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# OKIDATA<sup>®</sup>

## Service Manual

### OKIFAX 1000

### Facsimile Product

Adobe Acrobat printable reference  
copy of the OKIDATA Service Training Manual.  
09/17/97

**Note: This Adobe Acrobat version of the Okidata Service Training Manual was built with the pictures rendered at 300 dpi, which is ideal for printing, but does not view on most displays well.**

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**1.1.01 General Information**

The Okifax 1000 is a Group 3 facsimile unit which utilizes an LED page printer engine to produce a plain paper, permanent copy of received data. The unit can store 85 auto dial locations and has 15 one touch programmable keys. Scanning is accomplished by the direct contact image sensor method. The image sensor consists of 1,728 elements. The Okifax 1000 has a scanning width of up to 8.5 inches.

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## 1.2 GENERAL FACSIMILE SPECIFICATIONS

### 1.2.01 Style

- Desktop

### 1.2.02 Compatibility

- CCITT Group 3 **ONLY**

### 1.2.03 Physical Dimensions

- Width  
16.1 inches ( Approximately 410 mm)
- Depth  
16.4 inches (Approximately 417 mm )
- Height  
8.38 inches (Approximately 212.8 mm)
- Weight  
26.5 pounds (Approximately 12 kg)

### 1.2.04 Ambient Temperature and Relative Humidity (RH)

- Operation  
50° to 90° F  
10° to 30° C  
20 to 80% RH
- Storage  
-20° to 43° C  
-4° to 109° F

#### Temperature Conversion Formulas

##### F° to C°:

$$C^{\circ} = (F^{\circ} - 32) * .5556$$

##### C° to F°:

$$F^{\circ} = (C^{\circ} * 1.8) + 32$$

### 1.2.05 Power Requirement

- 115 vac

### 1.2.06 Power Consumption

| <u>Mode</u>            | <u>Typical Power</u> |
|------------------------|----------------------|
| Transmit               | 40W                  |
| Receive                | 120W                 |
| Local Copy (All black) | 118W (580W**)        |
| Local Copy             | 125W                 |
| Standby                | 35W                  |

\*\* Peak Power when the input voltage is 120V.

### **1.2.07 LCD Display**

- 2-line by 20 digit display

### **1.2.08 Memory**

- Standard Memory  
256 Kbytes (up to 14 pages of CCITT No.1 Sample Document)
- Optional Expansion Memory  
1 Mbyte (up to 64 pages of CCITT No.1 Sample Document)

### **1.2.09 Copy Mode Resolution**

- Fixed at 200 lines per inch

### **1.2.10 Warm-up Time**

- From power On until printer is ready  
Maximum of 120 seconds

### **1.2.11 Receive Options**

- Auto Receive
- Manual Receive
- Tel/Fax Receive
- Telephone Answering Device (TAD) Mode
- No Paper Receive
- No Toner Receive

### **1.2.12 Transmit Document Specifications**

- Document Width
  - Minimum 5.8 inches
  - Maximum 8.5 inches
- Document Length
  - Minimum 5 inches (single page), 5.8 inches (multi-page document)
  - Maximum 14 inches, or unlimited length for 1 hour
- Document Weight Range
  - 16 pounds to 24 pounds
- Desired opacity
  - Less than 40 % of the scanner source light should be able to pass through the paper.

### **1.2.13 Automatic Document Feeder (ADF) Capacity**

- 30 sheets (20 pound bond)
-

---

## 1.3 COMMUNICATIONS

### 1.3.01 Telephone Line Compatibility

- PSTN (public switched telephone network)
- PBX (private branch exchange)

### 1.3.02 Communication Mode

- Half Duplex

### 1.3.03 Protocol

- CCITT Recommendation T.30
- Oki Special Protocol

In multi-document reception, the local unit can start transmitting the modem training bits immediately after transmitting end of message (EOM) and upon reception of message confirmation (MCF) from the remote unit, instead of repeating all procedures (which takes about six seconds).

- Oki Special High Speed

The T.30 handshake is conducted at message transmission speed (instead of 300 bps) during multi-page transmission.

### 1.3.04 Line Interface

- Impedance  
600 ohms balanced
- Send Power Level  
0 dbm to -15 dbm (can be adjusted in 1 dbm steps by modifying TF #21)

### 1.3.05 Ring Signal Detection Sensitivity

- Voltage Range  
25 to 150 r.m.s.
- Frequency Range  
15 to 68 Hz (with 44 to 56 volts superimposed)
- Ring Signal Detection Time  
One Ring Signal  
or  
Adjustable between 5 and 30 seconds, in 5 second increments  
Refer to User Function 24 (optional second tray installed)  
Refer to User Function 23 (optional second tray NOT installed)
- Ring Signal Voltage Duration  
Longer than 180 milliseconds (inoperative if duration is 90 milliseconds or less)

### 1.3.06 Coding Schemes

- Modified Huffman (MH) **Only**
- Modified-Modified Read (MMR)
- Modified Huffman (MH)

### **1.3.07 Error Correction Methods**

- CCITT Error Correction Mode (ECM)
- Page Re-transmission (Memory Mode / ECM Off)

### **1.3.08 High Speed Modem**

- CCITT Recommendation V.29 (9600/7200 bps)
- CCITT Recommendation V.27 Ter. (4800/2400 bps)

### **1.3.09 Low Speed Modem**

- CCITT Recommendation V.21 Channel 2 (300 bps)

### **1.3.10 Transmission Time**

- 10 seconds  
CCITT No. 1 sample document at 9600 bps

### **1.3.11 Transmit Resolution**

- Horizontal  
8 PELs per mm  
(PEL = **P**icture **E**lement)
- Vertical  
STD  
3.85 lines per mm or 98 lines per inch  
  
FINE  
7.7 lines per mm or 196 lines per inch  
  
Ex.FINE  
15.4 lines per mm or 392 lines per inch

### **1.3.12 Photo/Half Tone Transmit Resolution**

- 32 Levels (using error diffusion)

### **1.3.13 Ringer Equivalent Number**

- 0.68

### **1.3.14 Transmit Dialing Methods**

- Auto Dialing  
70 two-digit auto dial codes
- One Touch Dialing  
15 one-touch keys)
- Off Hook Dialing
- On Hook Dialing
- Broadcasting  
Group Dial

### **1.3.15 Receive Mode**

- Auto Receive  
Dedicated fax machine
- Manual Receive  
Telephone manual switch to fax mode
- Tel\Fax Auto Switching  
Telephone will auto switch to fax mode
- TAD Interface

### 1.3.16 Broadcast Transmit Capabilities

- Maximum: 85 locations in one session

### 1.3.17 TSI/CSI

- Maximum: 20 characters are displayed. If the function is enabled, the received TSI is marked at the top of the first reproduced copy.

#### **NOTE:**

#### **FEDERAL COMMUNICATIONS COMMISSION TELEPHONE CONSUMER PROTECTION ACT**

Part 68 Implementation of the Telephone Consumer Protection Act states:

" The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains in a margin at the top or the bottom of each transmitted page, or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message and the telephone number of the sending machine of such business, other entity or individual."

To comply with this law, the End-User must:

1. Enter the **DATE** and **TIME** into the Okifax 1000
2. Enter the **NAME** and **TELEPHONE NUMBER** to identify the source of their facsimile transmission.

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## 1.4 PRINTER SPECIFICATIONS

### 1.4.01 Print Method

- Development  
Dry electro-photography
- Exposure  
Stationary LED head

### 1.4.02 Print Speed

- Continuous Print  
4 sheets per minute (letter size)
- Warm-up Time  
Power-ON (Cold): approximately 120 seconds  
Idle: approximately 15 seconds

### 1.4.03 Receive Paper Sizes

- Letter  
8.5 inches x 11.0 inches
- Legal (Option)  
8.5 inches x 14.0 inches

### 1.4.04 Receive Paper Types

- 20 pound Bond Paper

### 1.4.05 Copy Stacking

- The Okifax 1000 stacks the printed output printed side down.  
Face-down Stacker Capacity: 100 sheets

### 1.4.06 Paper Cassette Capacity

- First Cassette  
100 sheets
- Second Cassette (Option)  
250 sheets

### 1.4.07 One-Line Minimum Print Time

- Standard Resolution  
10 milliseconds per line
- Fine Resolution  
5 milliseconds per line

### 1.4.08 Contrast Selection

- Normal
  - Light
  - Dark
-

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## **1.5 USER FUNCTIONS**

### **1.5.01 Transmit Mode**

- Auto transmit mode  
The Okifax 1000 begins sending messages after detecting the remote stations answer.
- Manual transmit mode  
The operator presses the Start Key after an answer tone has been heard.

### **1.5.02 Receive Mode**

- Auto Receive Mode
- Manual Receive Mode
- Telephone / Fax Automatic Switch
- TAD Interface

### **1.5.03 Absent Mode Auto Timer**

- This feature enables switching to the auto receive mode at a specified time.

### **1.5.04 Group Dial**

- One group of up to 85 locations

### **1.5.05 Telephone Directory and Location ID**

- In addition to telephone numbers, an alphanumeric name can be assigned to each of the numbers. This alphanumeric name is called the Location ID and can contain up to 15 characters.

### **1.5.06 Voice Request**

- A voice request from the transmitter is available only upon completion of the total message transmission.
-

---

## 1.6 SCANNER SPECIFICATIONS

### 1.6.01 Scanning Method

- 1728 bit contact image sensor

### 1.6.02 Effective Reading Width

- Maximum: 8.5 inches

### 1.6.03 Scanning Resolution

- Horizontal
  - 8 PELs per mm (PEL= **P**icture **E**lement) - approximately 200 PELs per inch
- Vertical
  - 3.85 lines per mm or 98 lines per inch (STD)
  - 7.7 lines per mm or 196 lines per inch (FINE)
  - 15.4 lines per mm or 392 lines per inch (Ex.FINE)

### 1.6.04 Automatic Document Feeder

- Maximum 30 sheets of 8.5 x 11 inch, 20 pounds bond paper

#### **NOTE:**

**Documents must be placed face down on the ADF document guide.**

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## **1.7 CONSUMABLE ITEMS**

### **1.7.01 Toner Cartridge Kit**

- Toner Cartridge
- LED Lens Cleaner Pad

### **1.7.02 Image Drum Cartridge Kit**

- Image drum
- 

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## **1.8 OPTIONS**

### **1.8.01 Letter / Legal / Universal Paper Tray**

- 100 sheet capacity
- Adjustable sizing capability (letter, legal, universal)

### **1.8.02 Second Tray Unit (ST-250)**

- 250 sheet capacity

### **1.8.03 Memory Expansion Kit**

- 1 MByte Memory Card
- 

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## **1.9 AGENCY APPROVALS**

- FCC Class A
- UL 478 Ver. 5
- CSA 22.2 220

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## **1.10 RELIABILITY DATA**

### **1.10.01 Automatic Document Feeder Jam Rate**

- Approximately one for every 500 operations

### **1.10.02 Separation Rubber Life**

- Approximately 10,000 document feeds

### **1.10.03 Lithium Battery Life**

- Approximately 5 years

### **1.10.04 Image Drum Life**

- One page print jobs  
Up to 11,000 pages
- Continuous print  
Up to 20,000 pages

### **1.10.05 Toner Cartridge Life**

- First toner cartridge in image drum  
Up to 1,250 pages
- Subsequent toner cartridges  
Up to 2,500 pages

### **1.10.06 Estimated Fuser Life**

- Approximately 180,000 pages

### **1.10.07 Facsimile Mean Time Between Failure (MTBF)**

- Approximately 3,000 hours

### **1.10.08 Printer Duty Cycle**

- Approximately 6,000 pages per month

### **1.10.09 Estimated Printer Life**

- Approximately 180,000 pages

### **1.10.10 Mean Time To Repair (MTTR)**

- Approximately 30 minutes
-

## 2.1 PRINCIPLES OF OPERATION

The Okifax 1000 Principles of Operation section is comprised of three sub-sections.

- Transmitter Theory of Operation
  - Receiver Theory of Operation
  - LED Printer Theory of Operation
- 

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### **2.1.01 Compatibility**

The Okifax 1000 facsimile machine operates as a Group 3 (G3) facsimile device.

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**2.1.02 Communications Mode**

The Okifax 1000 operates as a half-duplex facsimile transceiver. Transmit and receive operations cannot take place at the same time. However, documents can be prepared for transmission while the Okifax 1000 is engaged in message reception. These documents will be automatically transmitted upon completion of the receiving operation.

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### **2.1.03 Modem Operation**

The high-speed modem conforms to CCITT Standard V.29 for 9600/7200 bps (bits per second) operation and to CCITT Standard V.27 ter. for 4800/2400 bps operation.

The low-speed (300 bps) modem, which is used for handshaking, conforms to CCITT standard V.21 channel 2 or equivalent.

