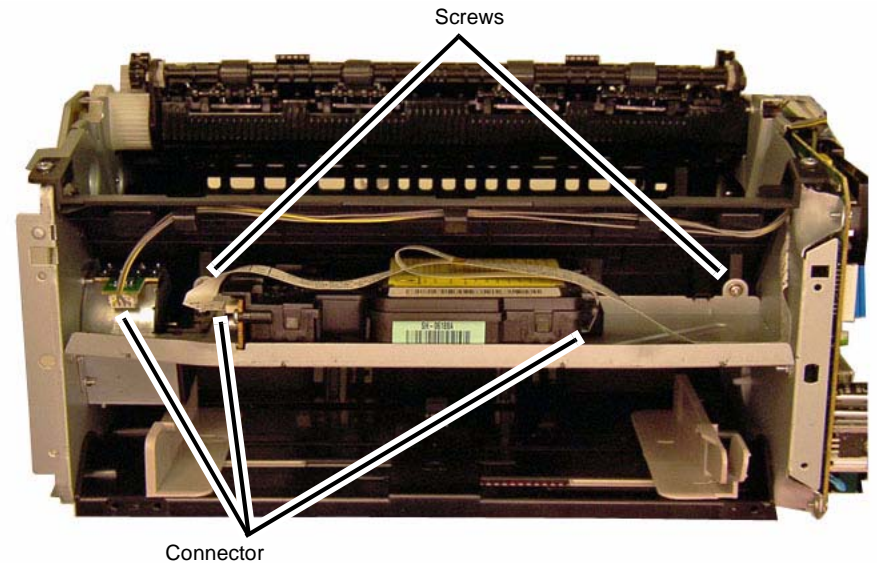
VORSICHT: Beim Ersetzen der Lasereinheit / LSU (ROS) und beim Umgang mit Hochspannungsleitern ist äußerste Vorsicht geboten. Die Lasereinheit muss durch Berühren des Hochspannungsleiters mit dem Gehäuse des Geräts entladen werden. Nach Betrieb der Lasereinheit (ROS) bleibt immer eine Hochspannungsladung zurück, welche ein hohes Elektroschockrisiko darstellt. Äußerste Vorsicht ist geboten.

AVISO: Use extrema precaución para sustituir el Escáner de salida ráster / LSU (ROS) o tocar el cable de alto voltaje. Descargue el sistema láser tocando el cable de alto voltaje del bastidor de la máquina. El ROS utiliza un sistema láser que retiene carga de alto voltaje después de interrumpir la alimentación de energía y representa un grave peligro que puede ocasionar daños personales graves si no se descarga.

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the Print Cartridge.
3. Remove the following covers:
   a. Left and Right Side Covers (REP 1.2).
   b. Rear Cover (REP 1.3).
   c. Front Cover (REP 1.1).
   d. Top Cover (REP 1.4).
4. Perform the following (Figure 1):
   a. Disconnect the Drive Motor connector (1).
   b. Disconnect the LSU Flat Cable connectors (2).

      NOTE: The Flat Cable may be adhered to the LSU. Detach it from the LSU and reinstall it on the new LSU in the same location.
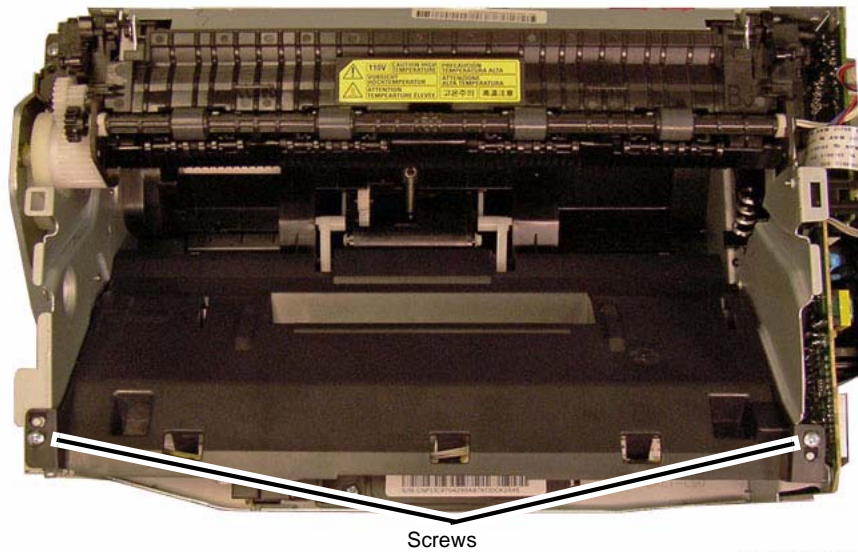
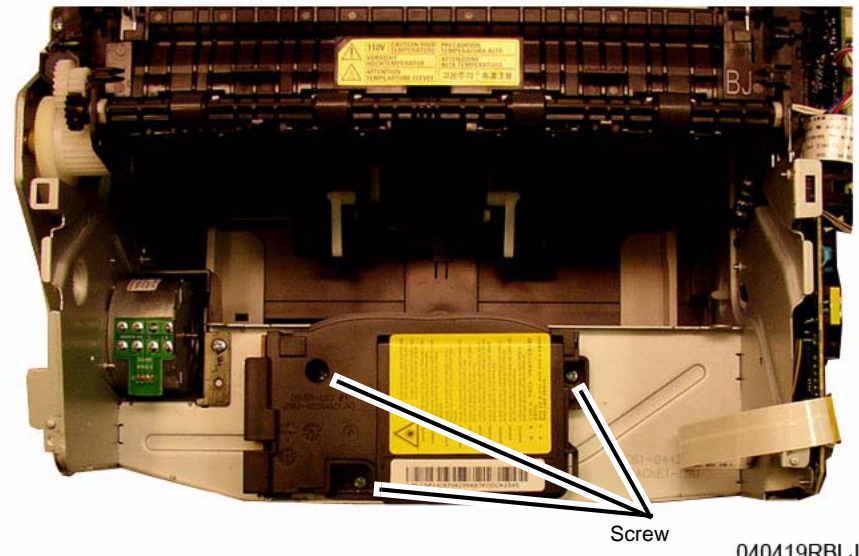   c. Remove the inside LSU cover screws (2).

5. Remove the top LSU cover screws (2) and the cover (Figure 2).

Screws

040418RBLJ

Figure 2 LSU Cover Top Screws (Top View)

6. Remove the screws (3) and the LSU (Figure 3).

Screw

040419RBLJ

Figure 3 LSU Removal (Top View)

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

Install the components in the reverse of removal.

REP 1.11 Feed Rolls and Retard Pad

Parts List on PL 3.7 and PL 3.3

Removal

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the Print Cartridge.
3. Remove the following covers:
   a. Left and Right Side Covers (REP 1.2).
   b. Rear Cover (REP 1.3).
   c. Front Cover (REP 1.1).
   d. Top Cover (REP 1.4).
4. Perform the following (Figure 1):
   a. Disconnect the Drive Motor connector (1).
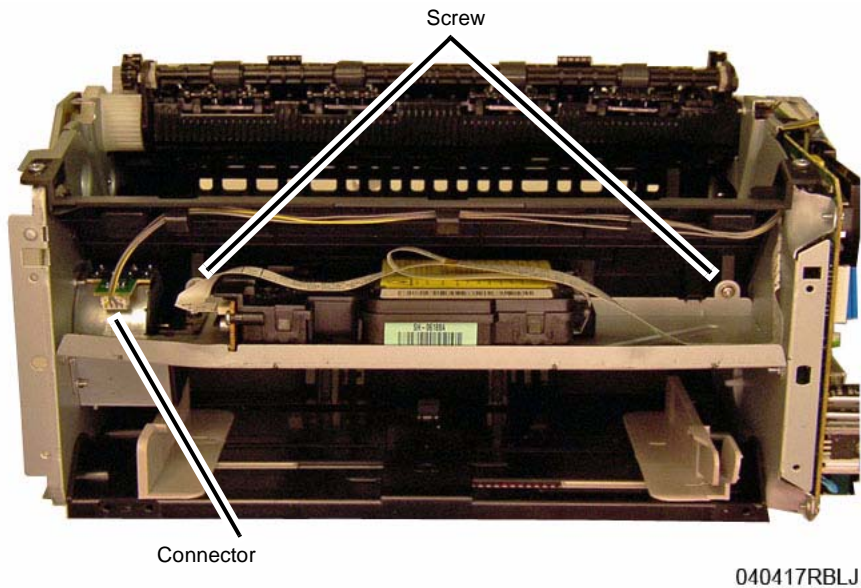   b. Remove the inside LSU cover screws (2).

Figure 1 Motor Connector and LSU Cover Screws (Front View)

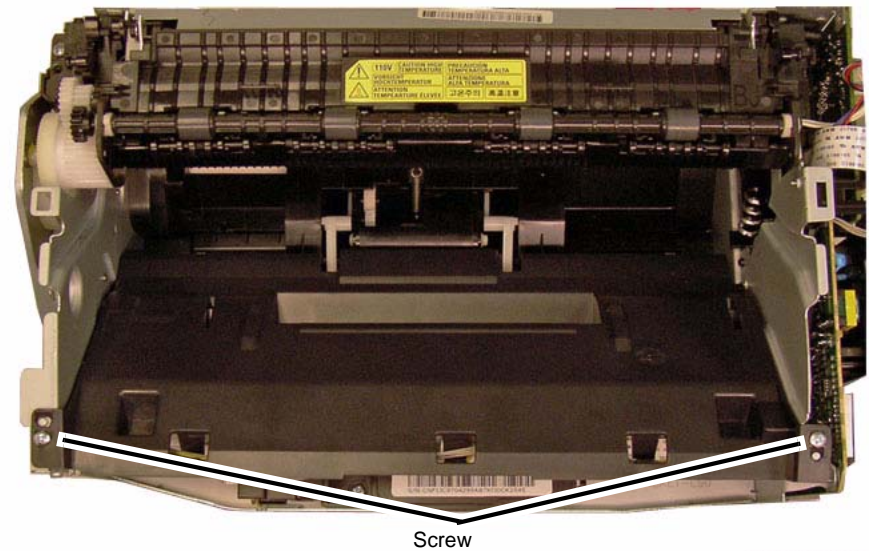5. Remove the top LSU Cover screws (2) and the cover (Figure 2).

Figure 2 LSU Cover Top Screws (Top View)

6. Remove the Feed Rolls Assembly screws (2) through the bottom of the Printer (Figure 3).

Screwdriver Access Holes

Front View
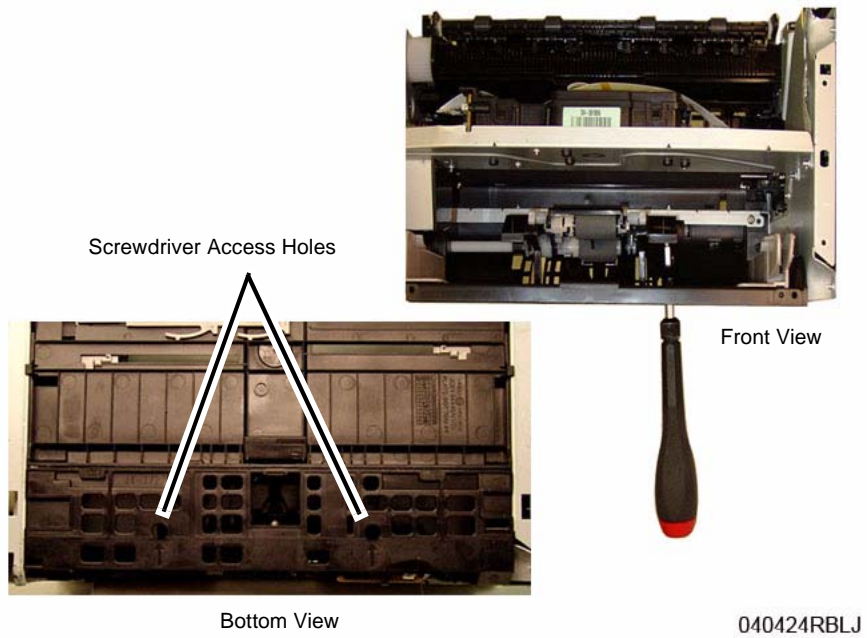
Bottom View

040424RBLJ

Figure 3 Feed Rolls Assembly Screws Removal

7. Remove the Feed Rolls Assembly (Figure 4):
   a. Rotate the Feed Roll assembly up to release the locating pins from the frame.
   b. Move the Feed Roll assembly up to the right and remove it.
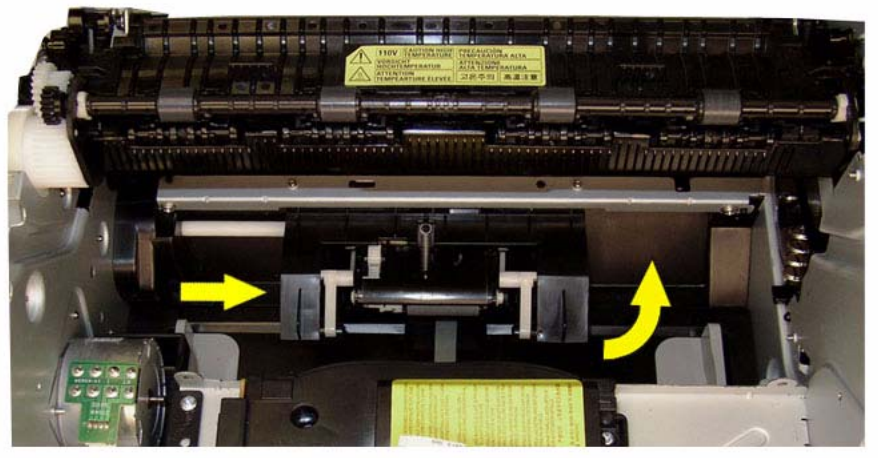

040425RBLJ

Figure 4 Feed Rolls Assembly Removal (Top View)

8. Remove the Retard Pad (Figure 5):
   Be careful not to lose the Retard Pad Spring.
   a. From the rear of the printer, release the Pivot Latches (2).
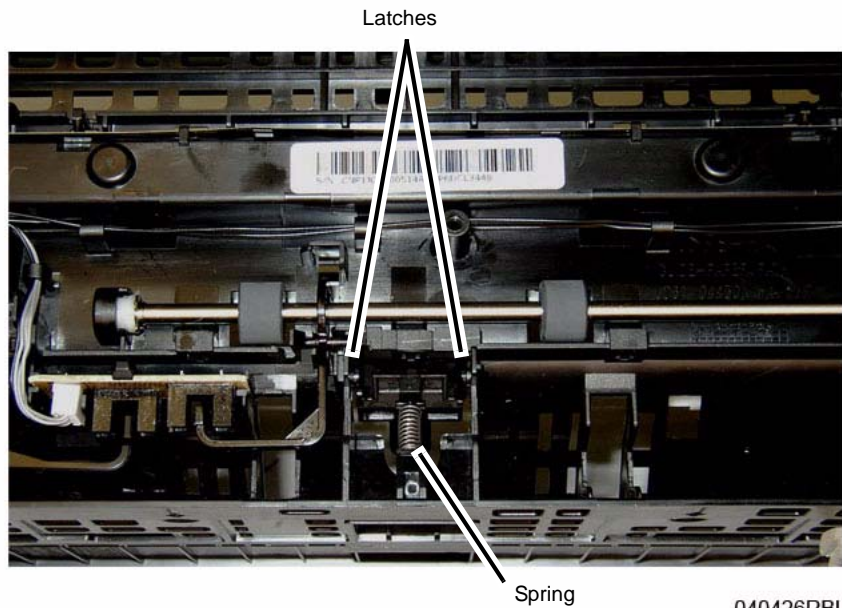   b. Move the Retard Pad into the printer to remove it.

Figure 5 Retard Pad Removal (Rear View)

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

Install the components in the reverse of removal.

When replacing the Retard Pad make sure the Spring is positioned on the locating post on the frame (Figure 5).

When replacing the Feed Rolls Assembly make sure the Locating Pins are positioned in the frame holes before installing the screws (2) (Figure 6).
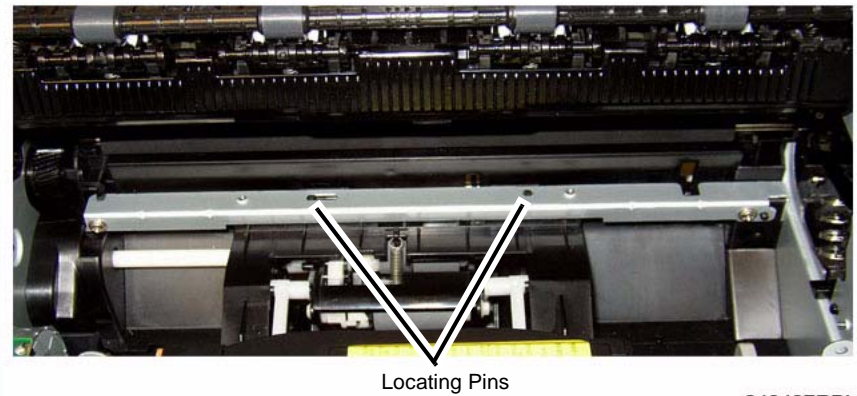

Figure 6 Feed Rolls Assembly Locating Pins (Top View)

REP 1.12 Feed Sensors PWB and Actuators

Parts List on PL 3.3

Removal

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the Rear Cover (REP 1.3).
3. Removing the Feed Sensor PWB (Figure 1):
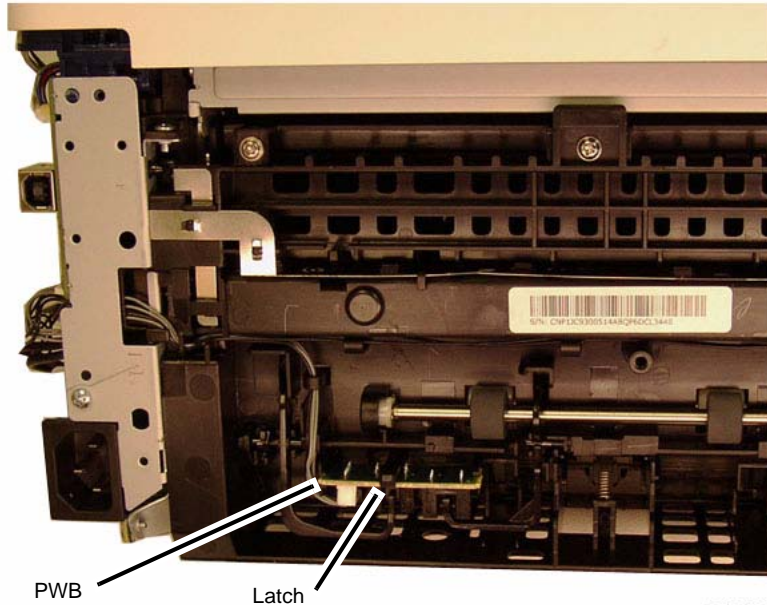   a. Unlatch and remove the Sensor PWB.
   b. Disconnect the connector (1).

4. Removing the Feed Sensor Actuator (Figure 2):
   Note the location of the Spring in the frame cutout for reinstallation.
   a. Unlatch and remove the actuator.
5. Removing the Width Actuator (Figure 2):
   Note the location of the Spring in the frame cutout for reinstallation.
   a. Unlatch and remove the actuator.

Figure 1 Feed Sensors PWB (Rear View)

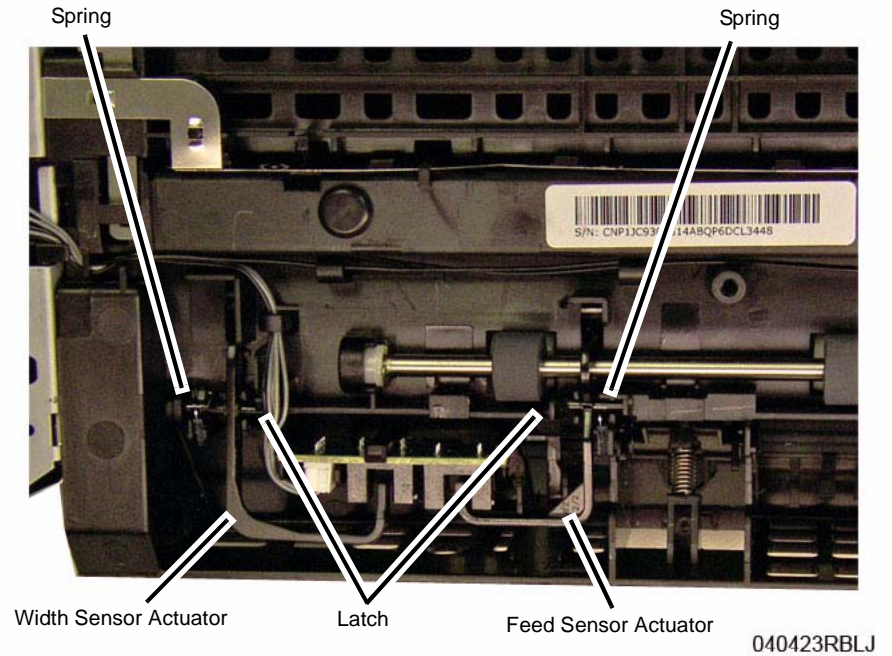**Figure 2 Sensor Actuators and Springs (Rear View)**

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

NOTE: Make sure that the Actuator Spring is location in frame cutout (Figure 2).

Install the components in the reverse of removal.

REP 1.13 Transfer Roll

Parts List on PL 3.1

Removal

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the Print Cartridge.
3. Remove the Fuser Module (REP 1.14).
4. From the rear of the printer, using a small screwdriver release the latches (2) and push the Transfer Roll Bushing into the printer (Figure 1).
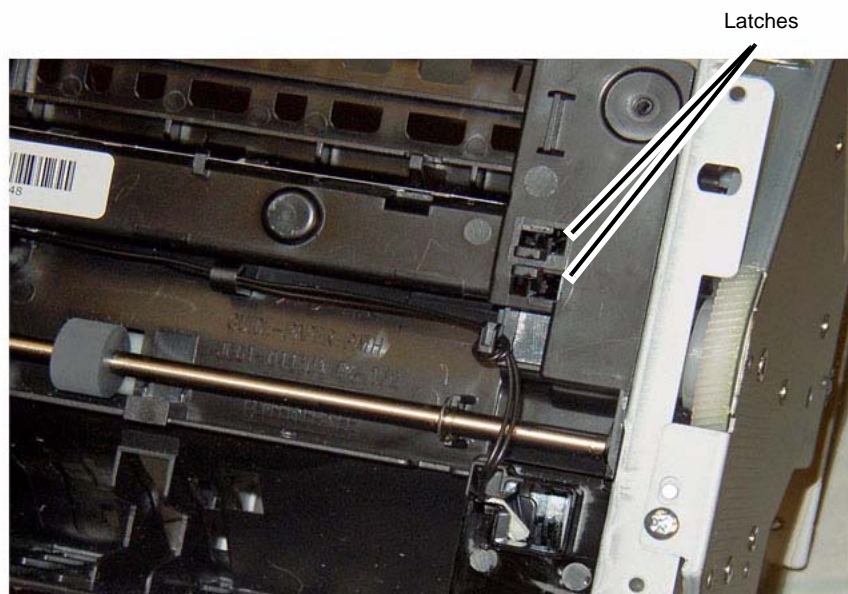
Latches

040414RBLJ

Figure 1 Transfer Roll Bushing Latches (Rear View)

5. Lift the Transfer Roll out of the printer (Figure 2).

Transfer Roll

040415RBLJ

Figure 2 Transfer Roll Removal (Top View)

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.
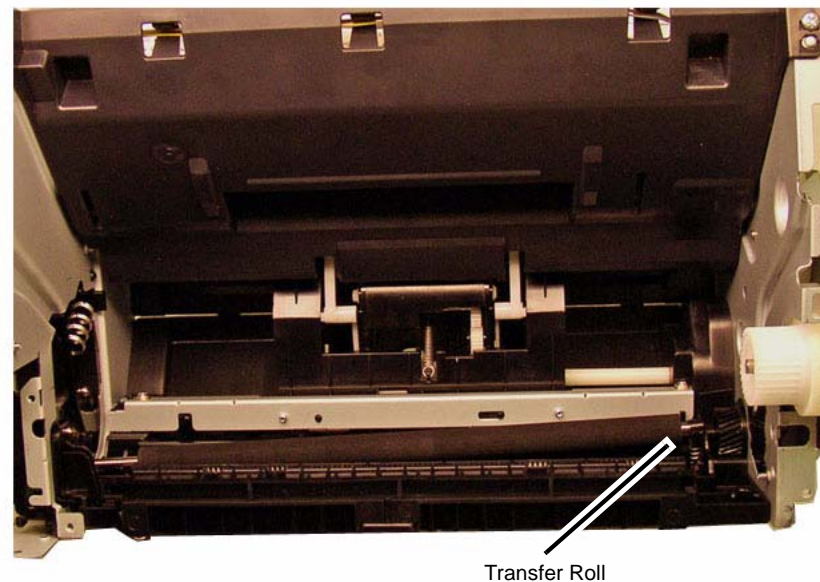
1. Align the slots in the Transfer Roll Bushing with the Guides on the Printer Frame (Figure 3).

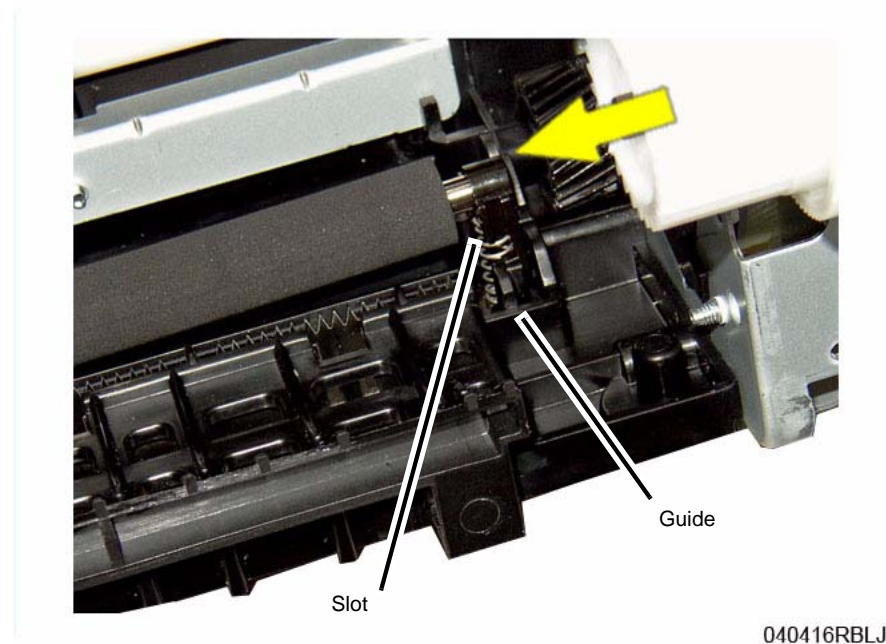   Tilt the top of the Bushing inward to align the Latches while pushing it into place.

Figure 3 Transfer Roll Bushing Alignment (Top View)

Install the components in the reverse of removal.

REP 1.14 Fuser Module

Parts List on PL 3.2
Removal

<div style="color:red">

WARNING

Do not perform repair activities with the power on or electrical power supplied to the machine. Some machine components contain dangerous electrical voltages that can result in electrical shock and possible serious injury.

DANGER: Ne pas effectuer de dépannnage avec le contact principal activé ou avec l'alimentation électrique appliquée à la machine. Certains éléments de la machine comportent des tensions électriques dangereuses qui peuvent causer un choc électrique et de graves blessures.

AVVERTENZA: Non effettuare alcuna riparazione con l'alimentazione elettrica inserita. Alcuni componenti contengono corrente ad alta tensione che può provocare forti scosse e gravi ferite.

VORSICHT: Es dürfen erst Reparaturarbeiten durchgeführt werden, wenn das Gerät ausgeschaltet ist oder der Netzstecker nicht mehr mit der Stromquelle verbunden ist. Einige Komponenten des Gerätes sind stromführend und können daher zu ernsthaften Verletzungen oder Stromschlägen führen.

AVISO: No realice reparaciones con la máquina encendida o conectada a la corriente. Algunos componentes de la máquina contienen voltajes eléctricos peligrosos que pueden producir una descarga eléctrica y causar daños graves.

WARNING

Do not handle the fuser components until they have cooled. Some fuser components operate at hot temperatures and can produce serious personal injury if touched.

DANGER: Ne pas manipuler les éléments du four avant de les laisser refroidir. Certains éléments du four fonctionnent à des températures très élevées et peuvent causer de graves blessures s'ils sont touchés.

AVVERTENZA: Non maneggiare i componenti del fusore finché non sono raffreddati. Alcuni di questi componenti funzionano ad alte temperature e possono provocare gravi ferite se vengono toccati.

VORSICHT: Die Fixieranlage sollte erst gehandhabt werden, wenn diese genügend abgekühlt ist. Einige Teile der Fixieranlage erzeugen übermäßige Hitze und führen bei der Berührung zu schweren Verbrennungen.

AVISO: No manipule los componentes del fusor antes de que se enfríen. Algunos de los componentes del fusor funcionan a altas temperaturas y pueden ocasionar daños personales graves si se los toca.

</div>

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the following covers:
   a. Left and Right Side Covers (REP 1.2).
   b. Rear Cover (REP 1.3).
   c. Front Cover (REP 1.1).
   d. Top Cover (REP 1.4).
3. Remove the Main PWB (REP 1.6).

4.   Disconnect the Fuser Connectors (Figure 1).
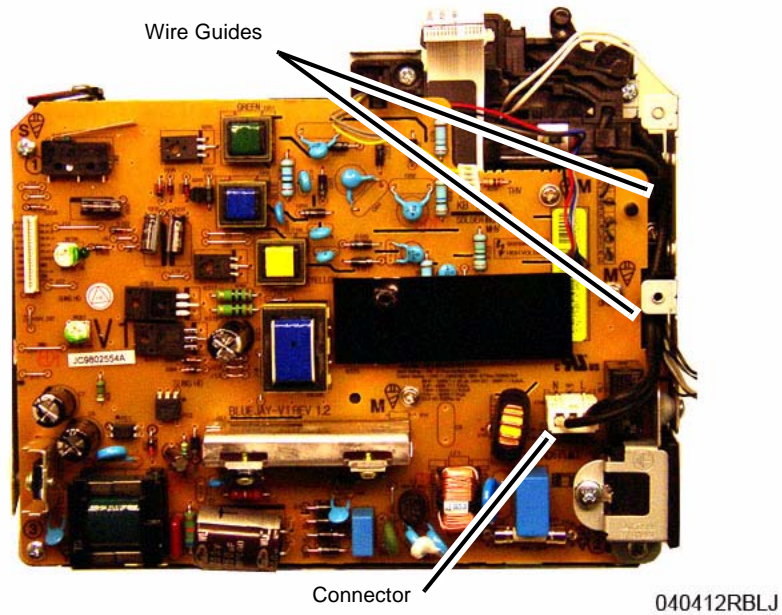

Wire Guides

Connector

040412RBLJ

Figure 1 Fuser Connector and Wire Guides

NOTE: The top right (viewed from the rear) Tapered Plastic Screw is different than the other plastic screws in the printer, make sure it is installed in the correct location during replacement.

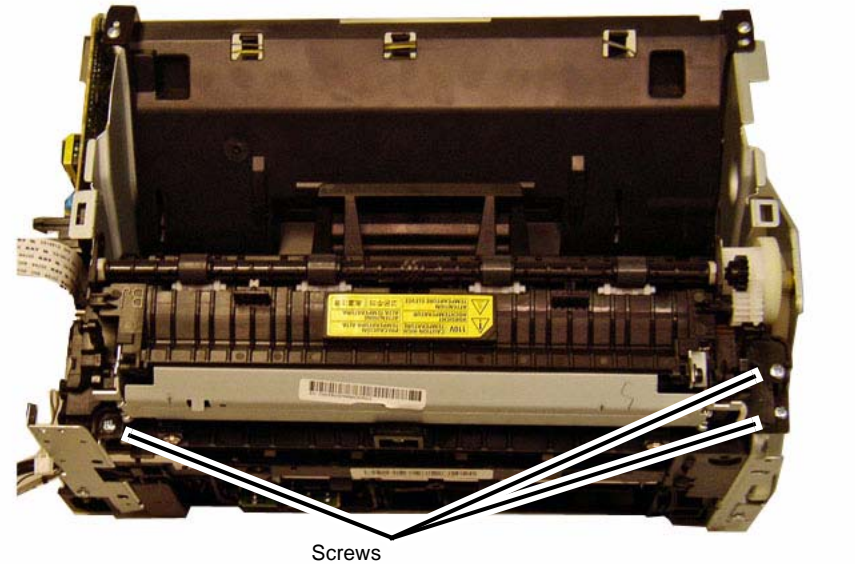5.   Remove the screws (3) (Figure 2).