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**2.1.04 Automatic Fall-back Mode**

The Okifax 1000 will change the message transmitting speed according to the following fall-back plan. The Okifax 1000 will first transmit a page of the message at 9600 bps. The receiving station will continuously monitor the received data. If the receiving station detects six or more consecutive error lines during reception of a single page, or if the total number of errors detected during the reception of a single page exceeds 10% of the data on the transmitted page, it will return an RTN (Retrain Negative) signal to the transmitting station upon termination of the page reception. With an RTN signal received, the transmitting station will downgrade its speed by one level (to 7200 bps in this case) and continue transmission of the next page. Similarly, should the transmitting station again receive an RTN signal from the receiving station, it will downgrade speed another level.

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**2.1.05 Telephone Line Connection**

The Okifax 1000 is connected to the telephone line via the LINE-JU Board. Two RJ-11 connectors are provided; one for connection to the phone line, and the other for an external telephone. A separate modular jack is provided for connection of the Okifax 1000s handset.

The Okifax 1000 will control the switching between the handset (or the external telephone) and the telephone line to permit use of the handset or telephone for voice communication.

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### 2.1.06 Error Correction Mode (ECM)

The Okifax 1000 features Error Correction Mode (ECM). When communicating with a remote unit that also has ECM, this feature provides error-free transmission.

What follows is an explanation of how ECM works.

- The transmit machine groups image data into blocks and transmits one block of data at a time to the receive machine. At the end of each block, a PPS (Partial Page Signal) is transmitted.
  - The receive machine stores the data block in memory and checks each frame within that block for errors.
    - Modified Huffman assigns a binary code to consecutive recurring bits of white or black. The codes must add up to a total of 1728 bits, which is the Main Scan Rate established by CCITT.
    - Modified Read uses a comparison technique. The line being coded is compared to the previous line and differences are noted. Codes are then assigned to reflect the differences between the two lines.
  - If no errors are detected, the receiver sends MCF (Message Confirmation) which requests the transmit machine to transmit the next data block.
  - If an error is detected by the receive machine, it transmits the frame number of the defective frame back to the transmit machine in a signal called PPR (Partial Page Request).
  - The transmit machine will then re-transmit the frame to the receive machine as a Partial Page.
  - The receive machine rechecks the Partial Page, and (if all frames are correct) the receive machine transmits MCF (Message Confirmation).
  - The next data block is then transmitted.
-

---

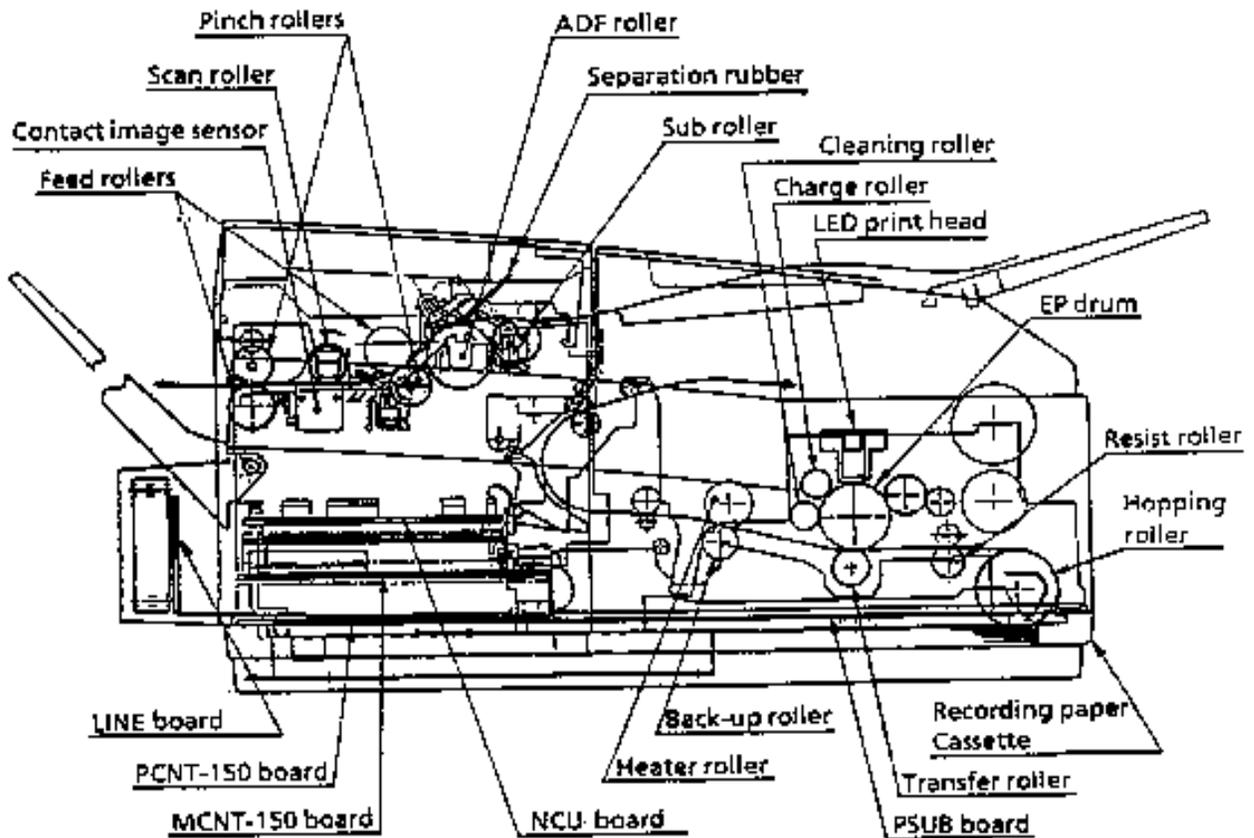
**2.1.07 Major Assemblies**

The following major assemblies make up the Okifax 1000 facsimile machine.

- Main Control Board MCNT-150
  - Printer Interface Board PCNT-150
  - Network Control Unit Board NCU-U
  - Operation Panel Assembly OPE-150
  - Power Supply Board (FXLA) PWU-150
  - Sub-Power Supply Board (FXHA) PSUB-150
  - Line Board LINE-JU
  - Hook Switch Board HOOK SW
  - Printer Unit
  - Scan Unit
- 

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#### Okifax 1000 Cross-Sectional View



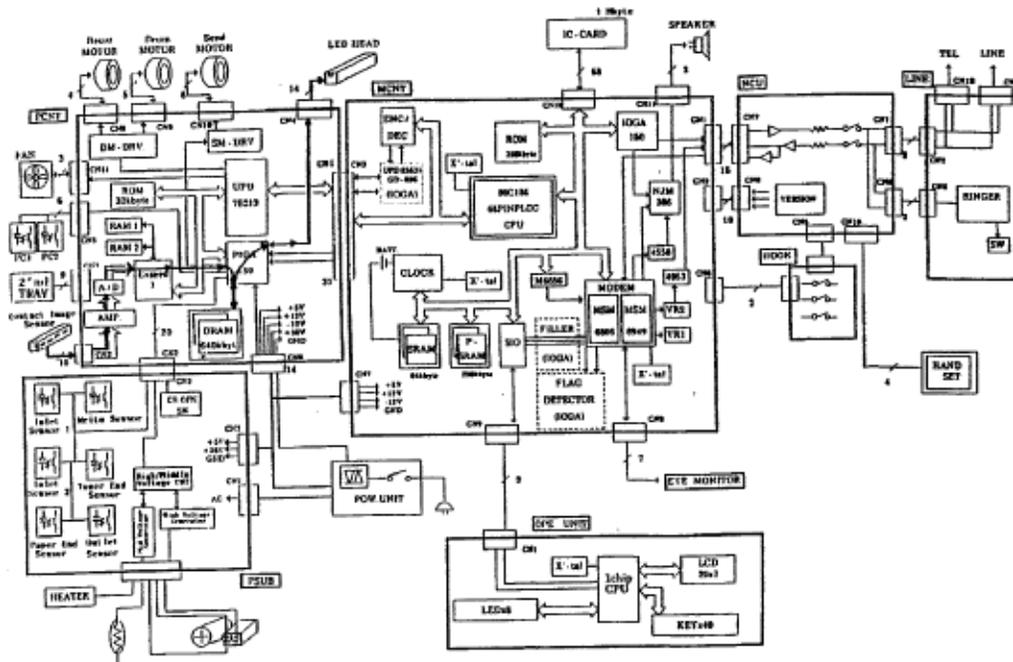
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## Chapter 2 Principles of Operation

### Copy Function Block Diagram



Copy Signal flow

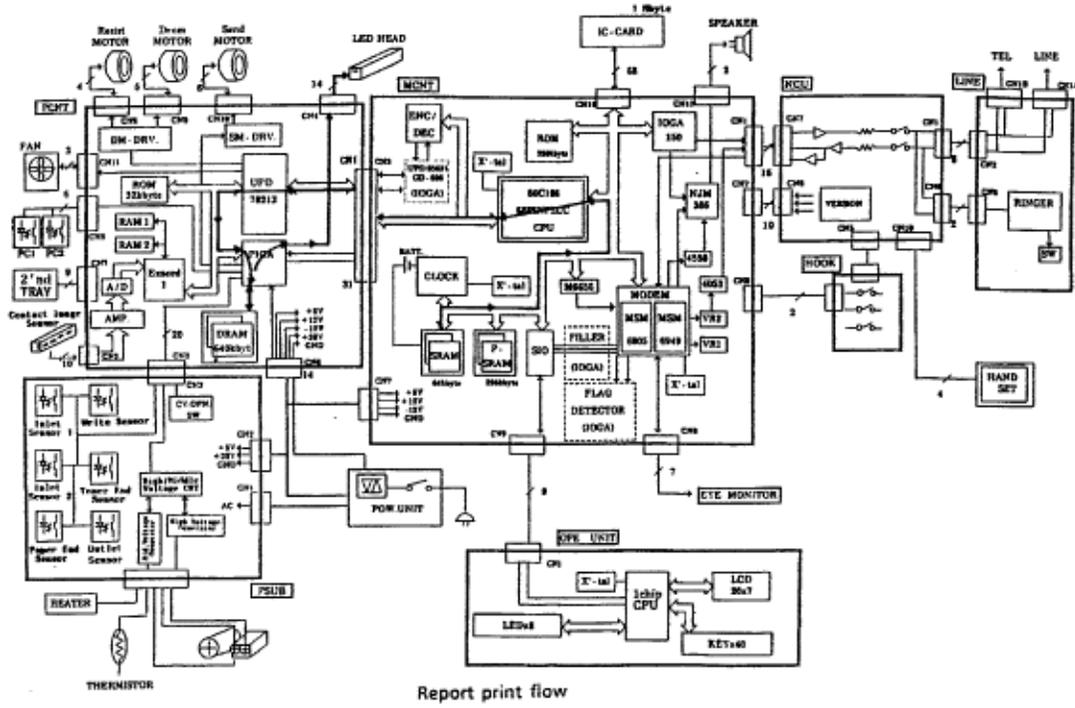
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## Chapter 2 Principles of Operation

### Report Print Function Block Diagram



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## 2.2 TRANSMITTER THEORY OF OPERATION

### 2.2.01 Typical Transmission

When a telephone number is dialed through the Okifax 1000 (either manually or through auto-dial), a connection will be established with the receiving station through the Public Switched Telephone Network (PSTN). When the call is answered, the operator will hear the Called Equipment Device (CED) tone from the receiving station. With CED received, the transmit machine acknowledges that the connection is established and proceeds to the CCITT T.30 300 bps handshake procedure.

**NOTE:**

**Refer to the Receive  and Transmit  Handshake Procedure Block Diagrams for functional overviews of 300 bps handshaking.**

**Refer to the Transmit Block Diagram for an overview of G3 Transmit Operations.** 

When the DIS (Digital Identification Signal) is received, G3 mode transmission is possible and the Okifax 1000 starts scanning the document, page by page. The image data is temporarily stored in FIFO (First In First Out) memory until it becomes valid for transmission. In about 3 seconds, the machine will receive CSI (Called Subscriber Identification) from the distant station. After reading the document pages and storing the image data in memory, the machine begins the handshake with the distant station. If the 9600 bps training is successfully completed, the machine will start transmitting the image data in digital, coded form. Training is a high speed data pattern transmitted to the receive modem. This training data pattern causes the receive modem to synchronize with the transmit modem. If the training fails due to the line condition, an automatic fallback to a lower rate will occur. The result will be indicated on the LCD display. As the machine transmits each page of image data, the page count on the LCD display will increment.

Training is used :

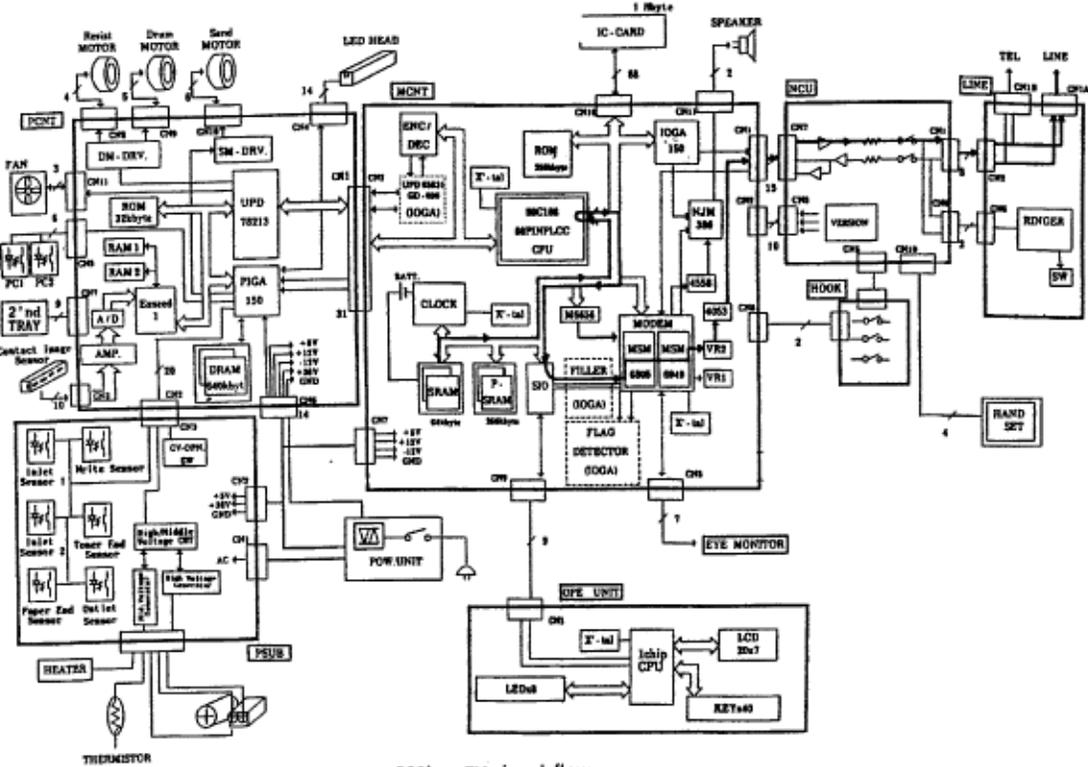
- To test the line condition for valid transmissions at a particular data rate.  
The TCF consists of 100 binary 0s transmitted in a burst. At least 98% accuracy must be achieved before transmission can take place at that data rate.
  
- By the receiving station in setting preliminary equalization for the current line conditions.



# Service Guide OF1000

## Chapter 2 Principles of Operation

### 300 bps Transmit Handshake Operation Diagram



300bps TX signal flow

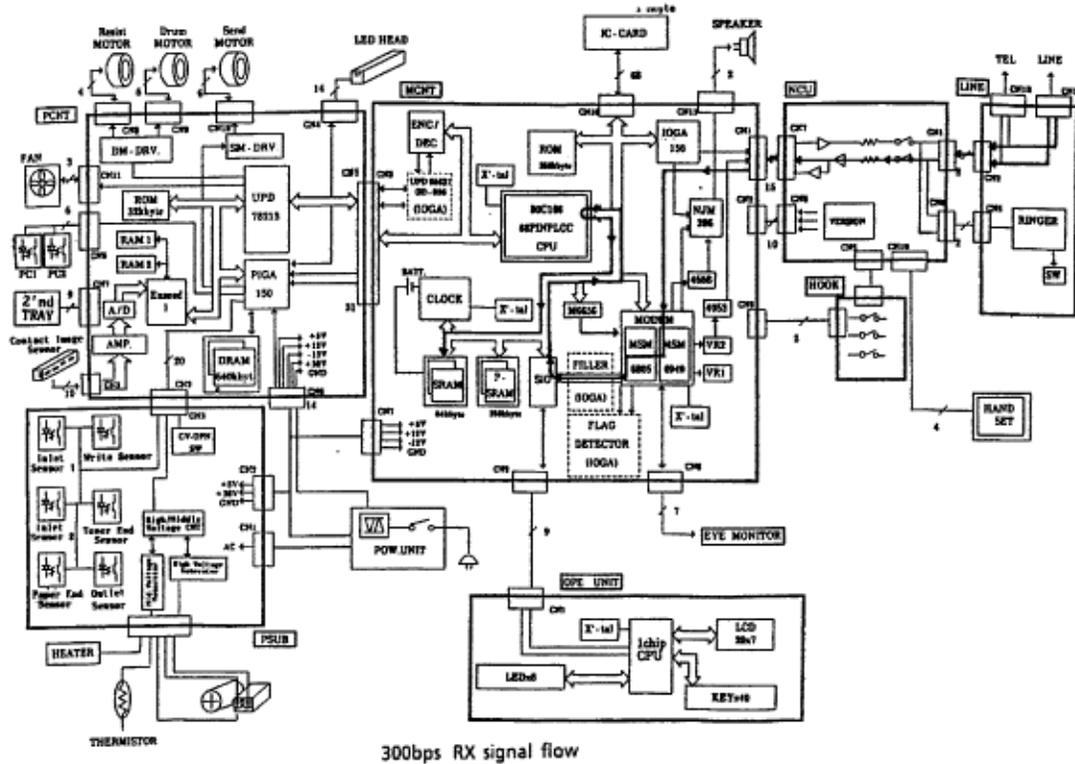
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## Chapter 2 Principles of Operation

### 300 bps Receive Handshake Procedure Diagram



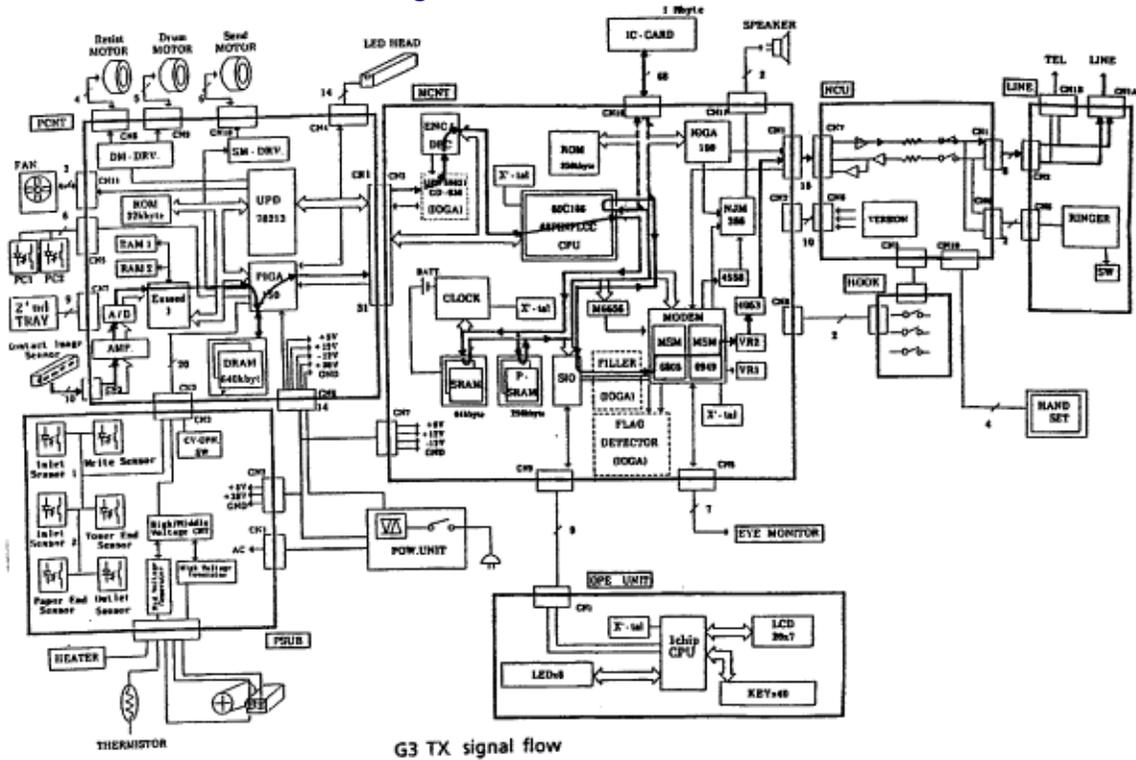
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## Chapter 2 Principles of Operation

### G3 Transmit Functional Block Diagram



G3 TX signal flow

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**2.2.02 Operator Panel**

Through the operator panel (OPE-150), the end user initiates transmit and receive operations, sets desired options, programs telephone numbers and other data, and interfaces in all facets of the operation of the machine. The panel consists of an LCD display (two rows of 20 characters), a numeric key pad, 8 LED indicators, and function keys. The functions of the keys and indicators are described in the Okifax 1000 Users Documentation.

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#### 2.2.03 Automatic Document Feeder (ADF)

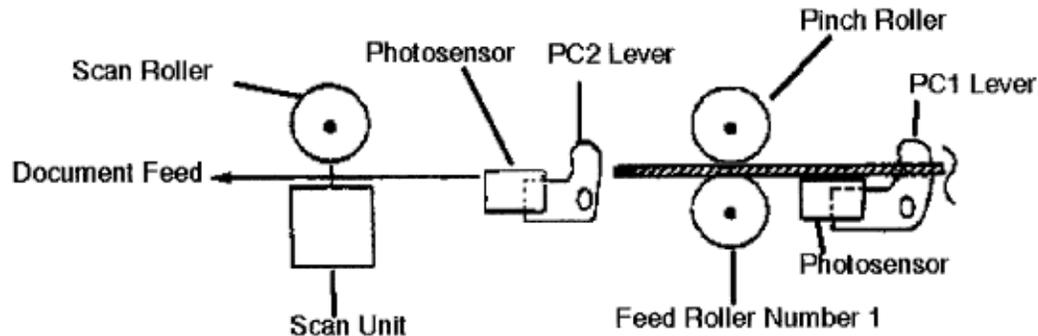
The automatic document feeder transfers document sheets to the scan unit automatically, one at a time. The following diagram shows the mechanism used for detecting the leading and trailing edges of a document.

When a document is placed on the feeder, it is sensed by PC1. This causes the feed rollers to activate, feeding the document. The document is fed to the PC2 lever, where the leading edge of the document is detected. When transmit (or copy) begins, the document is fed by the transmit stepper motor to the start scan position where reading start. The documents trailing edge is detected when the PC2 lever is released. If another document is on the feeder, the process is repeated.

The separation rubber holds back the top originals and allows only one document to be fed into the scanner area. The separation rubber and ADF rollers should be cleaned or replaced according to the cleaning schedule (in Section 3 of this manual) to assure proper operation.

The ADF capacity is 30 pages of 20 lb. bond. Documents are placed on the feeder image face side down. When feeding multiple pages, the bottom page is fed first, working toward the top.

#### Document Leading/Trailing Edge Detection Diagram



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#### 2.2.04 Scanner Assembly

The Okifax 1000 uses a 1728-element direct contact type image scanning sensor. LEDs are located at the bottom of the scan glass and image sensors are located at the top of the glass. When the document reaches the scanning unit, it passes directly in front of the image sensor. The LEDs illuminate the document and the light reflects back to the image sensors. This image data is sent to the printer control board (PCNT-150). The transmitted document length is limited to 14 inches; however, the machine can be modified for longer transmissions. (See Transmitting Long Documents in the Users Documentation).

Transmission will stop and a line disconnect will occur if the end of the document is not detected within 14 inches after scanning begins (unless the unit is set for unlimited transmission.) The message

RE-LOAD DOCUMENT  
CONFIRM AND "STOP"

will be displayed if the document does not reach the scanning position within 5 seconds after the start of a document feed.

**NOTE:**

When a jam condition is displayed on the operator panel during message transmission, the machine will stop, **but its receiving capability will remain active.**

**2.2.05 Encoder**

Scanned image data received by the PCNT is sent to the encoder/decoder (ENC/DEC) on the MCNT-150 board. The image data is compressed by the ENC/DEC according to the Modified Huffman (MH) and Modified Read (MR) encoding scheme, or MH only. The use of MH only or both MH and MR is determined by a function setting. Data is then stored in the FIFO area in one byte units. Fill bits are inserted if the length of one encoded line is less than the minimum scan time of the remote unit. Data is transferred to the NCU board, then sent to the line board for transmission over the phone line.

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**2.2.06 Modem**

The modem, located on the MCNT-150 board, modulates the data in the correct G3 (9.6, 7.2, 4.8, or 2.4K bps) data rate that was determined during handshaking between the local machine and the remote receiver. Modulation is the process of converting the digital output of the scanner into an analog signal that can be transmitted over the telephone system.

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### 2.2.07 Network Control Board (NCU)

The NCU-U board receives the modulated data from the MCNT-150 board and transfers the data to the line board.

The NCU board performs the following functions during the transmit operation.

- Unit connection / disconnection to the telephone line via the CML Relay
  - Dial pulse generation
  - The PIS Tone detection
  - Off-Hook Detection (Line Current Detector)
  - Tx Output Signal Attenuation (normally 9 db output)
  - Separation of the TX and RX signals (performed by the Hybrid Transformer)
  - Impedance matching (the 600 ohm impedance of the telephone line)
-



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### **2.2.08 Line Board**

The line board provides the RJ-11 connection used to transmit data to the PSTN or PBX.