Screws

040413RBLJ

Figure 2 Fuser Screws (Top View)

6. Remove the Fuser Module (Figure 3):

Lift the left side (viewed from the rear) of the user, then slide it to the left and remove it.
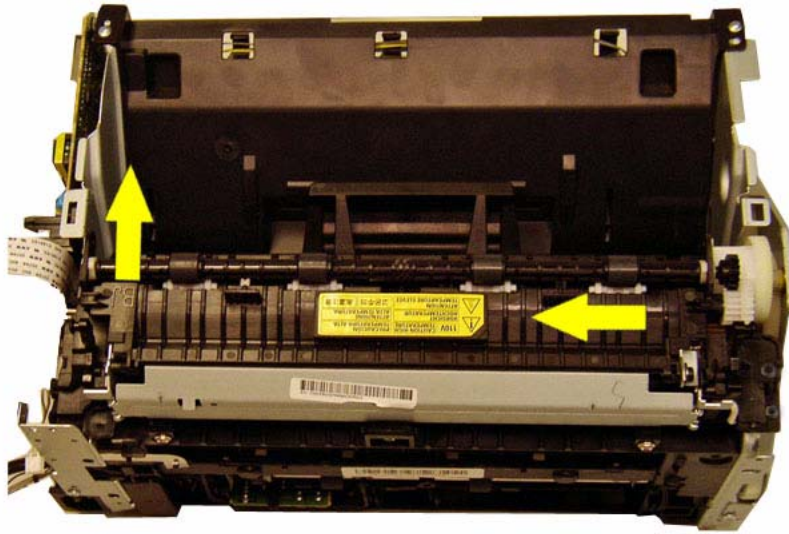
040413aRBLJ

Figure 3 Fuser Removal (Top View)

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

NOTE: The top right Tapered Plastic Screw (viewed from the rear) is different than the other plastic screws in the printer, make sure it is installed in the correct location during replacement, refer to (Figure 2).

Install the components in the reverse of removal.

REP 1.15 LSU Cables

Parts List on PL 3.6

Removal

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the following covers:
   a. Left and Right Side Covers (REP 1.2).
   b. Rear Cover (REP 1.3).
   c. Front Cover (REP 1.1).
3. Remove the Main PWB (REP 1.6), and the LVPS / HVPS PWB (REP 1.5).
4. Remove the Insulator Strip (Black) from behind the LVPS / HVPS PWB (Figure 1).

Insulator Strip

040420RBLJ

Figure 1 Insulator Strip

5. Remove the LSU Cables (Figure 2).
   a. Disconnect the connectors (2).

      NOTE: *The Flat Cable may be adhered to the LSU, detach it from the LSU and re-install it on the new LSU in the same location.*

   b. Route the cables through the frame.
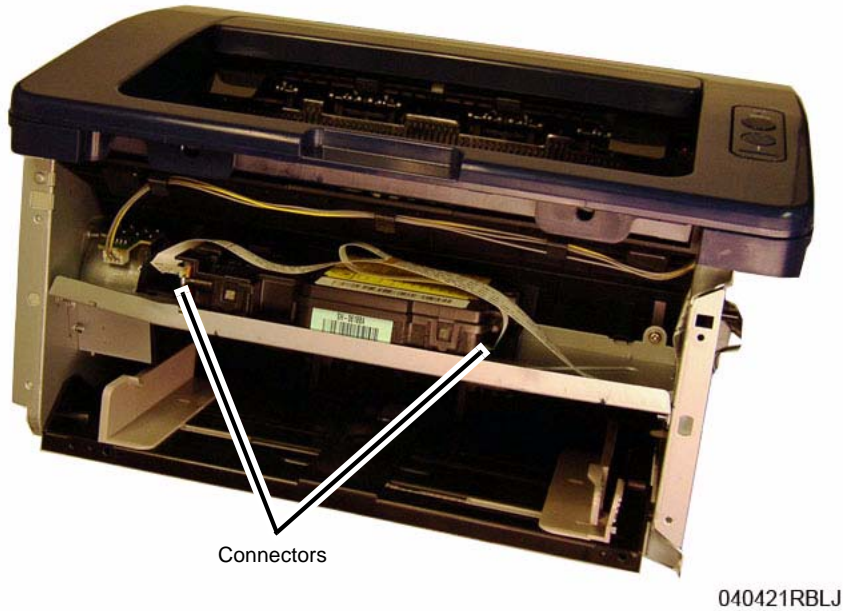
Figure 2 LSU Connectors (Front View)

Replacement

NOTE: *Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.*
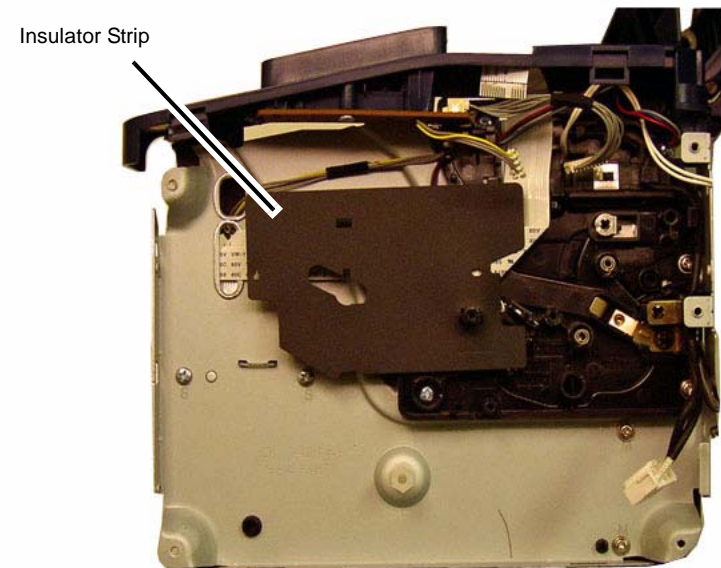
Install the components in the reverse of removal.

REP 1.16 Feed Clutch
Parts List on PL 3.3
Removal

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the following covers:
   a. Left and Right Side Covers (REP 1.2).
   b. Rear Cover (REP 1.3).
   c. Front Cover (REP 1.1).
   d. Top Cover (REP 1.4).
3. Unplug the Feed Clutch Connector from the Main PWB (Figure 1).
   Route the wires through the frame to the left side of the printer.

Figure 1 Feed Clutch Connector

4. Remove the Left Frame (REP 1.9).

5. Release the latch and remove the Feed Clutch (Figure 2).
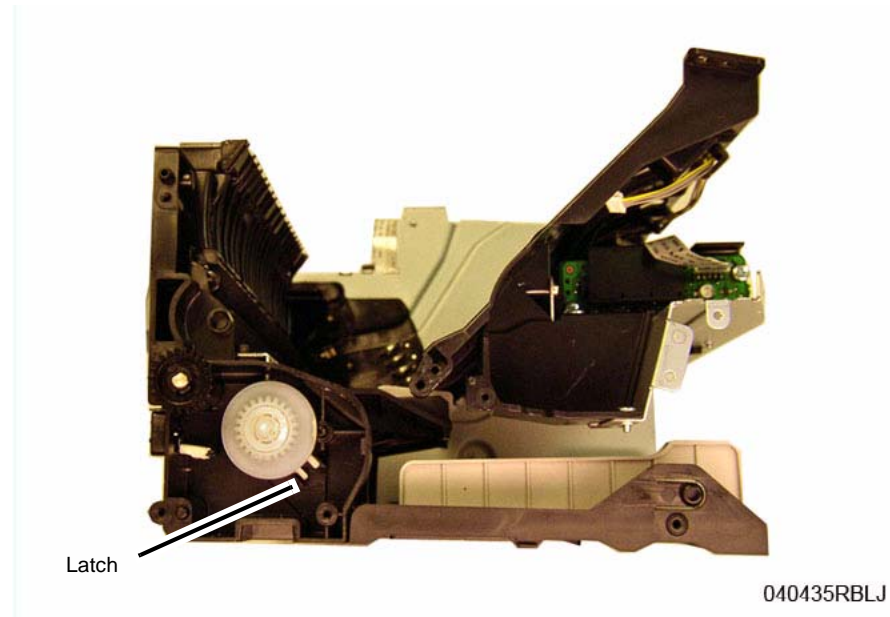
Figure 2 Feed Clutch Removal (Left View)

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

Install the components in the reverse of removal.

NOTE: Make sure the Feed Drive Shaft engages the Feed Roll Assembly.

REP 1.17 Paper Drive Roll and Drive Gear
Parts List on PL 3.3
Removal

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the following covers:
   a. Left and Right Side Covers (REP 1.2).
   b. Rear Cover (REP 1.3).

NOTE: When removing the Main Drive Unit make sure the gears do not slide off their shafts.

3. Remove the Main Drive Unit (4 screws) (Figure 1).
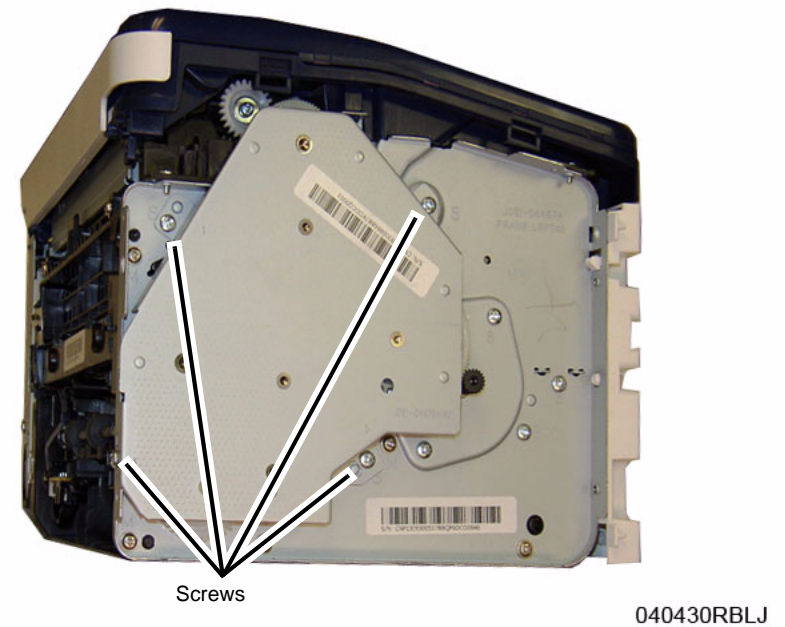
Figure 1 Main Drive Unit (Left View)

4. Release the latch on the Paper Drive Roll Gear and remove it (Figure 2).

Figure 2 Paper Drive Roll Gear (Left View)
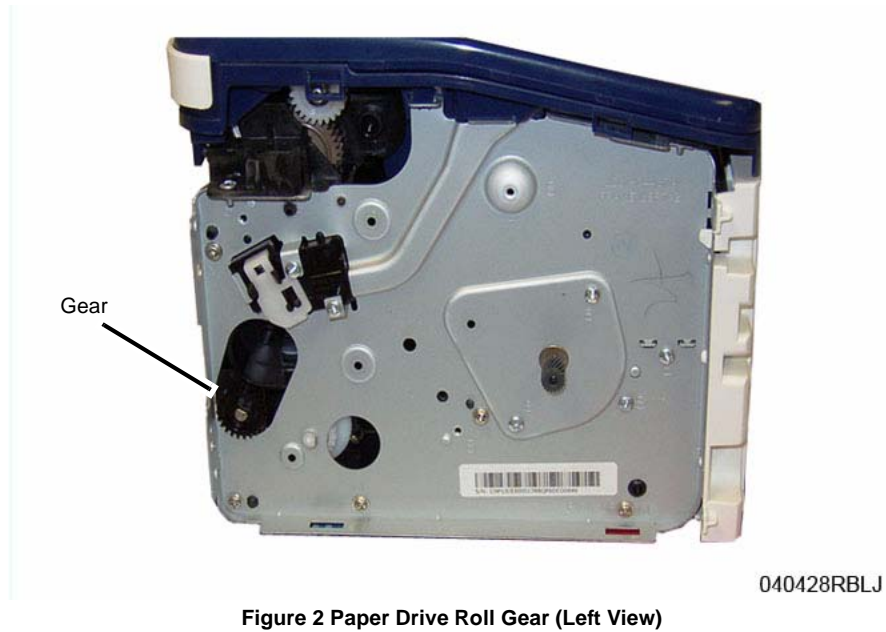
5. Remove the Feed Sensor Actuator (Figure 3).

Note the location of the Spring in the frame cutout for reinstallation.

a. Unlatch and remove the actuator.

Figure 3 Feed Sensor Actuator (Rear View)
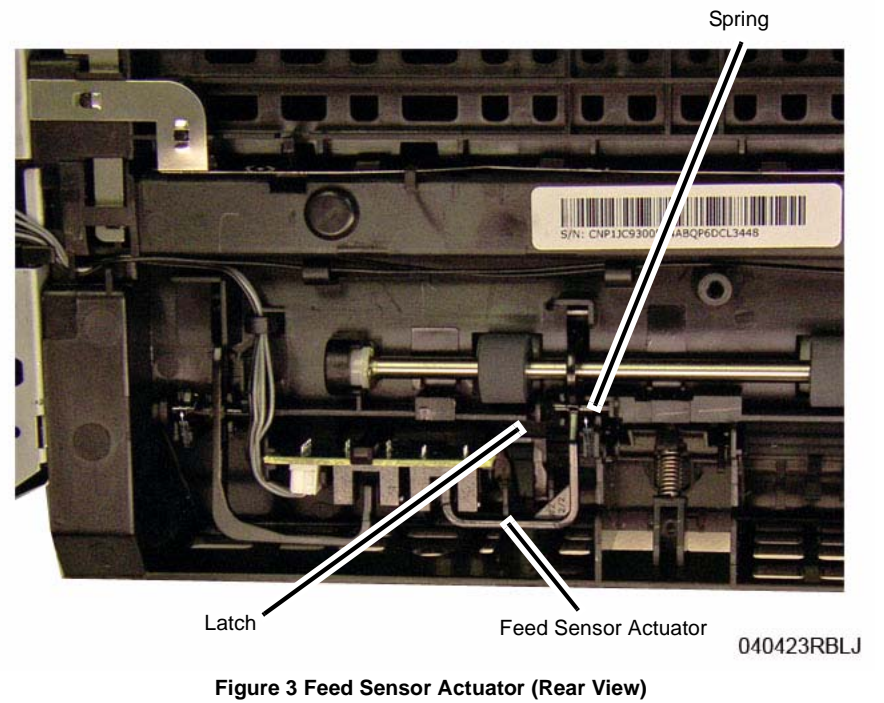
6. Remove the Paper Drive Roll (Figure 4):

    NOTE: Be careful not to lose the Paper Drive Roll Bushing on the Left Frame.

    a. Remove the E-rings (2).
    b. Move the roll to the right and remove it.
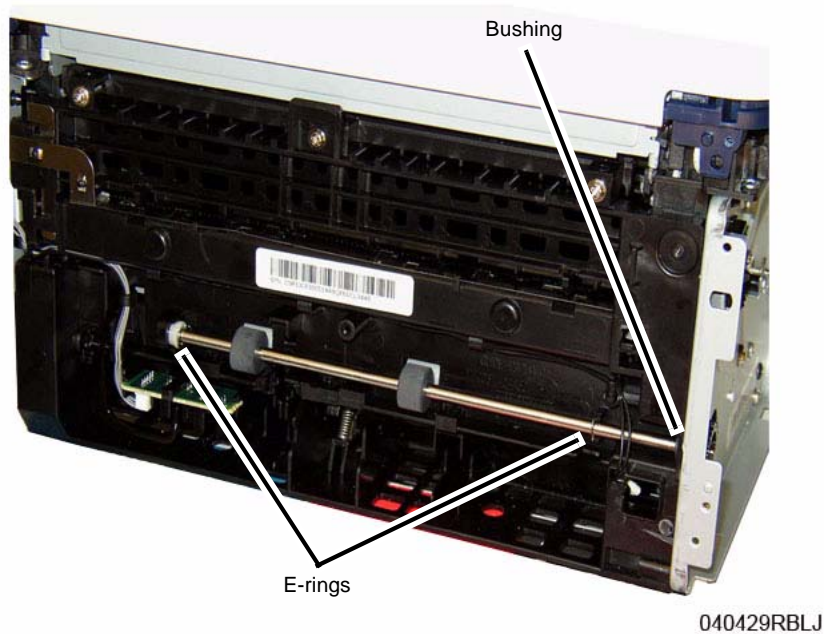
Figure 4 Paper Drive Roll Removal (Rear View)

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.
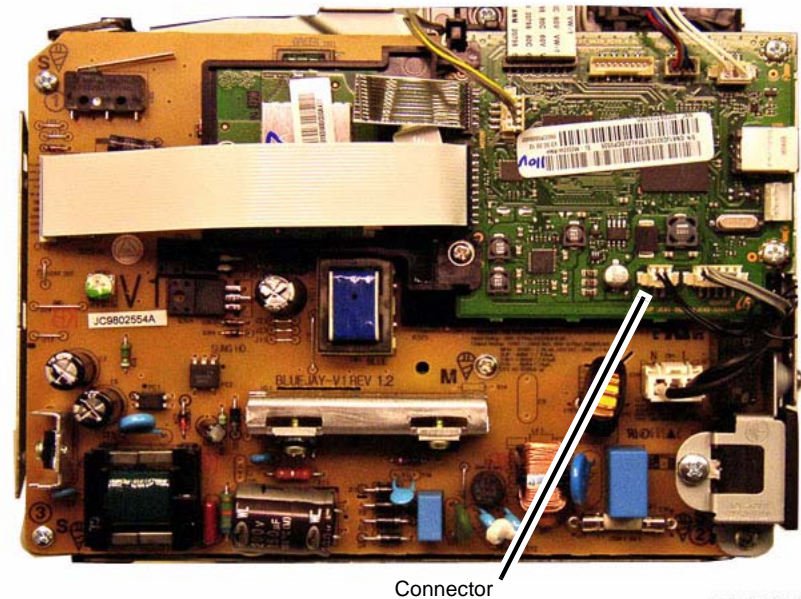
NOTE: Make sure that the Actuator Spring is location in frame cutout (Figure 3).

NOTE: When replacing the Main Drive Unit, the drive gears may need to be rotated to align them with the other drives.

Install the components in the reverse of removal.

REP 1.18 Paper Tray
Parts List on PL 3.1
Removal

1. Switch Off the Printer and unplug the Power Cord.
2. Remove the following covers:
    a. Left and Right Side Covers (REP 1.2).
    b. Front Cover (REP 1.1).
3. Remove the Paper Tray Screw (1) from the Left Frame (Figure 1).
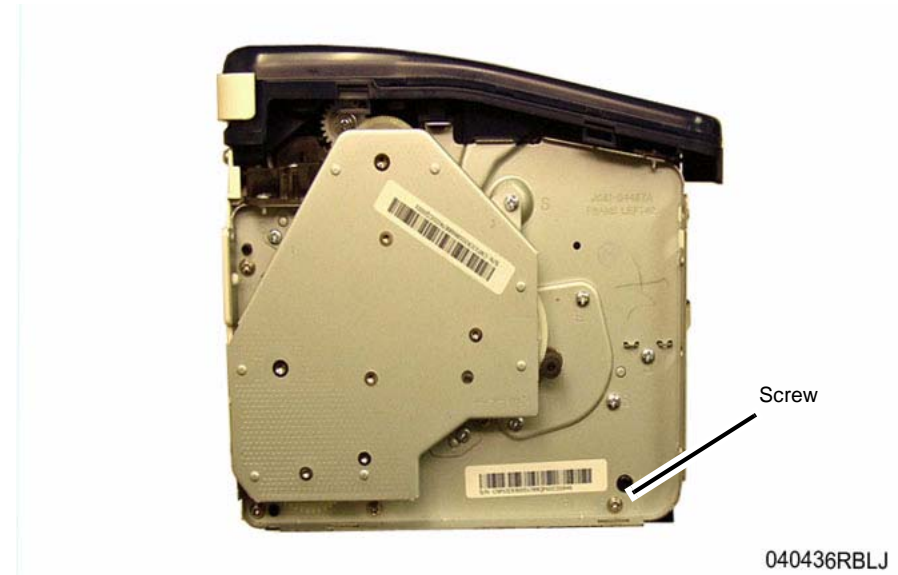
Figure 1 Paper Tray Screw (Left View)

NOTE: Use a small screwdriver to help release the Paper Tray from the frame.

4.   Remove the Paper Tray (Figure 2).
   a.   Release the Paper Tray from the Left Frame.
   b.   Release the Paper Tray from the Right Frame.

Right Frame

Left Frame

040437RBLJ

Figure 2 Paper Tray Removal (Front View)

Replacement

NOTE: Tapered Plastic Screws and Round Machine Screws are used to hold the PWB to the frame. Make sure that the Plastic Screws go into plastic components and Machine Screws go into the metal frame.

Install the components in the reverse of removal.

NOTE: Make sure the Locating Pins and Tabs on the Paper Tray align with the cutouts in the frame.

5 Parts List

PL 1.1 Main

Item	Part	Description
1	002N03166	Left Cover (Black)
–	002N03165	Left Cover
2	–	Top Cover (PL 2.1)
3	002N03162	Front Cover (Black)
–	002N03161	Front Cover
4	–	Frame (PL3.1)
5	002N03170	Rear Cover
–	002N03171	Rear Cover (Black)
6	–	Main PWB Insulator
7	140N63720	Main PWB -3020 BI (DMO-E / Russia/Middle East/South Africa/ Argentina/Peru)
–	140N63721	Main PWB - 3020 BI (Chile)
–	140N63719	Main PWB -3020 BI (NA / DMO-W)
8	–	Wireless Cover
9	140N63727	WNPC (WIFI) PWB
10	002N03183	Right Cover
–	002N03184	Right Cover (Black)
11	002N03178	Paper Support
–	002N03179	Paper Support (Black)
12	–	Front Cover Assembly (Items 3, 11)
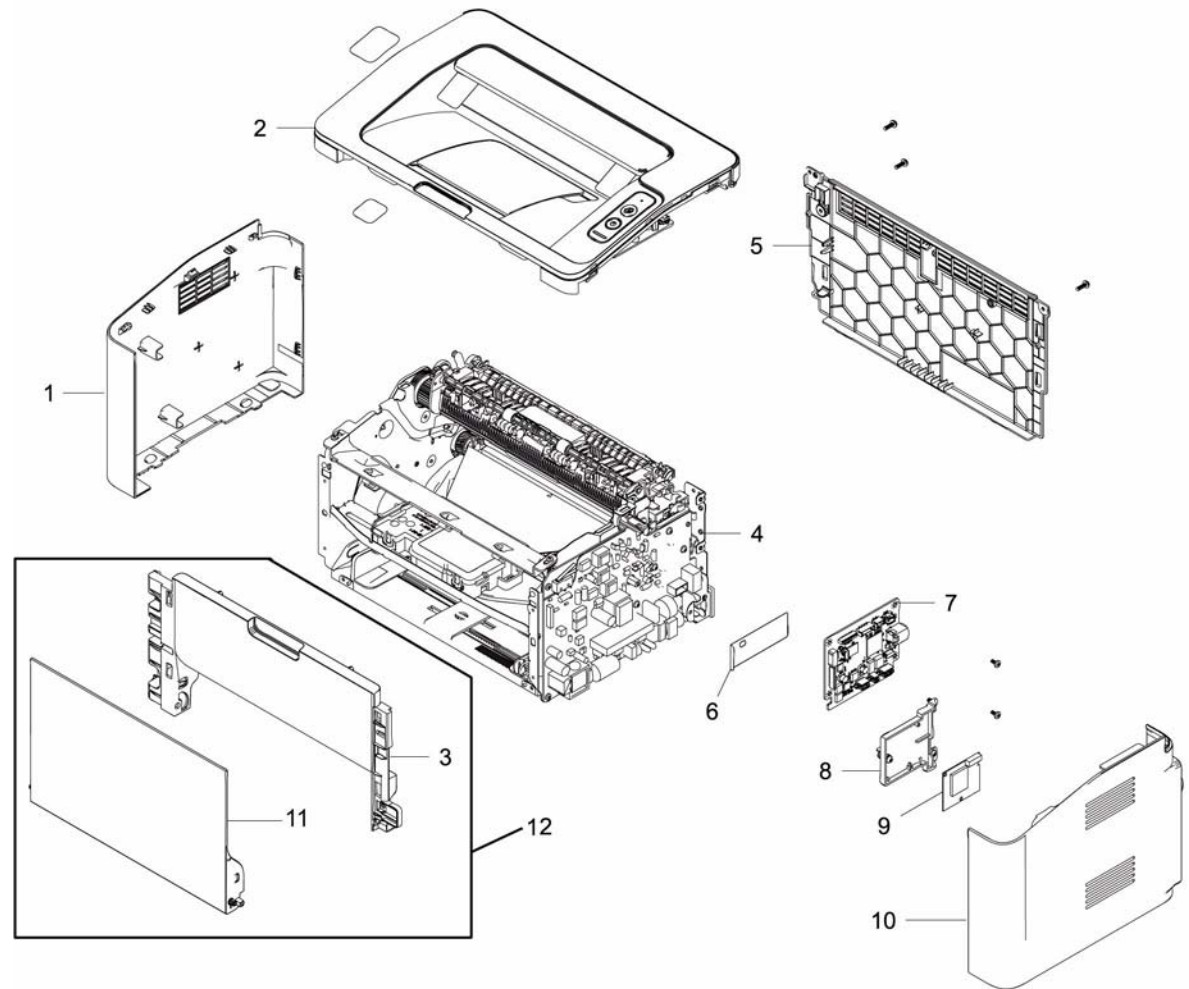
PL 2.1 Top Cover

Item	Part	Description
1	–	Dust Cover
2	–	Stacking Guides
3	–	Output Support
4	–	Inner Output Support
5	–	Shaft Holder
6	–	Jam Clearance Cover
7	–	Trim Strip
8	–	Top Cover
9	–	WPS Key
10	140N63725	Control Panel PWB
11	002N03159	Top Cover Assembly
–	002N03160	Top Cover Assembly (Black)
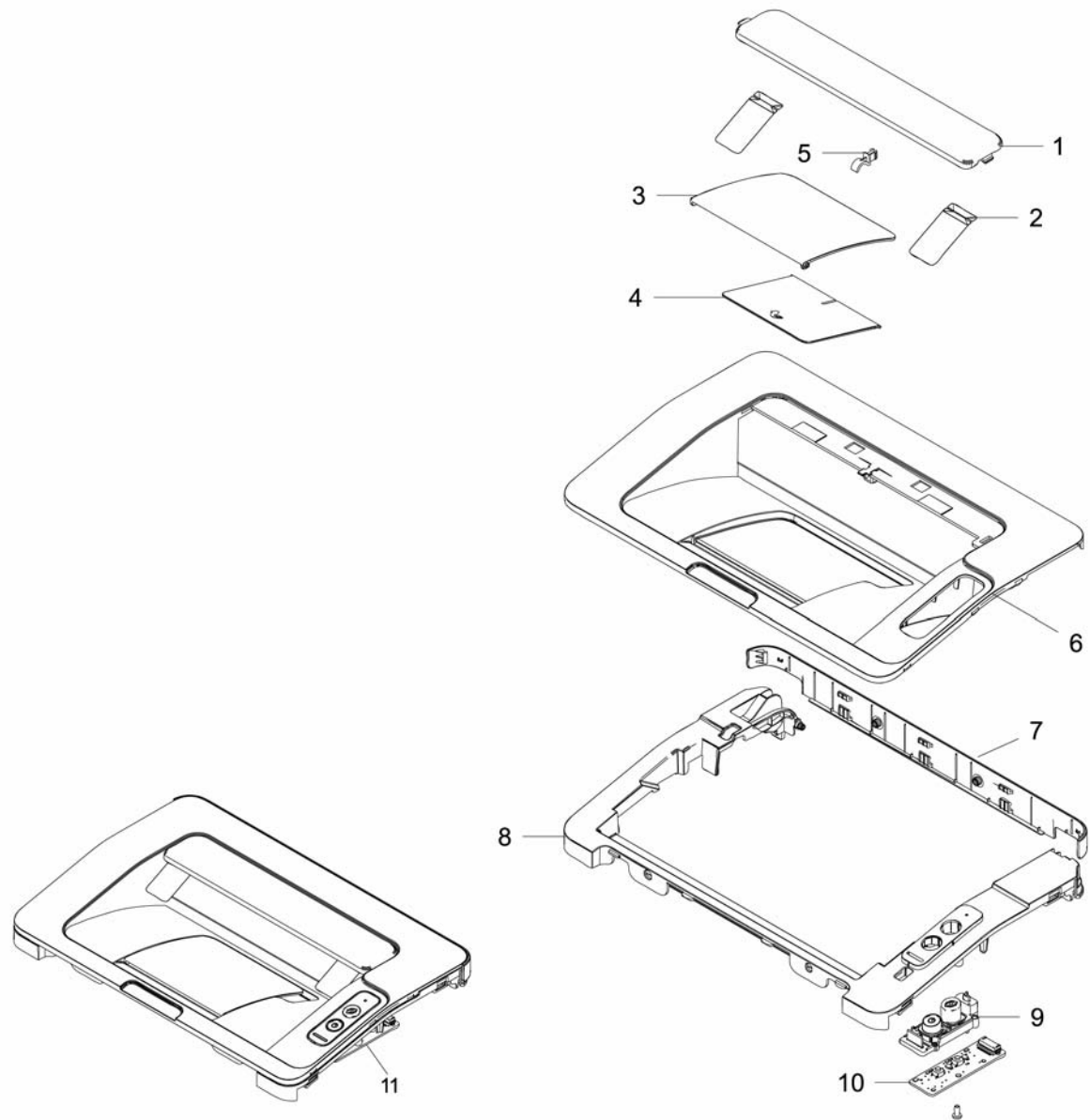
PL 3.1 Frame

Item	Part	Description
1	–	Paper Tray (PL 3.6)
2	–	LSU Frame (PL 3.6)
3	–	Main Frame Left (PL 3.4)
4	–	Paper Feed Assembly (PL 3.7)
5	–	Paper Path Frame (PL 3.3)
6	022N02794	Transfer Roller
7	–	Fuser Module (PL 3.2)
8	–	LSU Cover
9	–	Main Frame Right (PL 3.5)
10	–	HVPS Insulator
11	–	HVPS Contact
12	105N02303	LVPS/HVPS 220V
–	105N02302	LVPS/HVPS 110V
13	–	Input Guide
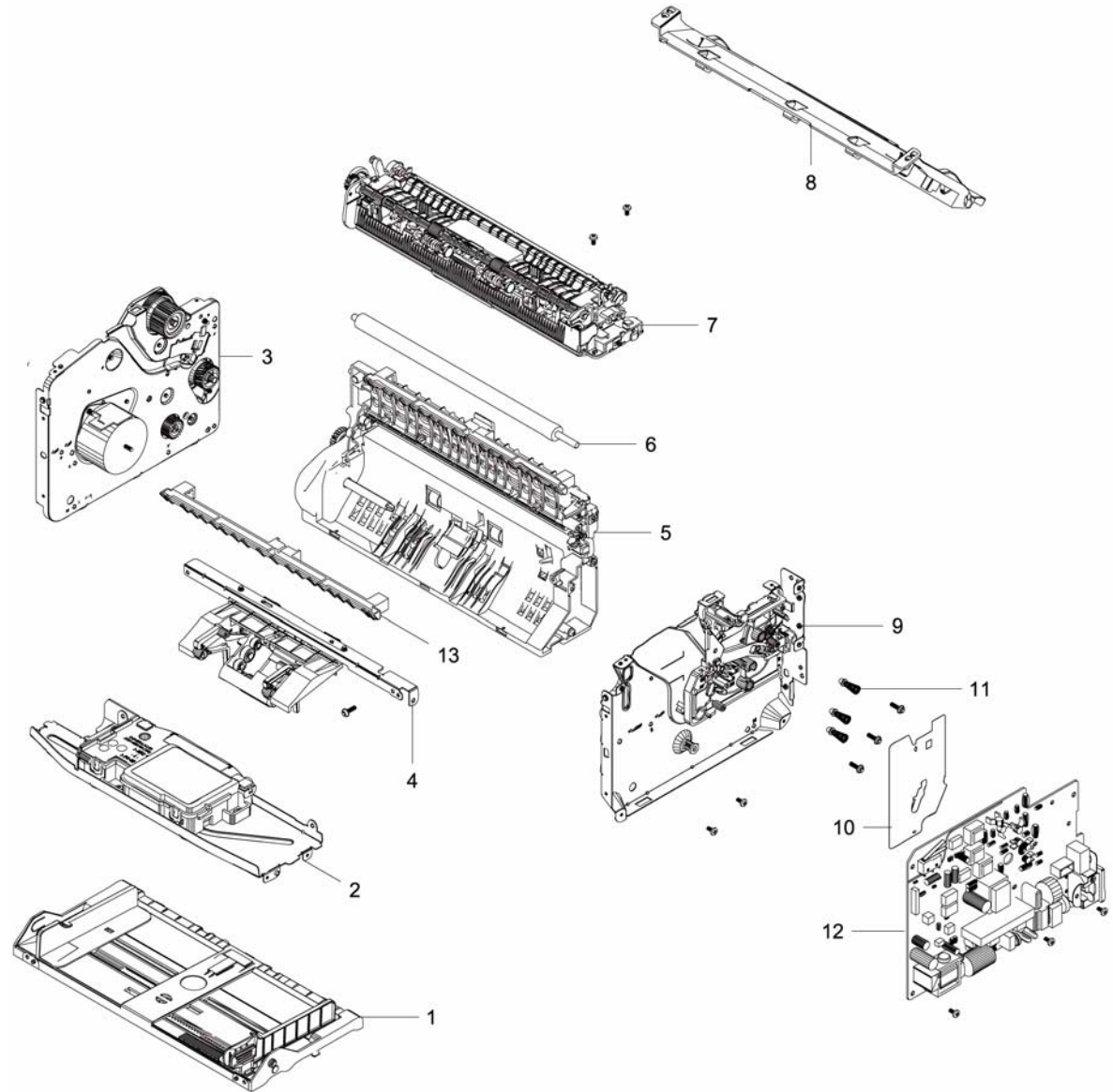
PL 3.2 Fuser