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## 2.3 RECEIVER THEORY OF OPERATION

**NOTE:**

Refer to the G3 Receive Operation Block Diagram .

### 2.3.01 Operator Panel

Through the operator panel, the user initiates manual receive operations and sets auto-answer options.

### 2.3.02 Line Board

The line board provides the RJ-11 connection used to receive data from the PSTN or PBX.

### 2.3.03 Network Control Board (NCU)

The NCU receives the modulated data from the line board and sends it to the modem (located on the MCNT board). The operation of the NCU in the receive mode is very similar to the transmit mode. However, during receive operations, the NCU also functions as an amplifier for the received signal.

### 2.3.04 Modem

The modem demodulates the data from the G3 (9.6, 7.2, 4.8, or 2.4K bps) scheme that was determined during handshaking. The data is then sent to the read-only memory for temporary storage. The storage time is dependent on whether the machine is printing real-time or from memory.

### 2.3.05 Decoder

The decoder decodes the MH, MR, or MMR data from the RAM into lines of picture data that are 1,728 bits in length. After the data has been received, demodulated, and decoded, it is transferred to the PCNT board.

### 2.3.06 Document Size

Since the available printing area of the printer is smaller than the paper size, document contents may be missed on both sides of the paper, or a document image having the same length as the printing paper may be split into separate pages during printing. To prevent this, the Okifax 1000 automatically sets the proper reduction ratio within the range of 90 to 100% if the RX REDUCTION function has been set ON. If a received document image is longer than the available printing length, the excess part of the image is eliminated. If the SPLIT PRINT function has been set ON, the excess image will be printed on the next page.



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## 2.4 LED PRINTER

### 2.4.01 Principal Components

The principal hardware components of the printer unit are listed below.

- Printer Control Board (PCNT-150)
  - Power Supply Board (PWU-150)
  - Sub-Power Board (PSUB-150)
  - Fuser Unit
  - Main Motor
  - LED Head
  - Registration Motor
  - DC Fan
  - Second Paper Tray Mechanism (option)
-

**2.4.02 Printer Control Board (PCNT-150)**

The printer control board (PCNT-150) contains a microprocessor, an EPROM which stores the printer control program, and 640 Kbytes of dynamic RAM.

This board controls the paper feed and paper transport functions. This board also activates the LED array diodes, which leave a latent electrostatic image on the photosensitive drum. This latent image is printed by fusing toner to the paper.

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### 2.4.03 Power Supply Board (PWU-150)

The power supply is a switching-type unit, which generates the following voltages from the AC input voltage.

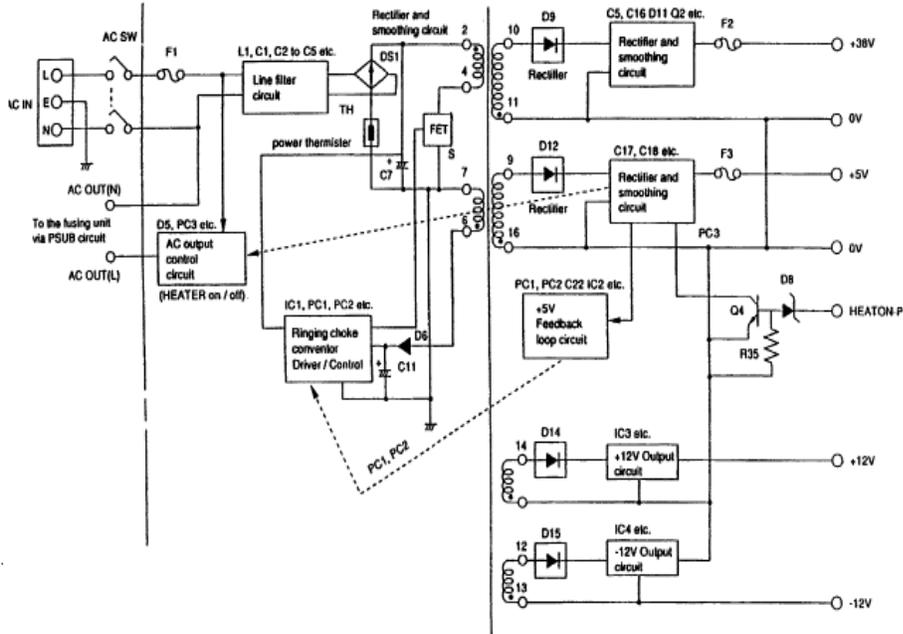
- + 5 vdc : Printer Logic
- + / - 12 vdc: Interface Signal Levels
- + 38 vdc: Transmit Stepper Motor, Registration / Drum Motor Drive, Fan Drive, high-voltage source.

When the PCNT-150 board enables the HEATON signal, the power supply provides the AC voltage to the fuser lamp via the PSUB-150 board.

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### Power Supply Block Diagram





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### Chapter 2 Principles of Operation

#### 2.4.04 Sub-Power Supply Board (PSUB-150)

The PSUB-150 consists of IC1 (a one-chip CPU), a cover-open switch, the high voltage generation circuit and the photo-sensors.

##### Photosensors

- PS1 - Outlet Sensor
  - Detects paper jams at the paper exit path.
- PS2 - Paper Sensor
  - Along with the outlet sensor, is used to monitor paper feed and paper length.
- PS3 - Inlet Sensor 1
  - Detects the leading edge of the paper. Used in the determination of when to switch from the hopping to feeding operation.
- PS4 - Paper-end Sensor
  - Detects the presence of paper in the cassette. (ON: Paper is present)
- PS5 - Inlet Sensor 2
  - Detects the width of the receive paper (ON: A4 or larger)
- PS6 - Toner-low Sensor
  - Detects a lack of toner

##### Cover Open Switch

Whenever the stacker cover is opened, the cover open switch is turned OFF. This removes the + 38 vdc source voltage from the high-voltage generation circuit. As a result, all high-voltage outputs are disabled. The CVOPN signal is sent to the MCNT-150 and the cover open routine is performed. The message COVER OPEN will be displayed on the operator panel.

##### High-Voltage Circuits

The following voltages are generated for use in the electro-static printing process.

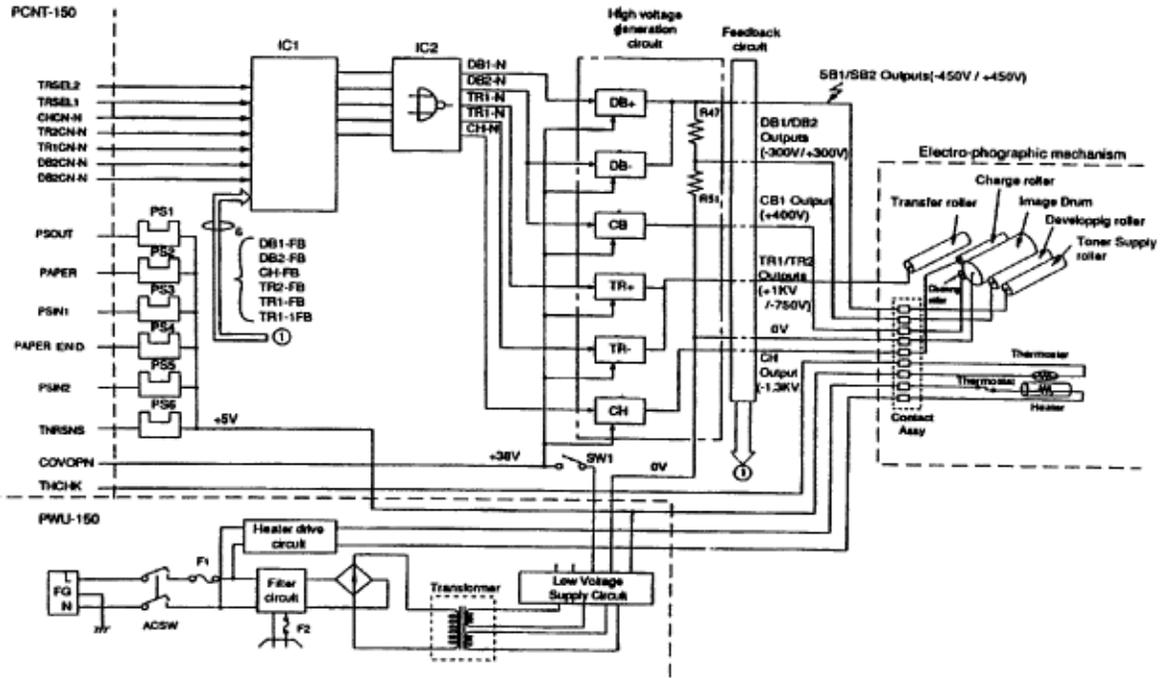
| OUTPUT  | VOLTAGE    | USE                      |
|---------|------------|--------------------------|
| SB1/SB2 | - 450 vdc  | Toner Supply Roller      |
| DB1/DB2 | - 300 vdc  | Toner Development Roller |
| TR1/TR2 | + 1 Kvdc   | Transfer Roller          |
| CH      | - 1.3 Kvdc | Charging Roller          |
| CB      | + 400 vdc  | Toner Cleaning Roller    |



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## Chapter 2 Principles of Operation

### Sub-Power Supply Board Block Diagram



PSUB-150 Block Diagram

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#### 2.4.05 Fuser Unit

The fuser unit is controlled by a thermistor, the printer interface gate array, an LSI and the CPU to keep the heat roller surface temperature within a predetermined range (about 150 degrees Celsius). A thermal fuse within the fuser unit prevents abnormal temperature rises in case the thermistor fails.

**NOTE:**

The CPU checks for an open circuit in the thermistor at power -on, setting a fuser alarm if this error is detected.

The CPU also sets a fuser alarm if the proper temperature is not attained within a specified period of time after power-on.

Upon detecting a fuser alarm, the CPU will halt (after printing the current page).

---

**2.4.06 Main Motor (Drum Motor)**

The main motor is controlled by the motor control LSI, on the PCNT-150 board. The motor used is a four-phase motor, driven by the two phase excited signal generated by the LSI.

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**2.4.07 LED Array**

Data for the 1,728 LEDs in the LED array is placed in the shift register by the HD CLK signal. The data is loaded in the latch circuit by the HD LD signal.

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**2.4.08 DC Fan**

The fan is controlled by the FAN ON-P signal from the PCNT-150 board. In order for the facsimiles printer to operate, the signal FAN SENSE-N must be active.

**NOTE:**

The fuser and the fan are not enabled when the cover is open. If the fan fails to run, the fuser will turn off and the message **PRINTER ALARM 4** will be displayed. Printing is disabled.

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**2.4.09 Registration Motor**

The registration motor is driven clockwise for initial receive paper loading, then counterclockwise for paper feeding. The motor is controlled by the motor drive IC on the PCNT-150 board.

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**2.5 PRINTING PROCESS**

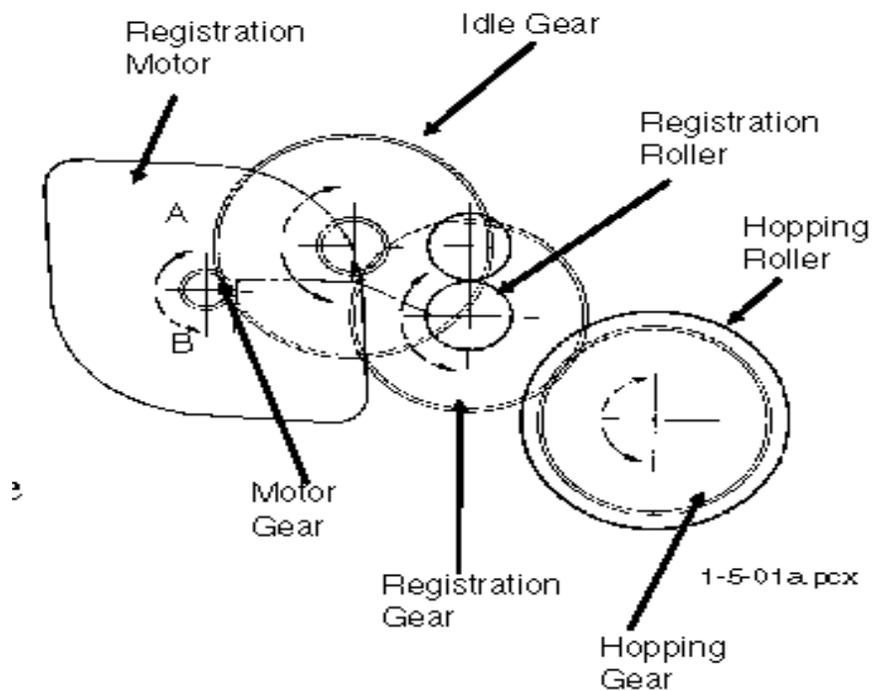
**2.5.01 General Information**

Hopping and feeding are controlled by a single registration motor.