Item	Part	Description
1	–	Exit Cover
2	–	Tap Screw
3	–	Exit Drive Gear
4	–	Exit Gear
5	–	Exit Shaft Bushing
6	–	Spring
7	–	Upper Fuser
8	–	Fuser Exit Roller Assembly
9	–	Lower Fuser
10	–	Fuser Cover
11	126N00432	Fuser Module Assembly 110V
–	126N00433	Fuser Module Assembly 220V
12	–	Exit Shaft
13	–	Rubber Rolls
14	–	Exit Roller
15	–	Holder
16	–	Exit Roller
17	–	Spring
18	–	Bracket
19	–	Bushing
20	–	Pressure Roll
21	–	Bracket
22	–	Frame
23	–	Fuser Gear Stopper
24	–	Jam Lever
25	–	Lamp Cover
26	–	Fuser Gear
27	–	Heat Roll
28	–	Guide
29	–	Spring
30	–	Thermostat
31	–	Thermistor
32	–	Fuser Cover
33	–	Bushing
34	–	Fuser Lamp
35	–	Jam Lever
36	–	Right Lamp Cover
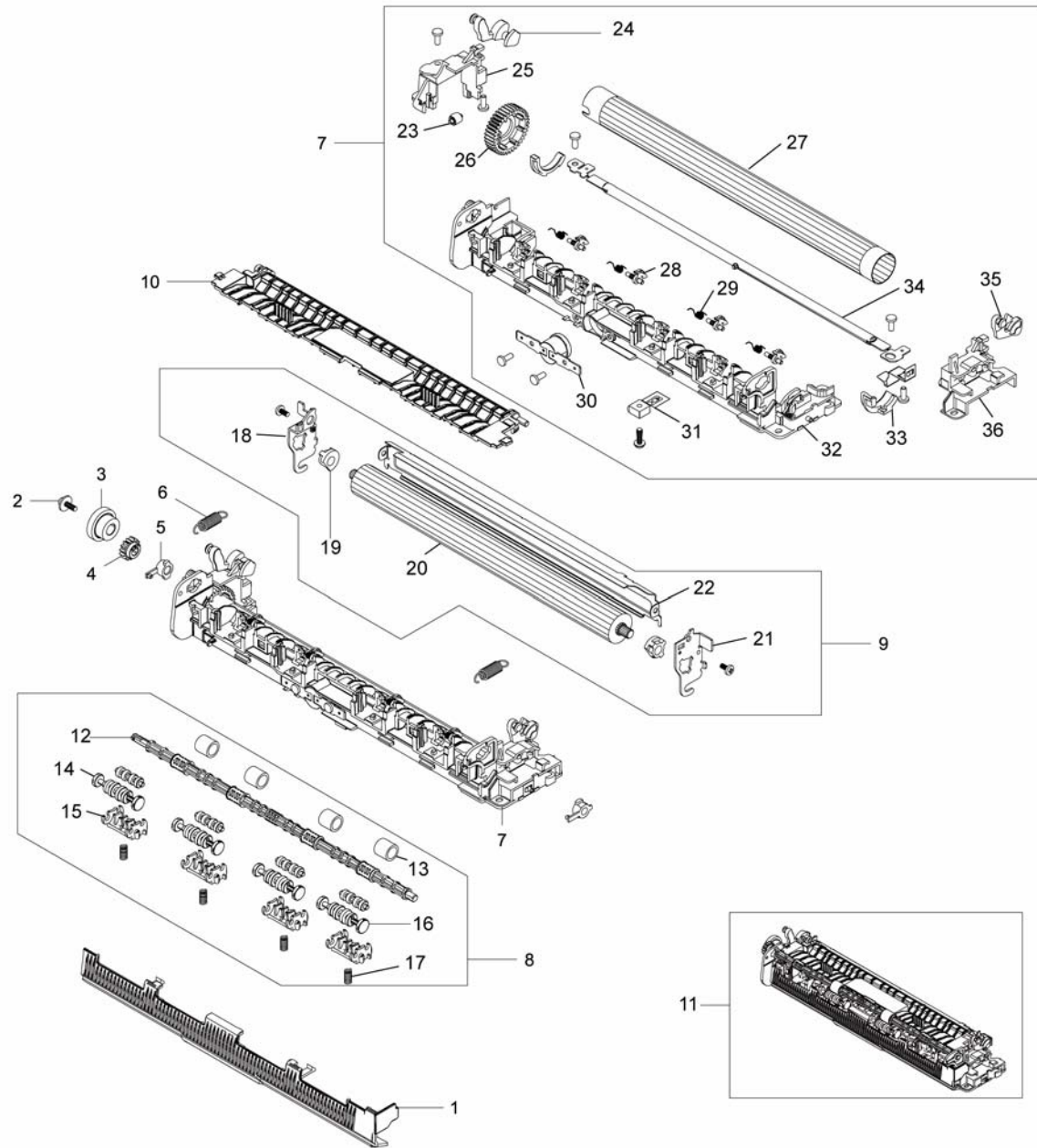
PL 3.3 Paper Path Frame

Item	Part	Description
1	130N01759	Paper Feed Sensor PWB
2	120N00546	Feed Sensor Actuator
3	–	Spring
4	120N00547	Width Sensor Actuator
5	–	Spring
6	022N02798	Paper Drive Roll
7	–	Plate
8	–	Ground
9	–	Ground Clip
10	–	Paper Path Guide
11	–	Feed Roll Shaft
12	121N01246	Feed Clutch
13	007N01801	Feed Gear
14	–	Bushing
15	–	Spring
16	–	Bushing
17	001N00547	Retard Pad
18	–	Path Frame
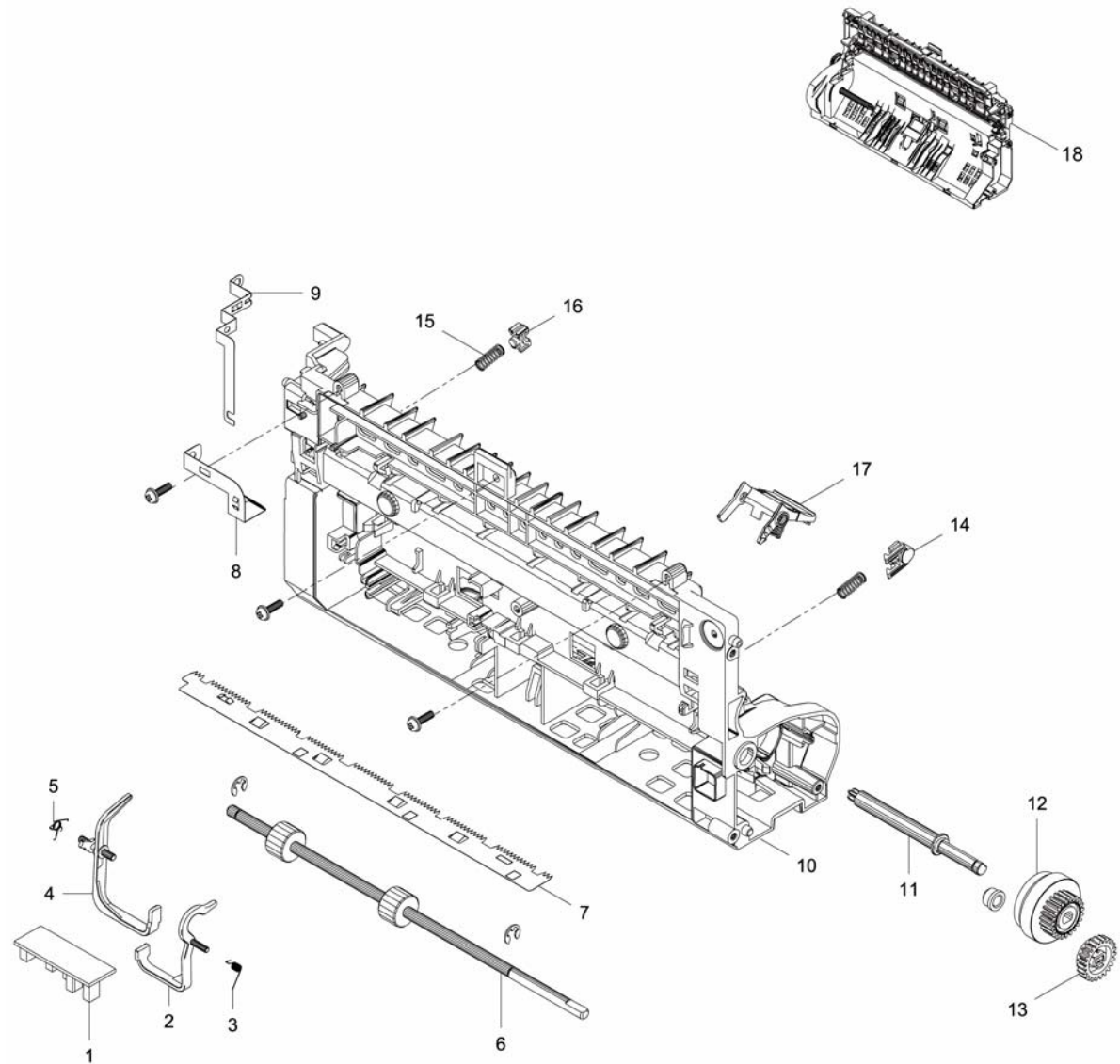
PL 3.4 Main Left Frame

Item	Part	Description
1	–	Left Frame
2	–	Feed Drive Gear
3	–	RDCN OPC Gear
4	–	Out Drive Gear
5	–	RDCN Drive Gear
6	–	Drive In Gear
7	–	Fuser Drive Gear
8	–	RDCN Fuser Gear
9	–	RDCN A Gear
10	–	Drive Motor
11	001N00548	Left Main Frame Assembly

12 { 2-10
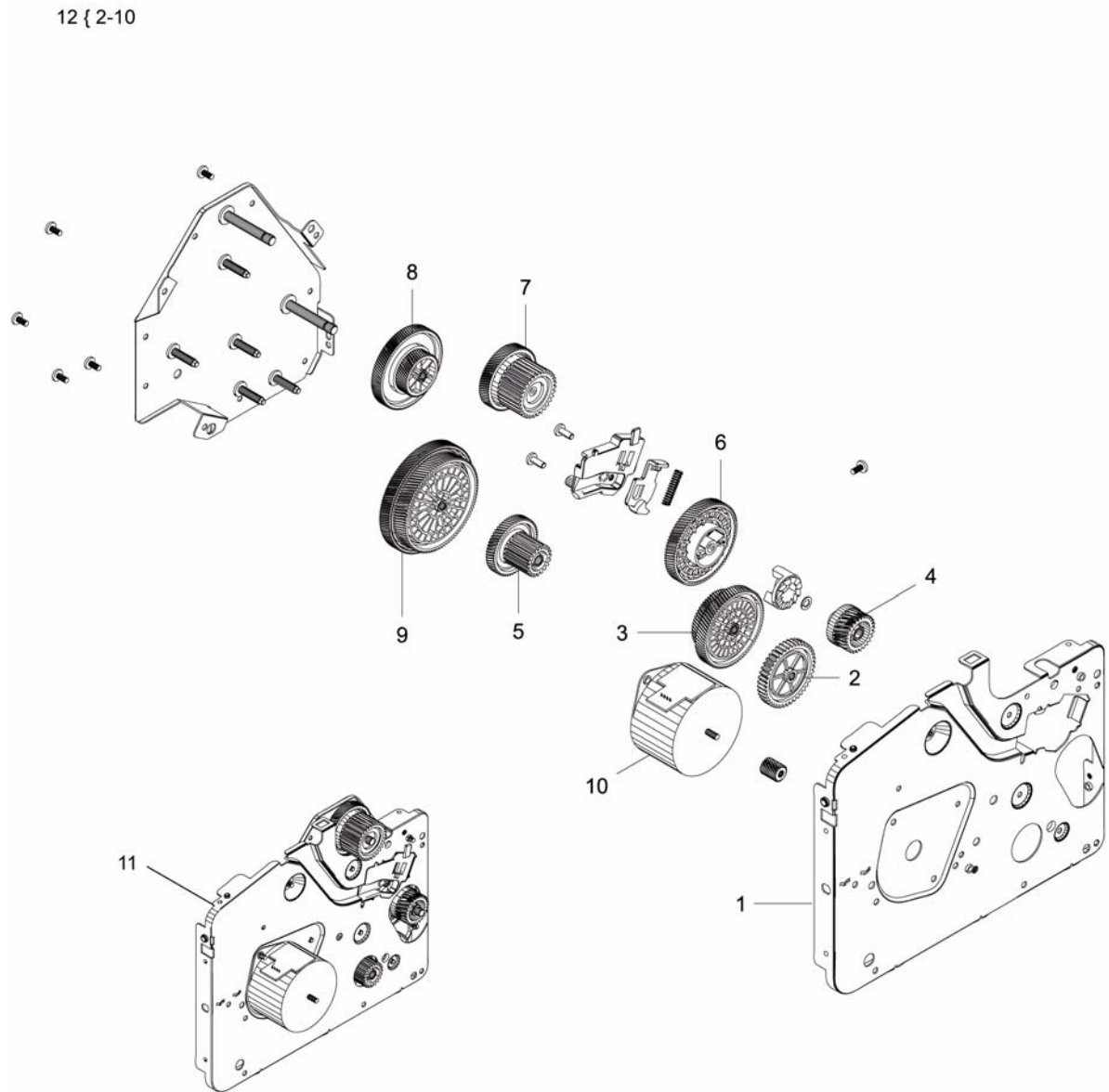
PL 3.5 Main Frame Right

Item	Part	Description
1	–	Right Frame
2	–	CRUM Contact
3	–	Spring
4	–	Ground Clip
5	–	Washer
6	–	Tap Screw
7	–	CRUM Cover
8	–	Right Print Cartridge Guide
9	–	Right Main Frame (Items 1 - 8)
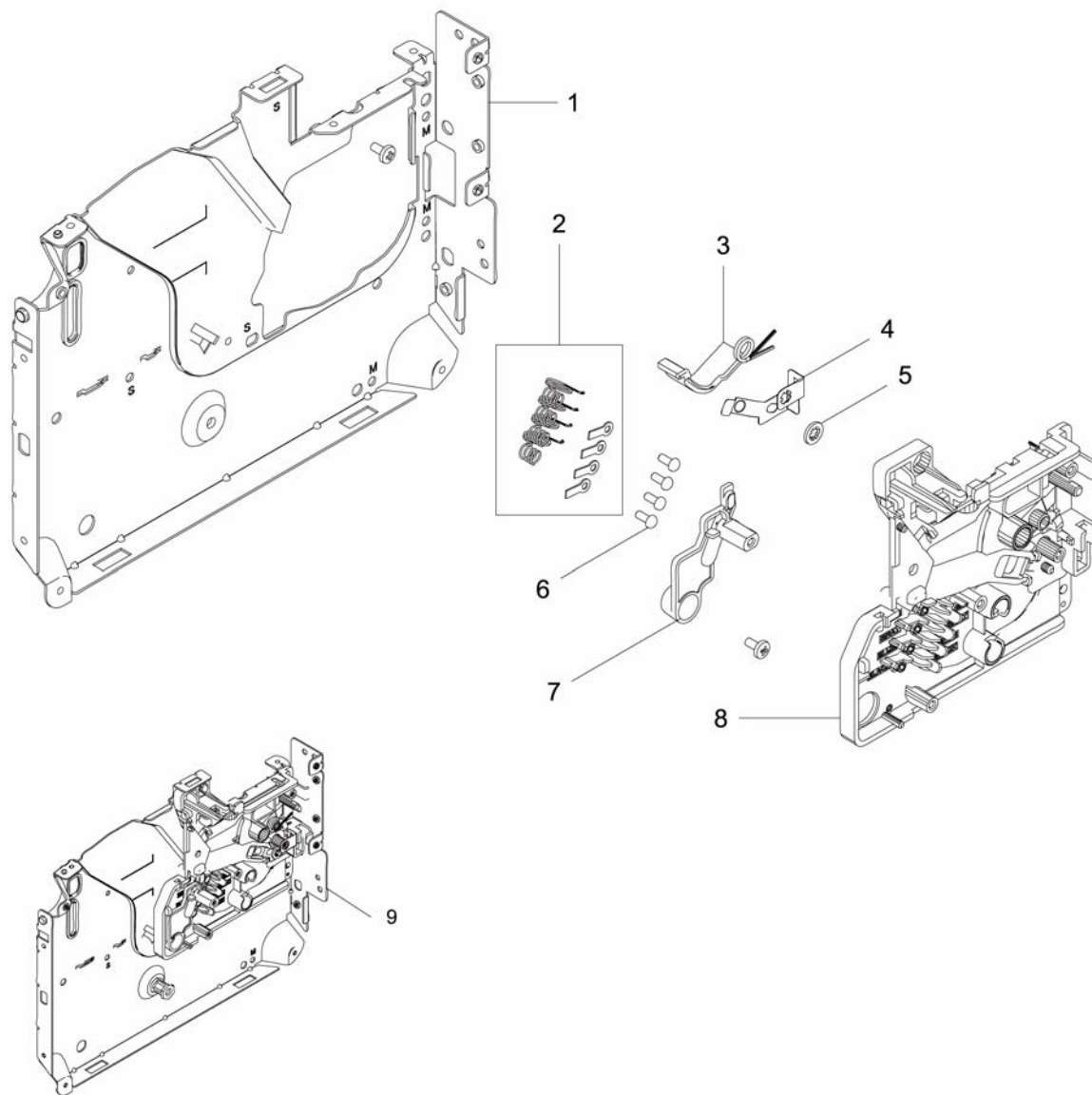
PL 3.6 Paper Tray And LSU Frame