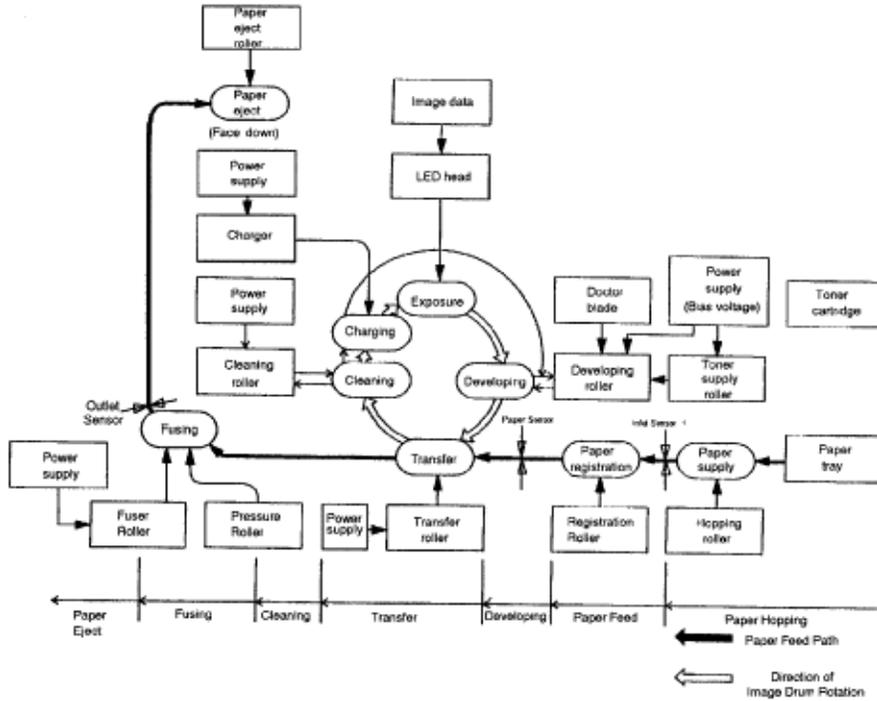
Turning the registration motor in the "A" direction drives the hopping roller.

Turning the registration motor in the "B" direction drives the registration roller.

The registration gear and hopping gear contain one-way bearings. Turning each of these gears in the reverse direction will **NOT** turn the corresponding roller.



### Printing Process Diagram



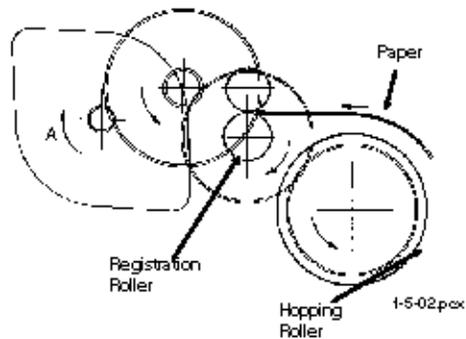
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### 2.5.02 Hopping

Hopping loads paper from the paper cassette.

During the hopping operation, the registration motor turns in a clockwise direction. This motor drives the hopping roller, which in turn advances the paper until the inlet sensor 1 switches ON. The registration gear turns, but the one-way bearing does not allow the registration roller to turn. After inlet sensor 1 switches ON, the paper is advanced a predetermined length (until the paper reaches the registration roller).



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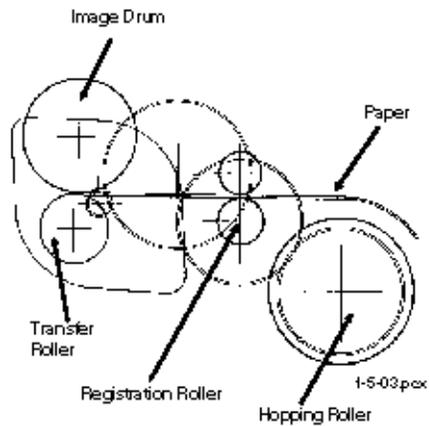
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### 2.5.03 Feeding

Feeding transports paper through the printer.

After the completion of hopping, the registration motor turns in a counter-clockwise direction. This counter-clockwise motion drives the registration roller and advances the paper. The hopping gear turns, but the one-way bearing does not allow the hopping roller to turn.



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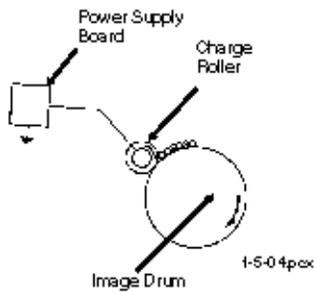
---

### 2.5.04 Charging

Charging applies -1.3 Kvdc to the charge roller. The charge roller contacts the image drum surface.

The charge roller has two layers: a conductive layer and a surface protective layer. The surface layer is flexible, which assures proper contact with the photosensitive drum.

The drum surface charges to approximately -750 vdc.



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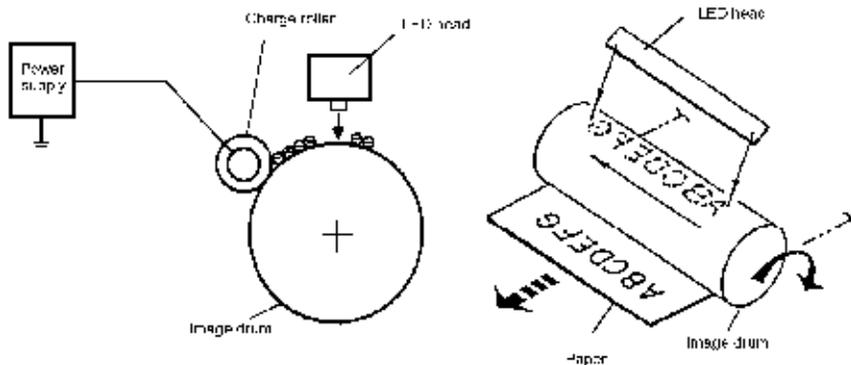
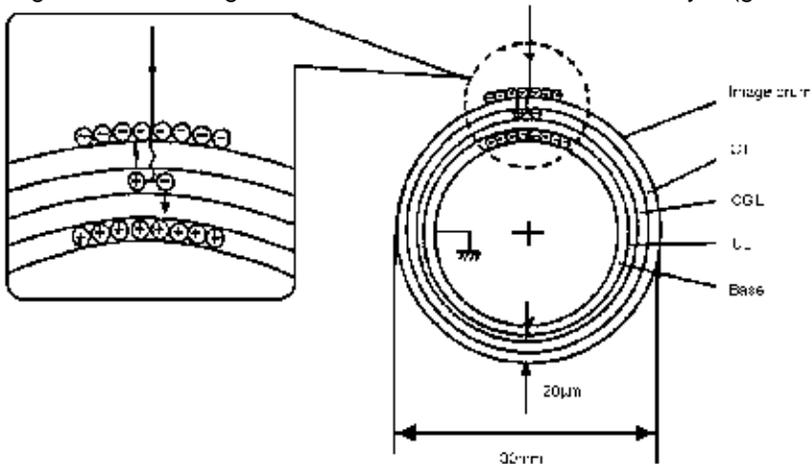
**2.5.05 Exposing**

The image drum has four layers.

- Carrier Transfer Layer (CTL)
- Carrier Generation Layer (CGL)
- Underlayer (UL)
- Aluminum Base

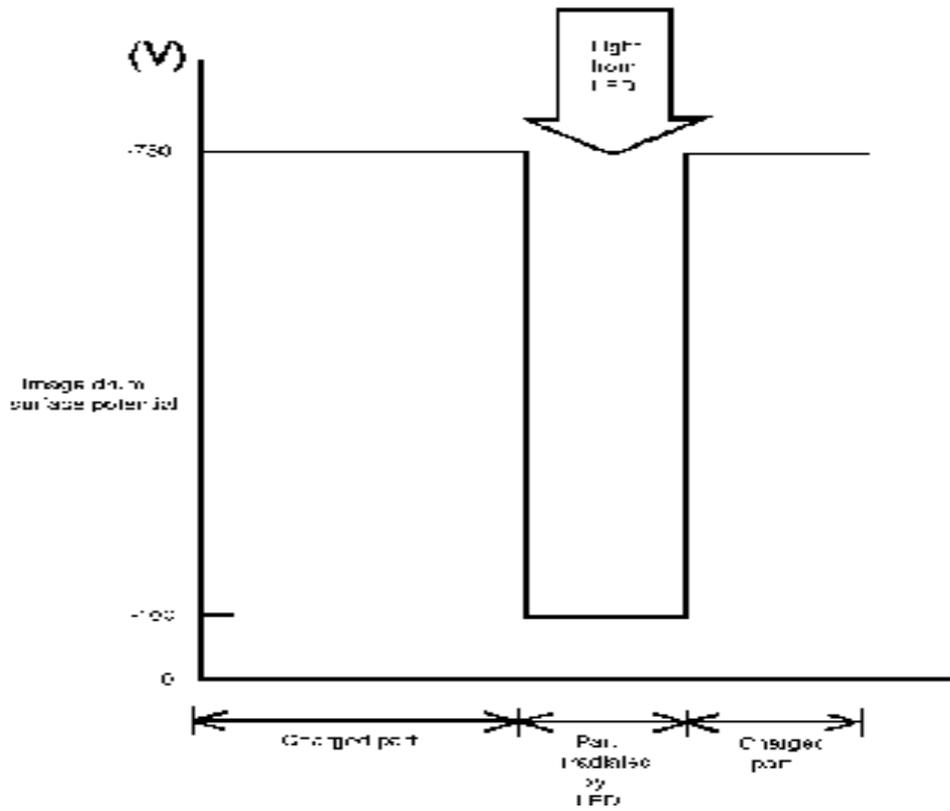
The CTL and CGL make up the organic photo conductor layer (OPC), which is about 20 micrometers (m) thick.

When light from the LED head irradiates the image drum surface, the light energy generates positive and negative carriers in the CGL. The positive carriers are moved to the CTL by an electrical field acting on the image drum. The negative carriers flow into the aluminum layer (ground).



The positive carriers moved to the CTL combine with the negative charges on the image surface

(accumulated by the contact charge of the charge roller), lowering the potential on the image drum surface. The resultant drop in the potential of the irradiated part of the image drum surface forms an electrostatic latent image on it. The surface potential on this irradiated part of the image drum is approximately -100 vdc.

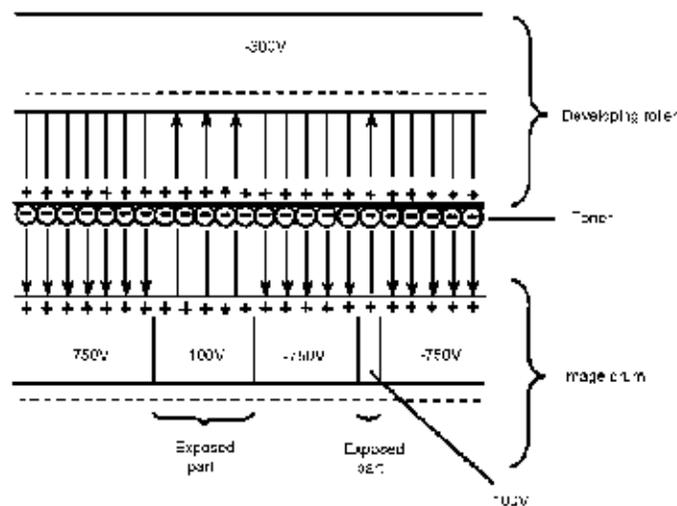


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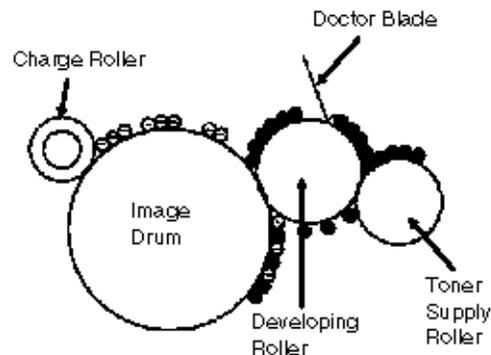
#### 2.5.06 Developing

The electrostatic latent image formed on the image drum surface is developed into a visible image. Developing takes place when contact is made between the image drum and the developing roller.

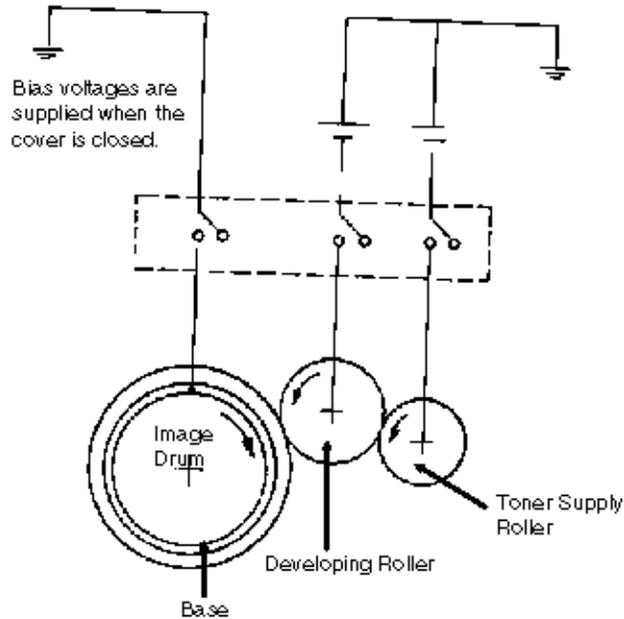
As the toner supply roller rotates, toner is absorbed into the sponge type roller material.