Item	Part	Description
1	001N00549	Paper Tray
2	–	LSU Frame
3	–	Right Guide
4	–	Left Guide
5	–	Rubber Friction Pad
6	–	Bottom Plate
7	–	Pinion Gear
8	–	Sponge Damper
9	062N00293	LSU
10	–	Motor Cover
11	–	LSU Frame
12	117N01970	LSU Flat Cable
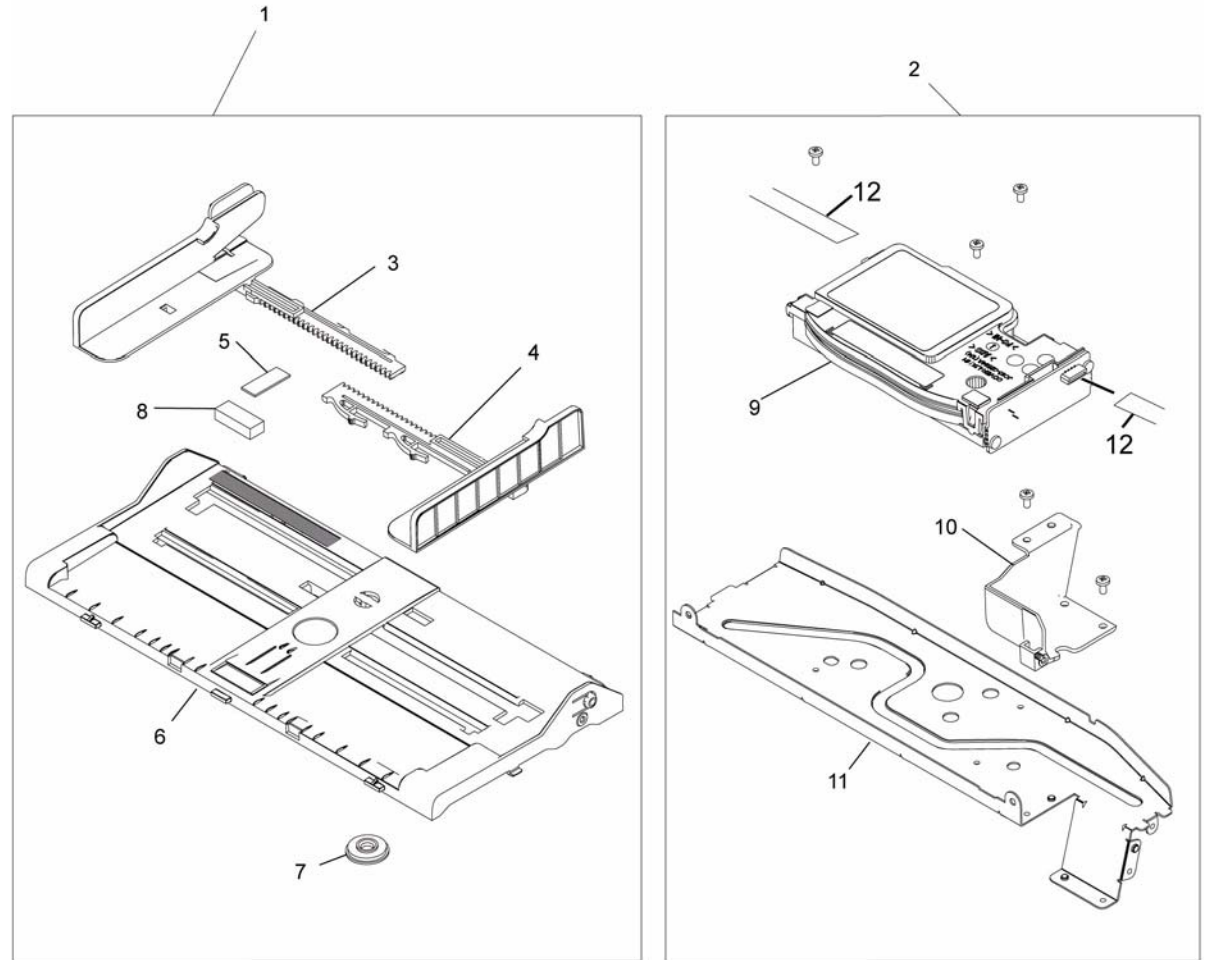
PL 3.7 Paper Feed Assembly

Item	Part	Description
1	–	Paper Feed Holder
2	–	Feed Roller
3	–	Spring
4	–	Guide Plate
5	–	Latch
6	–	Paper Stopper
7	130N01757	Feed Rolls Assembly
8	–	Latch
9	–	Damper Sponge
10	–	Feed Rolls Housing
11	–	Feed Rolls Shaft
12	–	Shaft Holder
13	–	Bushing
14	–	Spring
15	–	Collar
16	–	Joint Gear
17	–	Pick Up Clutch
18	–	Bushing
19	–	Pick Up Roller
20	–	Plain Washer
21	–	Bushing
22	–	Sleeve
23	–	Spring
24	–	Pick Up Gear
25	–	Feed Gear
26	–	Drive shaft Roller
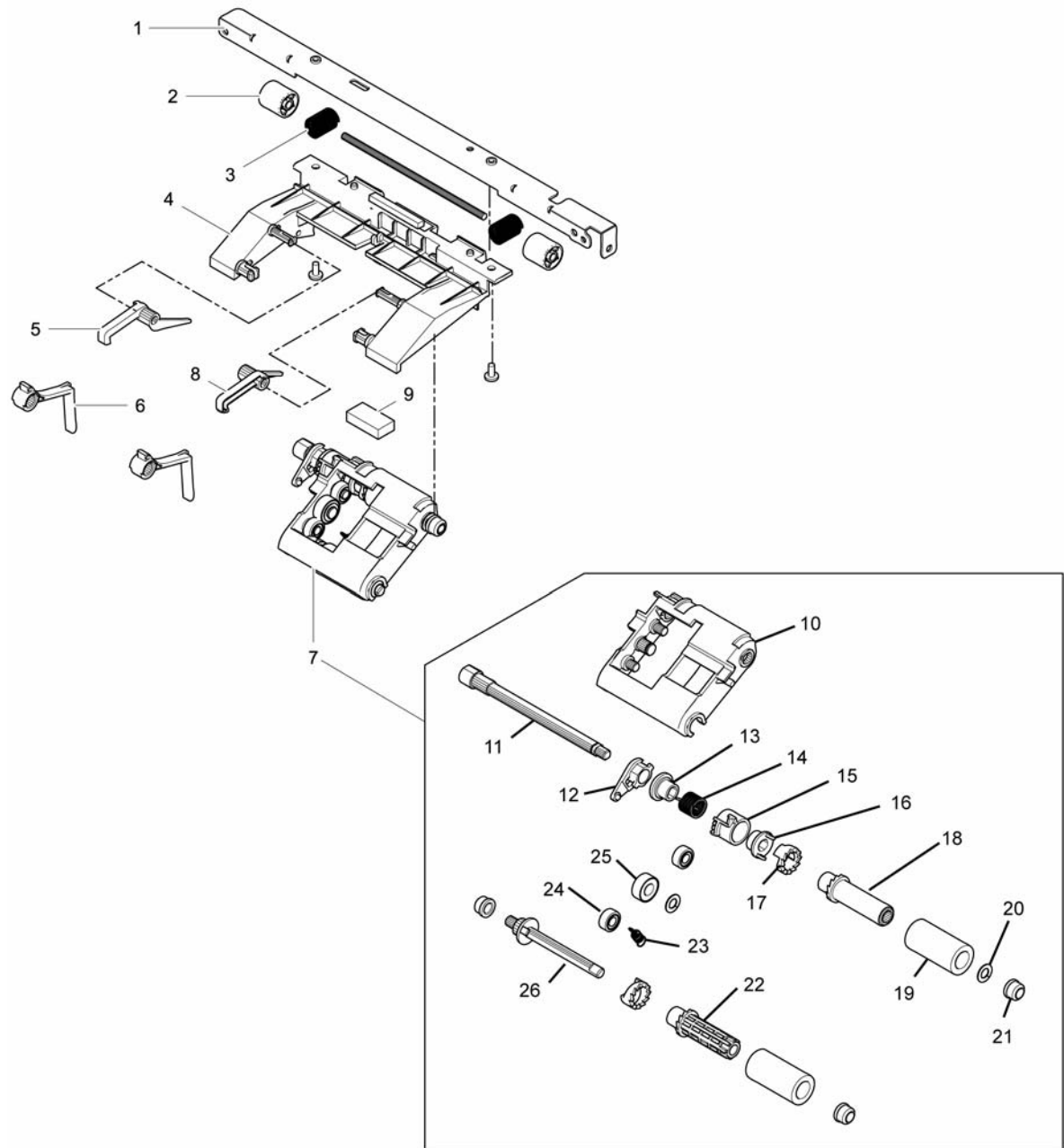
Part Number Index

Table 1 Part Number Index

Part Number	Part List
001N00547	PL 3.3
001N00548	PL 3.4
001N00549	PL 3.6
002N03159	PL 2.1
002N03160	PL 2.1
002N03161	PL 1.1
002N03162	PL 1.1
002N03165	PL 1.1
002N03166	PL 1.1
002N03170	PL 1.1
002N03171	PL 1.1
002N03178	PL 1.1
002N03179	PL 1.1
002N03183	PL 1.1
002N03184	PL 1.1
007N01801	PL 3.3
022N02794	PL 3.1
022N02798	PL 3.3
062N00293	PL 3.6
105N02302	PL 3.1
105N02303	PL 3.1
117N01970	PL 3.6
120N00546	PL 3.3
120N00547	PL 3.3
121N01246	PL 3.3
126N00432	PL 3.2
126N00433	PL 3.2
130N01757	PL 3.7
130N01759	PL 3.3
140N63719	PL 1.1
140N63720	PL 1.1
140N63721	PL 1.1
140N63725	PL 2.1
140N63727	PL 1.1

6 General Procedures and Information

General Procedures and Information

General Procedures and Information

Diagnostics

Glossary

General Information

The Xerox® Phaser® 3020 printer produces high quality prints from electronic documents with speeds of up to 21 ppm and an effective output resolution of up to 1200 x 1200 dpi.

System Overview

This section provides illustrations of the following systems:

- Paper Path - [Figure 1]
- System Layout - [Figure 2]
- Print Process - [Figure 3]
- Laser Scanner Unit (LSU) - [Figure 4]
- Drives - [Figure 5]
- Toner System - [Figure 6]

Paper Path

The following diagrams display the path that the paper follows during the printing process.

s3020_001
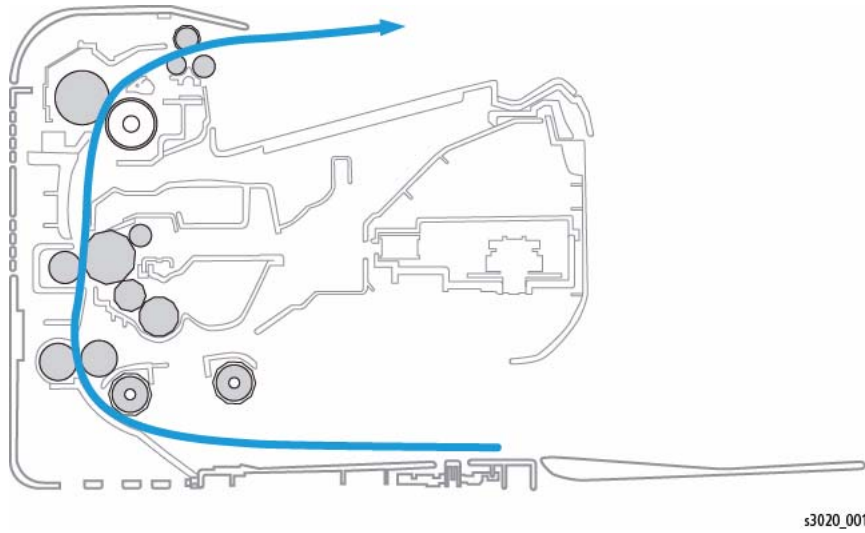
Figure 1 Paper Path

System Layout

The figures below illustrates the mechanical parts of the printer.

s3020_002
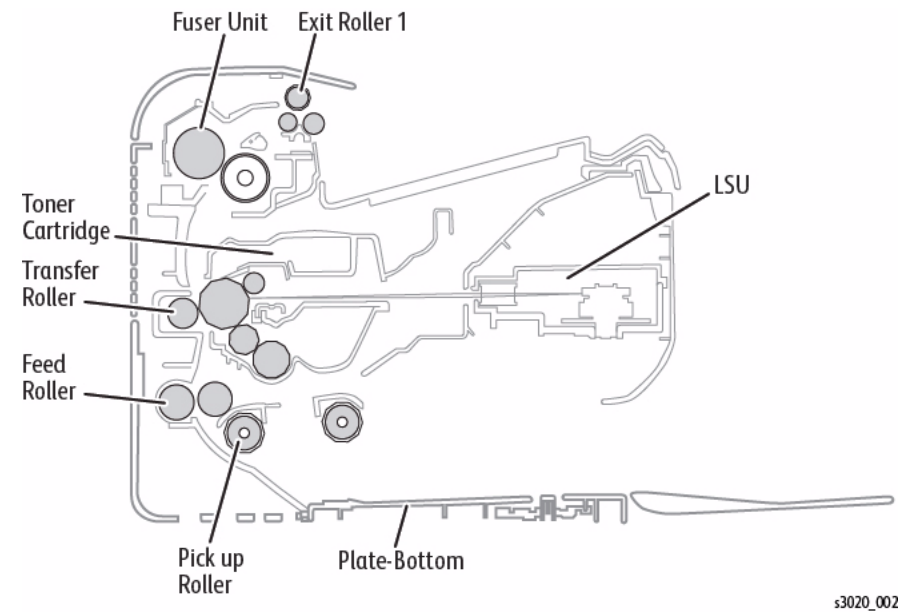
Figure 2 System Layout

Print Process

Figure 3 presents a general layout of the fusing and printing components used in the print process.
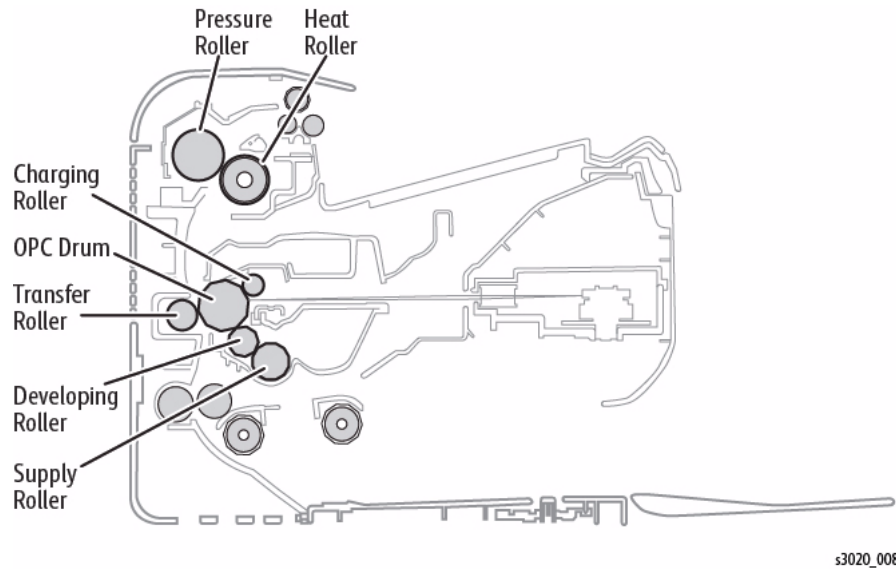
Figure 3 Print Process

Laser Scanner Unit (LSU)

The Scanner Unit receives image data from the HVPS PWB and scans the surface of the photoreceptor drum (OPC) with a laser to create a latent image.
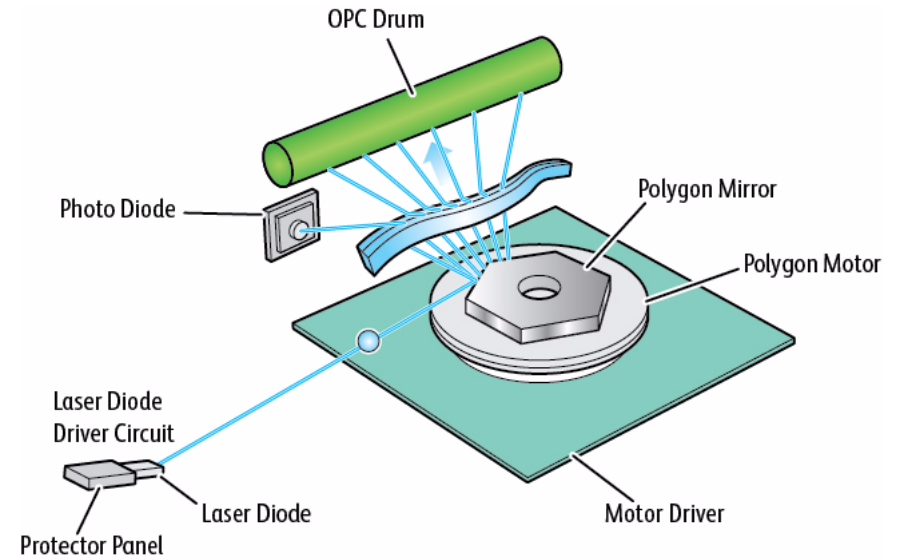
Figure 4 Laser Scanner Unit

Drives

The Drive System consists of the Main (BLDC) Motor, Registration and Pick-up Clutches along with various gears for the Drum Cartridge (OPC), Fuser, Pick-up, Registration, Feed and Exit Rollers.

s3020_003
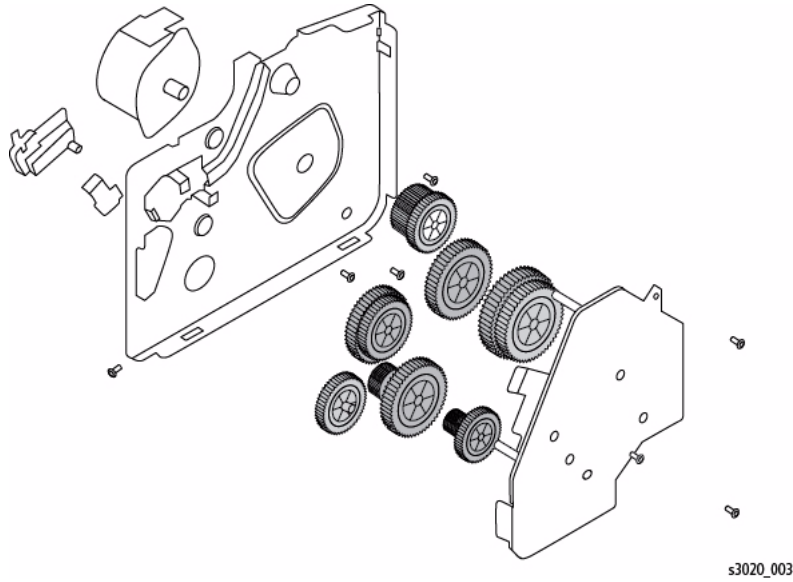
Toner System

The Phaser® 3020 printer uses a integrated toner system. The toner cartridge, photoreceptor and developer units are contained within the Print Cartridge.

s3020_005
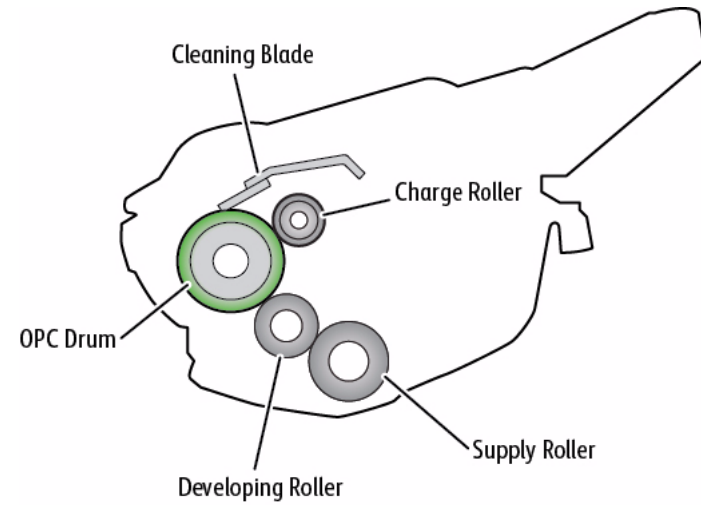
Figure 5 Integrated Toner System

Product Specifications

Table 1 Product Overview

Feature	Phaser 3020
Speed	20 ppm (A4), 21 ppm (8.5 x 11 in.)
Print Resolution	1200 x 1200 dpi
Processor	600MHz
Printer Language Emulation	SPL
Memory	M2022W / M2022: 128MB M2020W: 64MB M2020: 8MB
Interface	High Speed USB 2.0 Network 802.11b/g/n Wireless LAN (Only M202xW) Wireless Model Supports NFC Printing.
Print Cartridge - Initial	700 Images
Print Cartridge - Standard	1500 Images

Table 2 General Print Engine Specifications

Item	Mode	Phaser 3020
Engine Speed	Simplex	20 ppm (A4), 21 ppm (8.5 x 11 in.)
Warm-up time	From Sleep Mode	Less Than 30 Seconds
FPOT	From Standby Mode	Less Than 8.5 Seconds
	From Sleep Mode	Less Than 19 Seconds
Resolution		1200 x 1200 dpi

Table 3 Controller and Software

Item		Specification
Processor		600 MHz
Memory		128 MB
Printer Languages		GDI
Fonts		Windows
Print Driver	Default Driver	SPL
	Install	SPL
	Supporting OS	Windows® XP (32/64bits) Windows® Vista(32/64bits) Windows® 2003 (32/64bits) Windows® 2008 (32/64bits) c7 (32/64bits) Windows® 2008 R2 (64bits) Windows® 7 & 8 (32/64bits)
		Linux RedHat Enterprise Linux 5, 6 Fedora 11-19 SuSE Linux 10.0, 11 (32 bit) Open SuSE 11.0, 11.1, 11.2, 11.3, 11.4, 12.1, 12.2, 12.3 Ubuntu 10.04, 10.10, 11.04, 11.10, 12.04, 12.10, 13.04 SuSE Linux Enterprise Desktop 10, 11 Debian 5.0, 6.0, 7.0, 7.1 Mint 13, 14, 15
		Mac OS X 10.5 - 10.9
	WHQL	Windows® Vista 7, 8 (32/64bits)
	Compatibility	Windows® 2000/ XP (32/64bits) Windows® Vista(32/64bits) Windows® 2003 Server (32/64bits) Windows® 2008 Server (32/64bits) Windows® 7 (32/64bits) Windows® 2008 Server R2 (64bits) Windows® 8 (32/64bits)
Network Interface	Parallel USB Wired Network Wireless Network	NA Hi-Speed USB 2.0 NA 802.11b/g/n Wireless LAN
Applications	Easy Printer Manager	Windows® and Macintosh® OS Only
	Printer Status	Windows® OS Only
	Smart Panel	Linux Only

Table 4 Paper Handling

Item		Specification
Capacity: Paper Tray		150 Sheets Multi Purpose 20 lb. (80gsm)
Printing	Minimum Media Size	3 x 5 in. (76 x 127 mm)
	Maximum Medium Size	8.5 x 14 in. (216 x 356 mm)
Multi-purpose Tray	Capacity	Plain Paper: 150 Sheets Multi Purpose 20 lb. (80gsm), Envelope: 10 Sheets 20 lb. (80gsm)
	Media Sizes	8.5 x 14 in. (Legal), 8.5 x 11 in. (Letter), A4, A5, Executive, ISO B5, JIS B5, Oficio, Folio, Envelope (No 10, Monarch, DL, C5), Custom
	Media Type	Plain, Heavy-weight, Light-weight, Cotton, Colored, Pre-printed, Recycled, Envelope, Label, Cardstock, Bond, Archive
	Media Weight	16 to 43 lb. (60 to 163 gsm)
	Sensing	NA
Optional Cassette Tray		NA
Output Tray Stacking Capacity		Face-down: 100 Sheets 20 lb. (80 gsm)
Output Tray Full Sensing		NA
Duplex	Supporting	Yes (Manual)
	Media Sizes	8.5 x 14 in. (Legal), 8.5 x 11 in. (Letter), A4, A5, ISO B5, JIS B5, Executive, Oficio, Folio, Custom
	Media Types	Plain, Light-weight, Recycled, Archive
	Media Weight	16 to 24 lb. (60 to 90 gsm)
Non-printable Area		0.12 in (3 mm) From Edge (Top, Bottom, Right, Left)

Table 5 Toner Cartridge/Print Cartridge

Item	Approximate Yield (See Note)
Print Cartridge	1500 Images

NOTE:

Declared yield value in accordance with ISO/IEC 19752.

Depending on the options and job mode used, the toner cartridge's life span may differ.

When replacing a Toner/Print Cartridge, check model number and consumables code. Refer to the Phaser® 3020 User Guide for information regarding ordering consumables.

Table 6 Reliability and Service

Item	Specification
Printing Volume (SET AMPV)	75 Pages
MPBF	10,000 Pages
MTTR	30 Minutes
SET Life Cycle	30,000 Pages or 5 Years (whichever comes first)

Table 7 Environment

Item		Specification
Operating Environment	Temperature	50 - 90° F (10C to 32C)
	Humidity	10% - 80%
Acoustic Noise Level (Sound Power/Pressure)	Print	Less Than 50 dB
	Standby	Less Than 26 dB
Power Consumption	Print	Less Than 310 W
	Standby	Less Than 30 W
	Sleep Mode	Less Than 2.4 W
	Power Off	Less Than 0.45 W
Dimension (W x D x H)	SET	13.7 x 8.5 x 7.0 in. 332 x 215 x 178 mm
Weight	SET (with Print Cartridge) M202X M202XW	8.75 lbs (3.97 Kg) 8.82 lbs (4.0 Kg)

GP 1 Diagnostics Entry and Exit

Purpose

This procedure describes the following items:

• How to enter the Diagnostic (EDC) Mode

• The EDC menu

• How to exit Diagnostics

Procedure

Use the following steps to enter Diagnostic Mode:

1. Obtain the EDC tool and download it onto the PWS.
    • The EDC tool is available from the GSN website
2. Connect to the printer with a USB cable.
3. Switch On the power to the printer.
4. When the printer is in Ready mode, open the EDC ReadData application and select [**Run**] in the Compressed (zipped) Folders dialog box.
5. First, select [**Update LCD**] in the EDC dialog box to enable download of all diagnostic menu strings before running the EDC application.
6. Press the <**Menu**> button.
7. Use the arrows to select the desired diagnostic function.
8. Select <**Enter**> to confirm menu choices and to run diagnostic tests.
9. Use the <**Upper Level**> button to stop diagnostic tests and to return to the previous menu level.

To exit Diagnostic Mode:

1. Press the <**Exit**> button.

Refer to Section 6, Diagnostics for a listing of available functions within EDC mode.

GP 2 Machine Reports

Purpose

Use this procedure to access and print machine reports. The information within the reports may be useful for troubleshooting problems.

Procedure

To access machine reports, follow the steps below:

From the Control Panel:

1. To print a Configuration Report, press and hold the <**WPS**> button for approximately 10 seconds. The green LED light flashes, goes solid, then flashes again. Release button to print report.
2. To print the Supplies Information and Usage Counter Reports, press and hold the <WPS> button for approximately 15 seconds until the green LED flashes, goes solid, flashes then goes solid again. Release the button to print the reports.

From Easy Printer Manager:

1. Connect to the printer via USB cable or wireless connection.
2. Open Easy Printer Manager.
3. Select the [**Settings**] tab then select the [**CentreWare Internet Services**] button.
4. Login to CWIS: username (admin) password (1111).

    NOTE: It may be necessary to obtain the username and password from the customer if they have been changed.

5. Select the [**Status**] tab then, [**Current Settings, Print Information**] to access:
    • Machine Information
    • Security Information
    • Print Information and Reports:
        – Configuration
        – Network Configuration
        – Supplies Info
        – Usage Counters
        – Demo Page

Refer to the Phaser® 3020 User Guide for the following:

• Section 1 Getting Started, Information Pages, for information on machine reporting and configuration using the Control Panel and CentreWare Internet Services (CWIS) including:

• Section 6 Maintenance: Checking the Status of Consumables.

• Section 7 Troubleshooting, Machine Status Indicators, for:
    – LED color and status descriptions
    – Printing machine reports.

GP 3 Machine Firmware Version

Purpose

Use this procedure to check the firmware version of the machine.

Procedure

From the Control Panel:

1. Press the <**Cancel**> button for more than 4 seconds. The machine will print a Configuration Report listing the firmware version.

From CWIS:

1. Open the Xerox Easy Printer Manager to launch the CentreWare Internet Services (CWIS) application.
2. Log into CWIS: enter user name: **admin** and password: **1111**.
3. Select the [**Support**] Tab. The Firmware version is listed next to the Main Controller Board.

GP 4 Machine Settings

Purpose

Use this procedure to provide information on how to configure machine settings.

Procedure

From Easy Print Manger:

1. Connect to the Phaser® 3020 Print via USB cable.
2. Open Easy Print Manager and select **[Advanced Mode]** then select **[Machine Settings]**.
3. Select from the follow menu items to change the Machine settings.
   • System
   • Layout
   • Printer
   • Network Settings

GP 5 Altitude Adjustment

Purpose

Print quality is affected by atmospheric pressure, which is determined by the height of the machine above sea level.

Requirements

• USB or WiFi connection

Procedure

1. Determine altitude of machine placement:

Table 1 Altitude Values

Altitude	Values
0 - 1000 M 0 - 3,280 ft.	Normal
1000 - 2000 M 3,280 - 6,561 ft.	High 1
2000 - 3000M 6,561 - 9,842 ft.	High 2
3000 - 4000 M 9,842 - 13,123 ft.	High 3
4000 - 5000 M 13,123 - 16,404 ft.	High 4

2. Connect to the printer via USB cable from the PWS.
3. Open Easy Printer Manager. Select: [**Machine Settings, System, Altitude Adjustment**].
4. Select correct altitude value from the drop down menu.

To adjust altitude settings using a wireless connection, refer to the Phaser® 3020 User Guide, Section 2. Installation and Setup.

GP 6 Firmware Upgrade

Purpose

Use this procedure to update the machine firmware. The firmware can be updated over the network or by using the USB port.

Requirements

• Wired or wireless connection. (to upgrade using the network)
• The usblist2.exe tool and the SWUPGRADE_ON.prn file, (located in the GSN website) installed on the PWS.
• Correct firmware file for update.
• Firmware Upgrade must be enabled in the machine settings on the printer.
• Complete or delete all jobs in the printer queue before initiating a firmware upgrade.

Procedure

Upgrading the Firmware using a USB Port:

1. Connect a USB cable from the PWS to the USB port on the printer.
2. Confirm that the printer is the Ready status.
3. Drag the SWUPGRADE_ON.prn file and drop it onto usblist2.exe. This file enables firmware upgrade on the device.
4. Drag and drop the firmware file onto usblist2.exe. The firmware update will start automatically.
5. The Printer will reboot when the upgrade is complete.

Upgrading the Firmware using the Network:

1. Open a web browser and enter the machine's IP address.
2. Press <**Enter**>. The CentreWare Internet Services window will open.
3. Select the **Login** link at the top of the screen.
4. Enter the Administrator User name (**admin**) and password (**1111**). The Firmware Upgrade window will open.

   NOTE: It may be necessary to obtain a new user name and/or password from the customer if they have been changed.

5. Click on the **Properties** tab.
6. In the **Security link**, select **System Security**.
7. Select the **Feature Management** link in the directory tree.
8. Select the **Firmware Upgrade Enable** box.
9. Click **Apply** to save the changes.
10. Select the **Support** tab.
11. In the **Firmware Upgrade** link, select the **Upgrade Wizard** button.
    a. In the Firmware File area, select **Browse**.
    b. Locate and select the correct firmware upgrade .hd file.
    c. Select **Open**.

12. Select **Next**. The firmware will now be verified and display information about the upgrade.

13. Select **Next** to continue. The upgrade should take approximately 10 minutes.

14. The machine will reboot automatically when the upgrade has completed.

15. Print a Configuration Report and verify that the firmware has been successfully upgraded.

GP 7 Usage of the Electrostatic Discharge (ESD) Field Service Kit

Purpose

The purpose of the Electrostatic Discharge (ESD) Field Service Kit is to preserve the inherent reliability and quality of sensitive electronic components handled by the service representative. The kit should be used whenever handling the circuit boards or any other ESD sensitive components.