A charged particle will be attracted to a particle having a MORE POSITIVE charge than its own. The developing roller surface is charged to  $-300$  vdc and the toner supply roller is charged to  $-450$  vdc. Since the development roller is charged more positive than the toner supply roller, the toner on the toner supply roller is attracted to the developing roller. The toner on the developing roller contacts the doctor blade, forming a thin coat of toner on the developing roller surface.



The exposed portion of the image drum contains a more positive charge than the development roller ( $-100$  vdc vs  $-300$  vdc). Therefore, toner is attracted to the exposed areas of the image drum, making the electrostatic latent image visible.



**NOTE:**

**The toner supply roller and the developing roller are supplied with the bias voltages required during the developing process. The toner supply roller is charged to -450 vdc. The developing roller is charged to -300 vdc.**

---

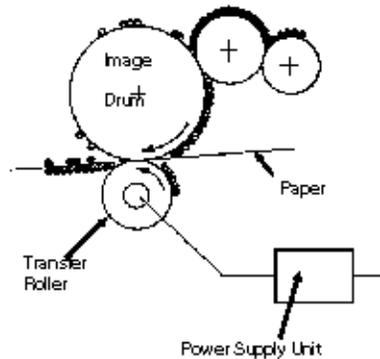
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### 2.5.07 Transfer

The transfer roller is made of a conductive sponge material. The roller keeps the paper in constant contact with the image drum. Paper is placed over the image drum surface. A positive charge (opposite in polarity to the toner) is applied to the paper from the reverse side.

A charged particle will be attracted to a particle having a MORE POSITIVE charge than its own. A high positive charge is applied to the transfer roller by the power supply board. This induced charge (on the surface of the transfer roller) is transferred to the paper when contact is made between the transfer roller and the paper. The lower side of the paper is positively charged. The negatively charged toner (on the photosensitive drum) is transferred to the upper side of the paper because of the positive charge on the lower side of the paper.

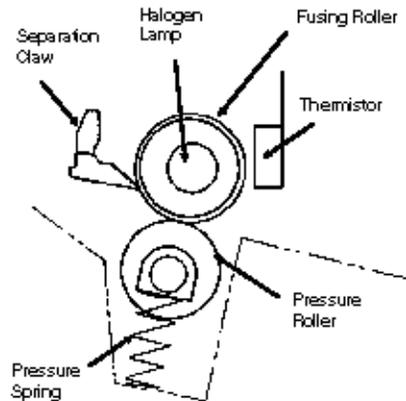


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### 2.5.08 Fusing

After transfer, the toner image is fused to the paper by heat and pressure. The paper passes between the fusing roller and the pressure roller. The fusing roller has a teflon coating and contains a 400 watt halogen lamp. A thermistor (which contacts the fusing roller) maintains the fusing roller temperature at approximately 150 degrees Celsius. A thermostat cuts off the voltage supply to the lamp if there is an abnormal temperature rise.

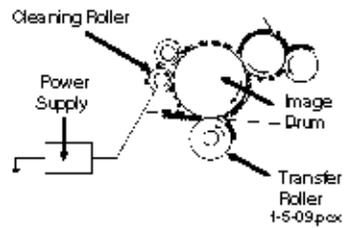
The pressure roller provides 2.5 Kg of pressure. This is generated by the pressure springs at each side of the roller.



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**2.5.09 Cleaning**

The image drum is cleaned at the end of transfer. The residual toner on the image drum is attracted to the cleaning roller, which has a + 400 vdc static charge.



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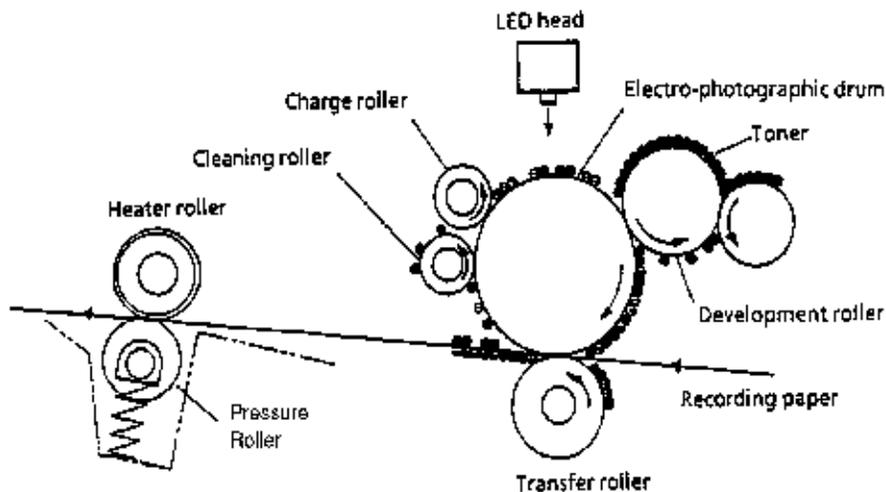
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### 2.5.10 Printing

Refer to the Printing Process Diagram .

Printing is accomplished as follows.

- Approximately - 1.3 Kvdc is supplied to the charge roller. This causes the drum to charge to approximately - 750 vdc.
- The LED head is turned ON in accordance with signals from the printer control board. This causes a latent electrostatic image to be formed on the surface of the drum.
- Through the development process, a toner image replaces the electrostatic image.
- A + 1 Kvdc charge is applied to the transfer roller. This causes the toner image to be transferred to the receive paper.
- Heat and pressure cause the toner image to become fused to the receive paper. The 150 degree Centigrade fusing temperature is attained by turning a 400 watt halogen lamp ON. The fusing temperature is controlled by a thermistor. In the event of a thermistor failure, a temperature fuse will OPEN, turning off the quartz lamp, and preventing equipment damage.
- The residual toner is removed from the drum.



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## 2.6 SENSORS AND SWITCHES

### 2.6.01 Paper Jam Detection

Paper jam detection monitors the location of paper when the printer is powered ON and during printing. If any of the following jams are present, the printing process is interrupted and the message PAPER JAM will be displayed on the LCD.

To return to the printing process, the paper jam condition **MUST** be cleared. This is accomplished by opening the upper cover, clearing the jam, and closing the cover.

#### **Paper Outlet Jam**

This jam occurs if,

- The paper does **NOT** pass over the outlet sensor within a pre-determined period of time, however, the paper has already passed over the paper sensor.

#### **Paper Size Error**

The time interval between when the paper contacts the paper sensor and the outlet sensor determines which size (length) paper is being used.

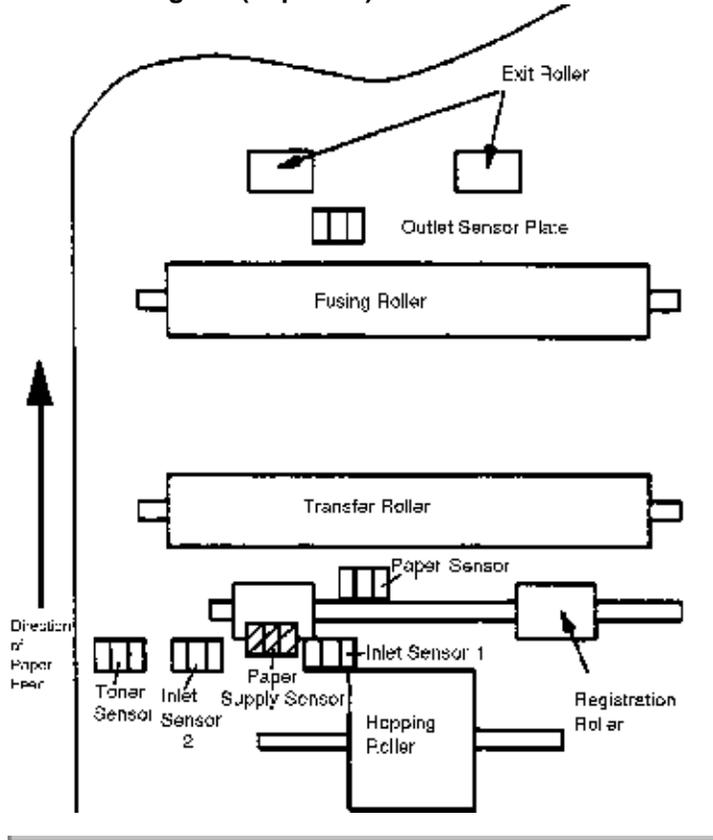
This error occurs if,

- The paper size of the loaded paper differs by + 45 mm or more from the paper size set by the menu.

#### **Cover Open Switch**

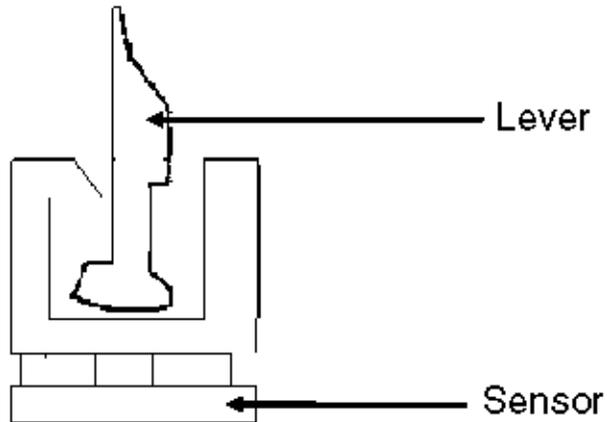
When the stacker cover is opened, the cover open microswitch on the sub-power supply board (PSUB-150) is deactivated. This disables the + 38 vdc and the high voltage power supply circuit. As a result, all high voltage outputs are interrupted. At the same time, the CVOPN signal is sent to the main control board (MCNT-150) to notify it of the OFF state of the microswitch. The MCNT-150 executes the cover open routine. The operation panel displays the message COVER OPEN.

Sensor Location Diagram (Top View)



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**Detail of Sensor / Lever**

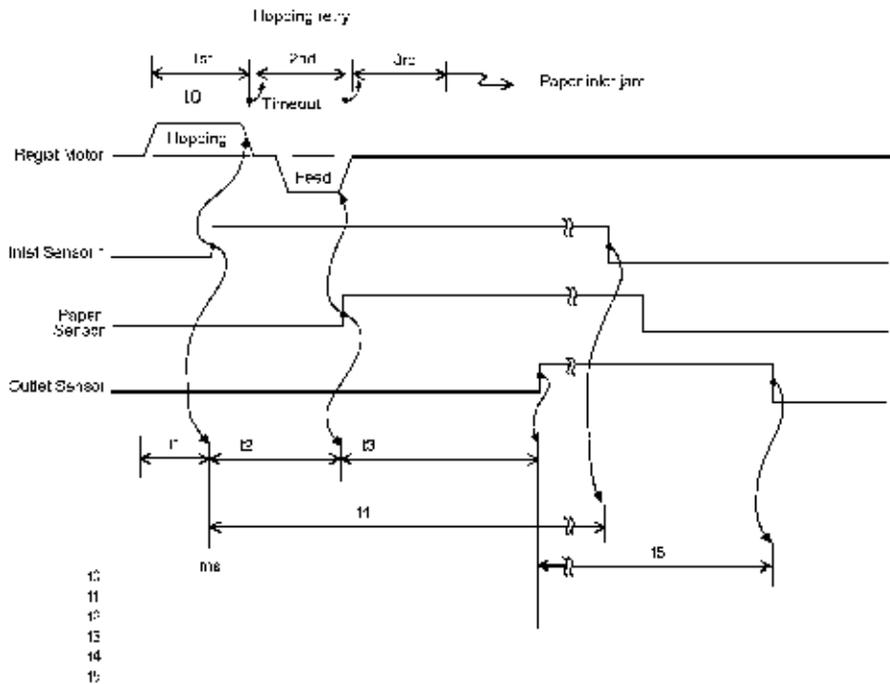
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**Paper Inlet Jam**

This jam occurs when either of the following conditions occur.

- When the printer is powered ON, paper is at inlet sensor 1.
- After the hopping operation is attempted three times, the leading edge of the paper does **NOT** reach inlet sensor 1.