Procedure

1. Switch off the machine power and disconnect the machine power cords.

2. Assemble the kit:

   a. Place the static dissipative work surface mat on a flat surface in close proximity to the machine or the component

   b. Connect the snap end of the green grounding cord to the snap on the static dissipative work surface mat. Connect the male end (plug) to the frame.

   c. Connect the small snap end of the blue cord to the top snap on the green grounding cord.

   d. Connect the small snap end of the blue cord to the snap on the adjustable cloth wrist strap or the ESD wristwatch.

   e. Install the adjustable wrist strap or ESD wristwatch securely on the wrist.

3. The circuit boards (PWB's) and ESD sensitive components can now be handled without causing any ESD related damage. Place all of the components removed from the machine onto the static dissipative work surface mat.

4. New replacement components, as well as defective components, should be handled during unpacking and repacking using the ESD Field Service Kit. During transfer from or to the packing material or container, the PWB should be placed on the static dissipative work surface mat.

GP 8 Software ServiceTools

Purpose

Use this procedure access and download the software service tools.

Procedure

1. To access the software tools file go to:
   - GSN Library #7387
   - https://www.xrxgsn.com/secure/main.pl?catid=13991
   - Software_tools.zip

2. Download the Software_tools.zip file onto the PWS.

3. Open the zip folder and extract the tool files.

4. The WorkCentre® 3020 uses the following tools:
   - SWUPGRADE_ON.prn - to enable the machine to accept software downloads
   - usblist2.exe - to download software via USB connection.
   - USB Serial Number Writing Tool - to write the machine serial number to the Main PWB.
   - EDC tool - to enter Diagnostic Mode

Diagnostic (EDC) Mode

Enter Diagnostic (EDC) Mode, using the steps outlined below. Refer to Section 6 General Procedures GP1, Diagnostics Entry and Exit, for detailed instructions.

1. Connect to the printer with a USB cable.
2. When the printer is in Ready mode, open the EDC ReadData application and select [**Run**} in the Compressed Folders dialog box.
3. Select [Update LCD] in the EDC dialog box.
4. From the EDC window, select the **<Menu>** button.

   NOTE: Allow 1 second for the printer to process the command before making the next menu selection.

5. Once in EDC Mode, use the arrows to select the following sub-menus:
   • DC330 Comp.Ctrl

Select the <**Enter**> button to confirm menu selections and run diagnostics tests.

Select the <**Upper Level**> button to stop tests.

Select the <**Exit**> button to exit EDC mode.

Table 1 EDC Mode Menu

Level 1	Level 2	Level 3	Level 4
DC330 Component Control	100 Motor	Main Feed Mot	Status [Off]
		Feed Mot Slow	Status: [Off]
	101 Clutch	Tray 1 Pickup	Status: [Off]
	102 Sensor	Feed Sens	Status: [Low]
		Width Sensor	Status: [Low]
	105 Charger	K MHV Bias	Status: [Off]
	106 Development	K Dev Bias	Status: [Off]
		K Dev AC	Status: [Off]
	107 Transfer	K [THV] Bias	Status: [Off]
		K [THV] - Bias	Status: [Off]
	109 Fuser	Temp A	Status: [0]
	110 LSU	LSU Mot1 Run	Status: [Low]
		LD Power4	Status: [Off]
		LSU HSync4	[Low]

Machine Reports

Refer to Section 1 of the Phaser® 3020 User Guide for information regarding:

• Control Panel Functions including:
  – Demo Page
  – Supplies Info and Event Log
  – Configuration Reports
• LED Status Displays

Glossary

NOTE: *For a comprehensive list of Xerox acronyms, refer to the Xerox Acronym database at:*
https://open.xerox.com/Services/acronym

Table 1 Glossary

Term/Acronym	Definition
802.11	802.11 is a set of standards for wireless local area network (WLAN) communications, developed by the IEEE LAN/MAN Standards Committee (IEEE 802).
802.11b/g/n	802.11b/g/n refers to specifications within the 802.11 family. 802.11b is also referred to as High-Rate or Wi-Fi, 802.11g is used for transmission over short distances and 802.11n adds multiple-input multiple-output.
Access point	A device that connects wireless communication devices on wireless local area networks (WLAN). Also acts as a central transmitter and receiver of WLAN radio signals.
BOOTP	Bootstrap Protocol. Used by a network client to obtain an IP address from a configuration server. During computer startup, a BOOTP configuration server assigns an IP address to each client from a pool of addresses.
Control Panel	Area where control or monitoring instruments are displayed, typically located in the front area of the machine.
Default	The value or setting that is in effect when the printer/copier is first installed, reset, or initialized.
DHCP	The Dynamic Host Configuration Protocol. A standardized networking protocol used by servers on an IP computer network to allocate assigned IP addresses to a computer requesting an IP address.
DPI	Dots Per Inch. The measure of the resolution of an image displayed on a screen or on a printed page, in dots or pixels.
Duplex	In printing, the capability to automatically turn over a sheet of paper so that the machine can print both sides of the sheet during one print cycle.
Duty Cycle	The proportion of time during which a device is active. (E.g., if the duty cycle for a printing device is 48,000 pages per month for 20 working days, the output that device can reliably produce is 2,400 pages a day.)
Emulation	Hardware and/or software that emulates the functions of one computer system (the guest) in another computer system (the host).
Fuser	The Fuser subsystem permanently affixes toner onto print media by applying heat and pressure.
Gateway	A node (a router) on a TCP/IP network that serves as an access point to another network.
IEEE	The Institute of Electrical and Electronics Engineers. An international non-profit, professional organization for the advancement of technology related to electricity.

Term/Acronym	Definition
Intranet	A private computer network that uses internet protocol technology to share information, operational systems, or computing services within an organization.
IP address	Internet Protocol Address. A unique number that devices use to identify and communicate with each other over a network utilizing the IP standard.
IPP	The Internet Printing Protocol. A standard protocol that can be used locally or over the internet to create and manage print jobs, and to support access control, authentication, and encryption.
ISO	International Standardization Organization. An international standard-setting body that develops and promotes world-wide industrial and commercial standards.
LED	A Light-Emitting Diode. A semiconductor device used to display machine status.
MFP	Multi Function Printer. A machine that includes multiple functions in one device such as; printing, copying, faxing, and scanning functions.
NFC Printing	Near Field Communication Printing. Allows printing and scanning directly from NFC enabled cell phones. (Does not require print driver installation or connection to an access point.)
OPC	Organic Photo Conductor. A mechanism that creates a virtual image for print using a laser beam emitted from a laser printer.
Originals	The original is the first example of a document, photograph, chart, or any combination of these, used to produce others.
PCL	Printer Command Language. A page description language developed to provide an efficient way to control printer features across various printing devices.
Printer Driver	A program used to send commands and transfer data from the computer to the printer.
Print Media	Material such as paper, envelopes, labels, and transparencies which can be used in printers, scanners, fax machines, or copiers.
PPM	Prints Per Minute. Used to measure printer speed. The number of copies or prints produced in one minute.
Protocol	A convention or standard that controls or enables the connection, communication, and data transfer between two computing endpoints.
Resolution	The sharpness of an image, measured in Dots Per Inch (DPI).
TCP/IP	Transmission Control Protocol (TCP) / Internet Protocol (IP). The suite of protocols for communication between computers, used as a standard for transmitting data over networks.
Toner Cartridge	A bottle or container used in a xerographic copier/printer that contains the powder used to form the text and images on the printed paper.
USB	Universal Serial Bus. A hardware interface that connects computers and peripherals. The USB is designed to concurrently connect a single computer USB port to multiple peripherals.
Wi-Fi	A technology that uses radio waves to provide high-speed internet and network connections.

TABLE OF CONTENTS

Xerox® Phaser® 3020 Printer
BLOCK SCHEMATIC DIAGRAMS
June, 2014

This document contains wiring and mechanical power data for the Xerox® Phaser® 3020 Printer. These block schematic diagrams are supplemental to the diagnostic and troubleshooting information found in the Xerox Phaser 3020 Service Manual.

Every effort has been made to achieve accuracy on these schematics. However, if a difference is noted between these schematics and the Xerox service documentation the service documentation takes precedence.

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1.1 AC / LOW VOLTAGE and HIGH VOLTAGE POWER / INTERLOCKS

LVPS / HVPS PWB
PL 3.1

MAIN PWB
PL 1.1

FRONT
COVER
INTERLOCK
SWITCH SQQ

+3.3 VDC

+24 VDC Off
Sleep Mode

J4 P4
9

COVER CLOSED
(H) +3.3 VDC

P4 J4

5   16

DC COM
18   3

DC COM
14   7

DC COM
13   8

DC COM   DC COM

DC POWER
GENERATION

+24VDC

+24 VDC Off
Sleep Mode

P1 J1
12

+24 VDC
19   2

+24 VDC
17   4

+24 VDC
15   6

+24 VDC

J2

ACH

ACN

DC COM
11   10

DC COM   DC COM

+5VDC

+5 VDC

+5 VDC

+5 VDC

DC COM

+24 VDC

+3.3 VDC
POWER
GENERATION

DC COM

+3.3 VDC
7   14

+3.3 VDC   +3.3 VDC   +3.3 VDC
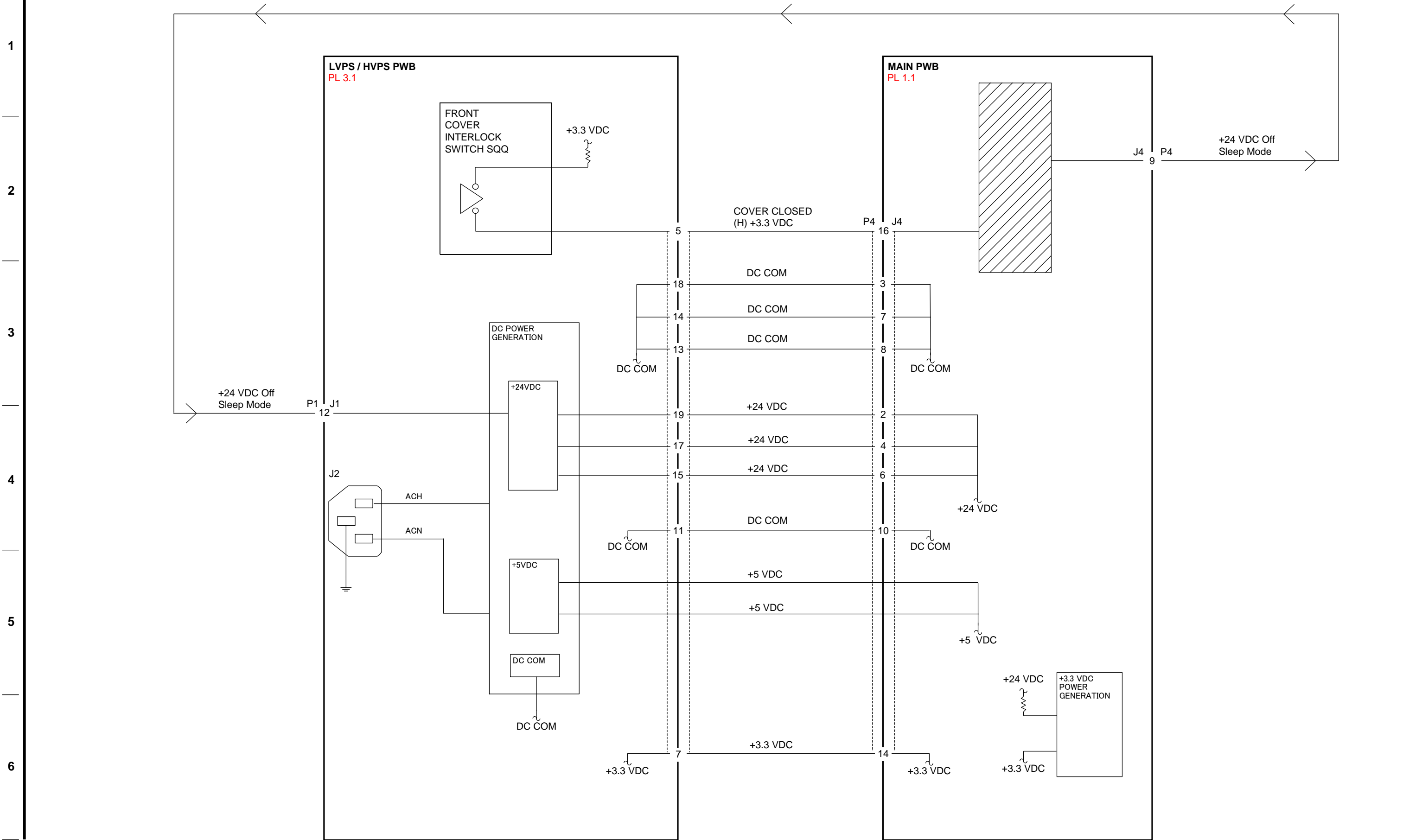
3.1 COMMUNICATIONS

1

2

3

4

5

6

MAIN PWB
PL 1.1

WITH WIRELESS MODEM

WNPC (WiFi) PWB
PL 2.1

J14   P14   +3.3 VDC
+3.3 VDC   1   11   +3.3 VDC
              2   SIGNAL   10
              3   DC COM   9   DC COM
DC COM   4   SIGNAL   8
              6   SIGNAL   6
              7   SIGNAL   5
              8   DC COM   4   DC COM
DC COM   9   SIGNAL   3   DC COM
DC COM   10   DC COM   2   DC COM
DC COM   11   +3.3 VDC 1
+3.3 VDC   +3.3 VDC   +3.3 VDC

USB

J3
1
2
3
4
DC COM

+3.3 VDC

J1
1
2
3   WIDTH SENSOR
4   FEED SENSOR

DEBUG

CONTROL PANEL PWB
PL 2.1

J2   P2
1   WPS KEY   9
2   POWER KEY 8
3   WPS LED   7
4   POWER LED 6
5   ERROR LED 5
6   READY LED 4
7   DC COM   3
DC COM   DC COM
8   TONER LED 2
9   +3.3 VDC   1
+3.3 VDC   +3.3 VDC

A   B   C   D   E   F   G   H   J

1

MAIN PWB
PL 1.1

+24 VDC

MOTOR
DRIVER

J7 P7   PHASE A

DRIVE MOTOR
PL 3.4

1

2   PHASE B

3   PHASE C   MOT

4   PHASE D

2

3

4

5

6

A   B   C   D   E   F   G   H   J

1

MAIN PWB
PL 1.1

LSU
PL 3.1

J6   P6   +24 VDC

+24 VDC   1   5   +24 VDC

DC COM   DC COM

DC COM   2   4   DC COM

MOTOR ENABLED

3   3

READY

4   2

CLOCK

5   1

POWER

8   9

LSU 1

9   8

LSU ON

10   7

DC COM

DC COM   11   6   DC COM

V1 DN

12   5

V1 DP

13   4

DC COM

DC COM   14   3   DC COM

SYNC SIGNAL

15   2

3.3 VDC

+3.3 VDC   16   1   +3.3 VDC

LSU MOTOR

7.1 PAPER FEED AND REGISTRATION

MAIN PWB
PL 1.1

FEED SENSOR PWB
PL 3.3

FEED SENSOR

PAPER AT FEED
SENSOR (L) +3.3 VDC

+3.3 VDC

CN1   CN   SENSOR

2   1

DC COM   DC COM

1   5

+3.3 VDC   +3.3 VDC

3   4

WIDTH SENSOR

PAPER AT REG
SENSOR (L) +3.3 VDC

+3.3 VDC

4   3

+3.3 VDC   +3.3 VDC

5   2

FEED
CLUTCH
PL 3.3

+24 VDC

FEED CLUTCH ON
(L) +24 VDC

J8   P8

1   1

2   2

DC COM

MAIN PWB
PL 1.1

LVPS / HVPS PWB
PL 3.1

PRINT MODULE

DEVELOPER ROLL

CHARGE

J4 | P4 | DEVELOPER ON | 10
11

TRANSFER ON | 9
12

DEVELOPER ENABLED | 8
13

DEVELOPER AC | 6
15

DEVELOPER DC | 4
17

TRANSFER ENABLED | 3
18

CHARGE ENABLED | 2
19

CHARGE ON | 1
20

PR DRUM

SUPPLY ROLL

TRANSFER ROLL

CRUM

J11 | P11 | +3 VDC | 1
1

+3.3 VDC

CRUM SIGNAL | 2
2

CRUM SIGNAL | 3
3

DC COM | 4
4

DC COM

MAIN PWB
PL 1.1

LVPS / HVPS PWB
PL 3.1

FUSER MODULE
PL 3.2

FUSER
THERMISTOR
RT10-001

Fuser Temperature
Signal

CN   FUSER
1

Enable Fuser
Relay

J4   P4
1

CN   CN
20

+3.3 VDC
2

+3.3 VDC

Fuser Relay
On

5

16

FUSER MODULE
PL 3.2

OVERTEMPERATURE
THERMOSTAT

T1   T2

CN1   CN   Heat Lamp
         L   On ACH

ACH

HEAT LAMP

N

ACN