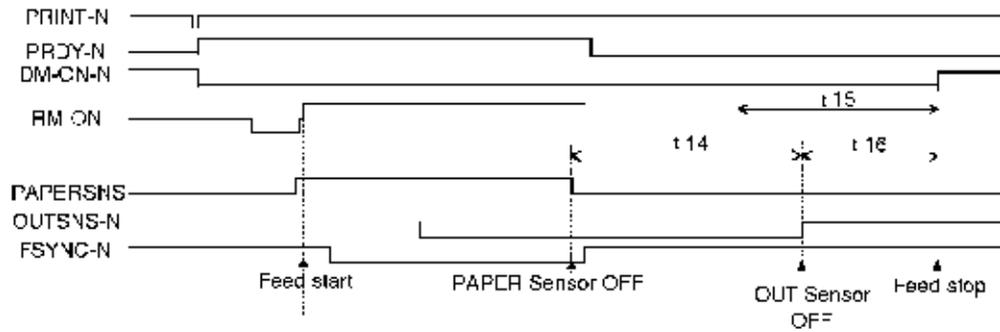
## Service Guide OF1000

### Chapter 2 Principles of Operation

#### Paper Feed Jam

This jam occurs when either of the following conditions occur.

- The paper does not pass over the paper sensor within a pre-determined period of time.
- The leading part of the paper does not reach the outlet sensor within a pre-determined period of time after the paper has passed over the paper sensor.



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### 2.6.02 Toner Low Sensor

The toner well of the image drum cartridge contains a toner agitator. Whenever the image drum rotates, the toner agitator attempts to turn. A spring clip in the bottom of the toner well (along with the proper amount of toner) holds the agitator at the bottom of the well. However, when toner is distributed unevenly or an insufficient amount of toner is in the well, the toner agitator will rotate. Therefore, as long as the toner well contains an adequate supply of evenly distributed toner, the toner agitator will not rotate.

The toner sensor lever has a magnet embedded in it. Whenever the toner agitator is positioned at the bottom of the toner well, the toner sensor lever is magnetically attracted to the toner agitator. This causes the toner sensor lever to be lifted from the path of the toner sensor.

During a low toner condition (less than 20 grams of toner remaining), the toner agitator will rotate **continuously**. This causes the toner sensor to turn ON / OFF as the image drum rotates. The operator panel will then display the TONER LOW message.

During an unevenly distributed toner condition, the toner agitator will rotate **until the toner is distributed sufficiently**. This causes the toner sensor to turn ON / OFF for only a few image drum rotations. The operator panel will not display an error message since this is normal printer operation.

If the toner sensor remains in an ON condition, the operator panel will display the TONER SNS message.

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## 3.1 MAINTENANCE

### 3.1.01 General Information

This section lists the parts replacement, adjustment, cleaning, and lubrication procedures. Disassembly should not be performed unless absolutely necessary. **NEVER** perform disassembly on a malfunctioning unit until you have followed the failure analysis procedures in Section Four of this Service Handbook.

Follow the procedures listed in **Adjustments and Service Settings**. Counters may have to be reset and adjustments may be required when either consumables or parts are replaced. Failure to perform these procedures could result in unnecessary service calls.

The Okifax 1000 is a xerographic device. Cleaning procedures must be performed correctly if high print quality is to be achieved.

### 3.1.02 Maintenance Tools

The following tools are required to service the unit.

- #2 Phillips screwdriver (with magnetic tip)
- Straight-slot screwdriver
- Needle nose pliers (4 inch)
- 5.5 mm wrench
- Digital multimeter
- Shop vacuum with toner filter
- Soft, lint-free cloth
- All-purpose cleaner
- Dow Corning Molycoat BR-2 or Molycoat EM-30L or equivalent

### 3.1.03 Maintenance Precautions

- Do not disassemble the unit if it is operating normally.
- Before starting disassembly and assembly, always power OFF the unit and detach the AC power cord.
- Detach the interface cable, if installed.
- Do not remove parts unnecessarily: try to keep disassembly to a minimum.

- Use the recommended maintenance tools.
- When disassembling, follow the listed sequence.  
Failure to follow the correct sequence may result in damaged parts.
- Since screws, collars and other small parts are easily lost, they should be temporarily attached to the original positions.
- When handling circuit boards use extreme care.  
Integrated circuits (microprocessors, ROM, and RAM) can be destroyed by static electricity.
- Do not place printed circuit boards directly on conductive surfaces.
- Follow the recommended procedures when replacing assemblies and units.

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### 3.2 DISASSEMBLY/ASSEMBLY PROCEDURES

#### **General Information**

This section contains the disassembly procedures. Only the removal procedures are explained here. Reverse the procedure for the installation.

At the bottom of each procedure is a listing of Okidata part numbers, item descriptions, and cross-references to Appendix B. Items included in the Recommended Spare Parts List are designated by the acronym RSPL. N/A will appear where a part number is not available.

This Service Handbook lists the disassembly procedures for major components of the unit. If you decide to perform disassembly during this training, Okidata recommends that you perform **only** the disassembly procedures for RSPL items. All other procedures are provided to assist you in identifying parts. It is not likely that you will perform these procedures while servicing the unit.

Be sure to read all notes, cautions, and warnings, as they contain important information regarding disassembly / assembly.

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### 3.2.01 Preliminary Items

**NOTES:**

[Refer to Section 3.4 of this Service Handbook for cleaning details.](#) 

[Refer to Section 4.8 of this Service Handbook for Toner and Drum Counter Information.](#) 

1. Press the AC switch and power OFF the unit.
2. Detach the AC power cord.
3. Detach the modular telephone cord.
4. Remove the document support tray (1).
5. Remove the handset cord (2) and handset (3).
6. Remove the document stacker tray (4).
7. Remove the paper cassette assembly (5).
8. Raise the document table (6).
9. Press the buttons and raise the copy stacker (7).
10. Remove the image drum with toner cartridge.

P/N 56618901 Cord: AC Power [RSPL B.2.16](#) 

P/N 56621001 Cord: Modular Telephone [RSPL B.2.16](#) 

P/N 50103401 Tray: Document Support [RSPL B.2.01](#) 

P/N 56628101 Cord: Handset [RSPL B.2.01](#) , [B.2.16](#) 

P/N 53549709 Handset [RSPL B.2.01](#) 

P/N 50102001 Tray: Document Stacker [RSPL B.2.01](#) 

P/N 50101901 Cassette: Paper Assembly [RSPL B.2.01](#) 

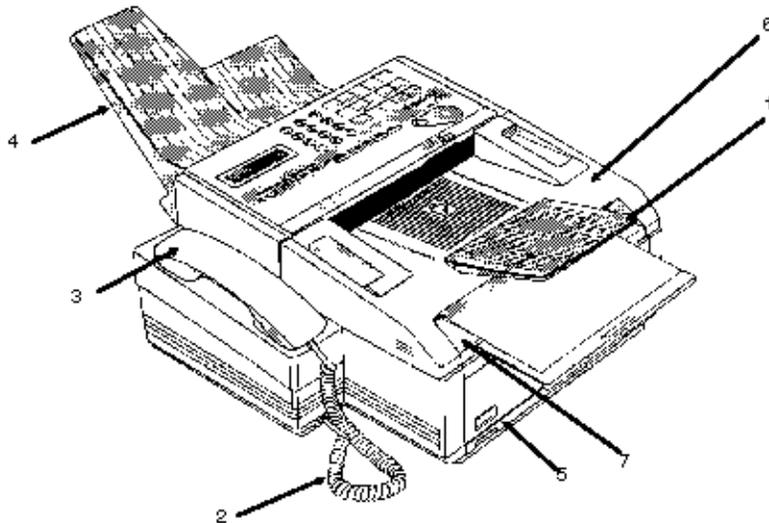
P/N 70026101 Tray: Legal/Universal Paper Option (100 Sheet Capacity) [B.2.18](#) 

P/N 56116901 Kit: Image Drum Consumable [B.2.04](#) , [B.2.20](#) 

P/N 52106701 Kit: Toner Cartridge Consumable [B.2.04](#) , [B.2.20](#) 

P/N 53571901 Cassette Separator Assembly [RSPL B.2.07](#) 

P/N 50925801 Spring: Cassette Separator [RSPL B.2.07](#) 



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### 3.2.02 LED Head

**CAUTION**

**Do NOT touch the LEDs.**

1. Perform this procedure:

[3.2.01](#)  .

2. Raise the document table (1).

3. Press the buttons (2) and raise the copy stacker (3).

4. Detach the cable (4).

5. Press the copy stacker out at positions (A) and release the tabs of the LED head (5).

6. Remove the LED head, being careful not to lose the ground clip (6).

**NOTES:**

The Cable: LED-PCNT runs from the LED Head to connector CN4 of the PCNT board. This is a flat white cable.

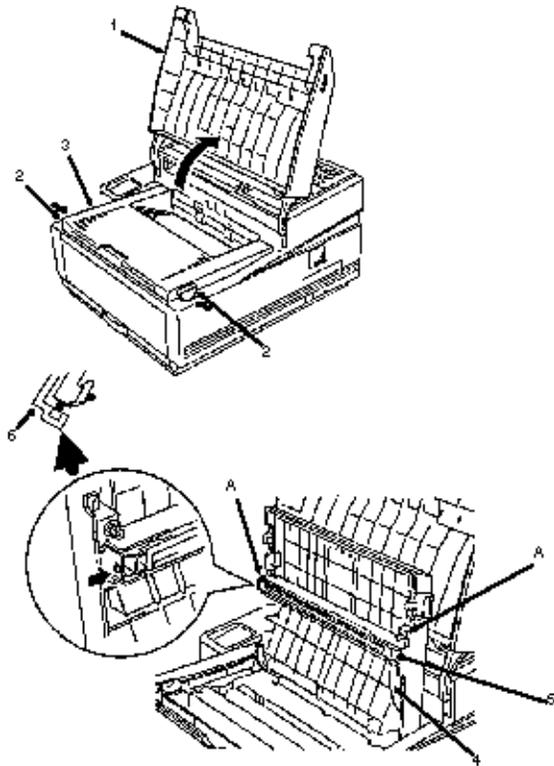
**INSTALLATION**

The blue strip of the cable faces the top of the unit.

When installing a new LED head, set the LED Head Drive Time. [Refer to Section 3.3 of this Service Handbook for details](#)  .

Clean the LED head using the LED lens cleaner provided in the toner cartridge kit or use a lens cleaning tissue and ethyl alcohol. [Refer to Section 3.4 of this Service Handbook for cleaning details](#)  .

P/N 56110801 LED Head [RSPL B.2.04](#) 



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### 3.2.03 Terminal Cover Cap, Rear Cover, and Fan

1. Perform this procedure:

**3.2.01** 

2. Remove the screw (1).

3. Remove the terminal cap cover (2).

**NOTE:**

**You do not have to remove the terminal cover cap to remove the rear cover and fan.**

4. Remove the two screws (3).

5. Detach the rear cover (4) and tilt it out to access the fan cable (5).

6. Detach the fan cable from connector CN11 (6) from the board (PCNT) (7).

7. Release the latches (8) and remove the fan (9).

8. Remove the rear cover.

**NOTES:**

The fan connector cable goes to CN11 of the PCNT board. This is a 3 pin connector.

When installing the rear cover, be careful not to damage the ring volume switch cover.

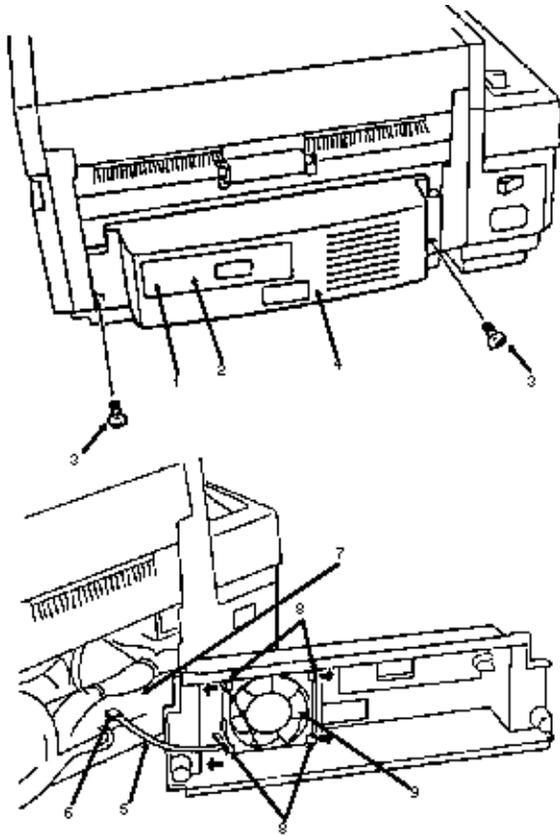
When installing the fan, be careful not to leave the cable in front of the fan. Be sure to place the cable on the side of the fan. If you do not, it may cause excessive vibration noise or prevent the fan from operating. If fan motion is stopped completely, a PRINT ALARM 3 will be displayed on the operator panel.

P/N N/A Screw **B.2.01** 

P/N 53070206 Cover: Terminal Cap **RSPL B.2.01** 

P/N 53070002 Cover: Rear **RSPL B.2.01** 

P/N 56510902 Fan **RSPL B.2.01**  , **B.2.16** 



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#### 3.2.04 Line Board (LINE-JU)

1. Perform these procedures:

[3.2.01](#)

[3.2.03](#)

2. Detach the cable to connector CN2 of the line board (LINE-JU) (1).
3. Detach the cable to connector CN5 of the board.
4. Remove the two screws (2).
5. Remove the board.

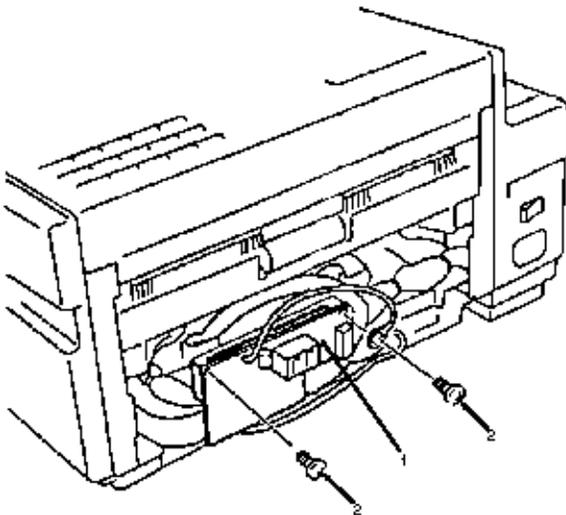
| ID | Connector | Board   |    | Connector | Board | Cable P/N | Pin | Description |
|----|-----------|---------|----|-----------|-------|-----------|-----|-------------|
|    | CN2       | LINE-JU | to | CN1       | NCU   | 56628510  | 8   |             |
|    | CN5       | LINE-JU | to | CN6       | NCU   | 56628901  | 2   |             |

P/N 55073401 PCB: Line-JU [RSPL B.2.07](#)

P/N 53070901 Cover: Ring Volume Switch [RSPL B.2.07](#)

P/N 56628510 Cable: NCU-Line (8 pin) [B.2.16](#)

P/N 56628901 Cable: NCU-Line (2 Pin) [B.2.16](#)



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### 3.2.05 Package Shelf Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.03](#) 

[3.2.04](#) 

2. Remove the four screws (1).
3. Pull the package shelf (2) out slightly.
4. Remove the three screws (3) holding the tie wraps down.
5. Detach the cables from the thirteen connectors (Not identified).
6. Remove the package shelf assembly, with boards.

P/N N/A Package Shelf Assembly [B.2.07](#)  , [B.2.08](#) 

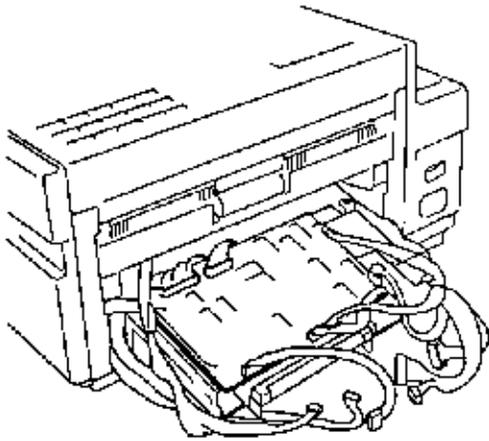
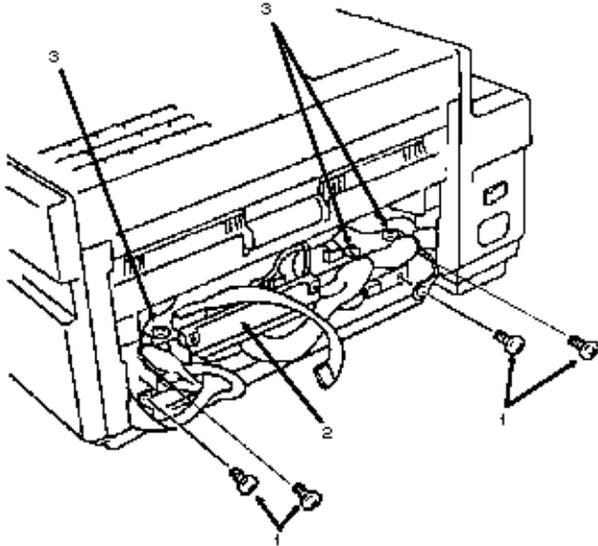
P/N N/A Bracket: Line [B.2.07](#)  , [B.2.08](#) 

P/N N/A Guide: Package [B.2.07](#)  , [B.2.08](#) 

P/N N/A Insulator (2) [B.2.07](#)  , [B.2.08](#) 

P/N N/A Plate: Shield (L) [B.2.07](#)  , [B.2.08](#) 

P/N N/A Screw [B.2.07](#)  , [B.2.08](#) 



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### 3.2.06 Network Control Unit (NCU-U)

1. Perform these procedures:

[3.2.01](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

2. Disconnect the cables from the connectors (see below).

| ID | Connector | Board |          | Connector | Board   | Cable P/N | Pin | Description    |  |
|----|-----------|-------|----------|-----------|---------|-----------|-----|----------------|--|
|    | CN1       | NCU   | to       | CN2       | LINE    | 56628510  | 8   | 7 blue, 1 red  |  |
|    | CN5       | NCU   | to       | CN1       | HOOK    | 56629209  | 4   |                |  |
|    | CN6       | NCU   | to       | CN5       | LINE    | 56628901  | 2   | 1 blue, 1 red  |  |
|    | CN7       | NCU   | to       | CN1       | MCNT    | 56628501  | 15  | 14 gray, 1 red |  |
|    | CN8       | NCU   | Not used |           |         |           |     |                |  |
|    | CN10      | NCU   | to       |           | Handset | 56628604  | 4   |                |  |

3. Remove the three screws (1).

4. Remove the network control unit (NCU) (2).

P/N 55073501 PCB: NCU-U [RSPL B.2.07](#) 

P/N 56628510 Cable: NCU-Line [B.2.16](#) 

P/N 56629209 Cable: NCU-Hook [B.2.16](#) 

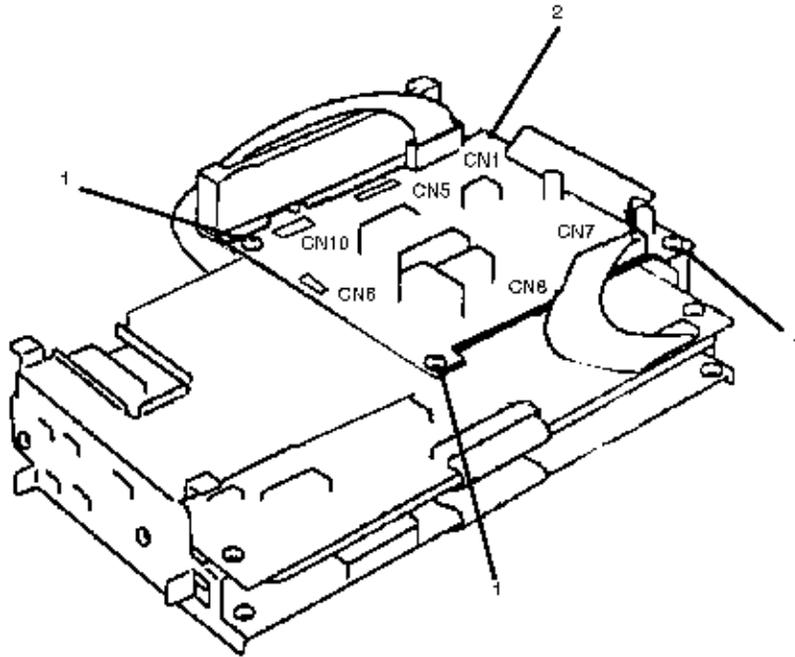
P/N 56628901 Cable: NCU-Line (2 Pin) [B.2.16](#) 

P/N 56628501 Cable: MCNT-NCU (15 Pin) [B.2.16](#) 

P/N 56628604 Cable: NCU-Hand Set [B.2.07](#) , [B.2.16](#) 

P/N N/A Screw [B.2.07](#) 

P/N 56628801 Cable: MCNT-PCNT [B.2.16](#) 



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#### 3.2.07 Main Control Board (MCNT-150)

1. Perform these procedures:

[3.2.01](#)

[3.2.03](#)

[3.2.04](#)

[3.2.05](#)

2. Detach the cables from connectors (see below).

| ID | Connector | Board |    | Connector | Board | Cable P/N | Pin | Description      |
|----|-----------|-------|----|-----------|-------|-----------|-----|------------------|
|    | CN1       | MCNT  | to | CN7       | NCU   | 56628501  | 15  | 14 gray, 1 red   |
|    | CN2       | MCNT  |    |           |       | Not used  |     |                  |
|    | CN3       | MCNT  | to | CN1       | PCNT  | 56628801  |     | White Flat Cable |
|    | CN4       | MCNT  | to |           |       | Not used  |     |                  |
|    | CN5       | MCNT  | to | Speaker   |       | 57001302  | 2   |                  |
|    | CN6       | MCNT  | to |           |       | Not used  |     |                  |
|    | CN7       | MCNT  | to | CN        | PWU   | 56628508  | 12  |                  |
|    | CN8       | MCNT  | to | CN        | Hook  | 56628505  | 2   |                  |
|    | CN9       | MCNT  | to | CN        | OPE   | 56628701  | 9   |                  |

3. Remove the two screws (1).

4. Remove the main control board (2).

P/N 56628501 Cable: MCNT-NCU (15 Pin) [B.2.16](#)

P/N 56628801 Cable: MCNT-PCNT [B.2.16](#)

P/N 57001302 Speaker [B.2.02](#) , [B.2.16](#)

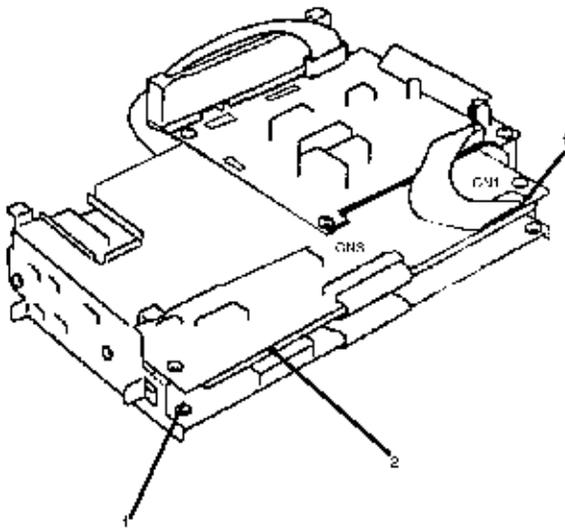
P/N 56628508 Cable: MCNT-PWU (12 Pin) [B.2.16](#)

P/N 56628505 Cable: MCNT-Hook (2 Pin) [B.2.16](#)

P/N 56628701 Cable: OPE-MCNT [B.2.16](#)

P/N N/A Screw [RSPL B.2.07](#)

P/N 55073701 PCB: MCNT-150 [RSPL B.2.07](#)



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### 3.2.08 Printer Control Board (PCNT-150)

1. Perform these procedures:

[3.2.01](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

2. Detach the cables from the connectors (see below).

| ID | Connector | Board |    | Connector | Board              | Cable P/N | Pin | Description |
|----|-----------|-------|----|-----------|--------------------|-----------|-----|-------------|
|    | CN1       | PCNT  | to | CN3       | MCNT               | 56628801  |     | fat cable   |
|    | CN2       | PCNT  | to | CN3       | PSUB               | N/A       | 10  |             |
|    | CN3       | PCNT  | to |           | Image Sensor       | 56628302  | 10  |             |
|    | CN4       | PCNT  | to |           | LED Head           | 56629101  |     | fat cable   |
|    | CN5       | PCNT  | to |           | PC1, PC2           | 56628603  | 6   |             |
|    | CN5       | PCNT  | to | CN3       | PWU                | 56628605  | 14  |             |
|    | CN7       | PCNT  | to | CN2       | 2nd Tray           | 56628507  | 9   |             |
|    | CN8       | PCNT  | to |           | Registration Motor | 56510702  | 4   |             |
|    | CN9       | PCNT  | to |           | Main Motor         | 56510703  | 5   |             |
|    | CN10      | PCNT  | to |           | S. Motor           | 57001302  | 6   |             |
|    | CN11      | PCNT  | to |           | Fan                | 56510901  | 11  |             |

3. Remove the two screws (1).

4. Remove the printer control board (2).

P/N N/A Screw [B.2.07](#) 

P/N 55073601 PCB: PCNT-150 [B.2.07](#) 

P/N 56628801 Cable: MCNT-PCNT [B.2.16](#) 

P/N N/A Cable: PCNT-PSUB [B.2.17](#) 

P/N 56628302 Cable: PCNT-Image Sensor [B.2.17](#) 

P/N 56629101 Cable: LED-PCNT [B.2.17](#) 

P/N 56628603 Cable: PC1+PC2-PCNT [B.2.17](#) 

P/N 56628605 Cable: PCNT-PWU [B.2.17](#) 

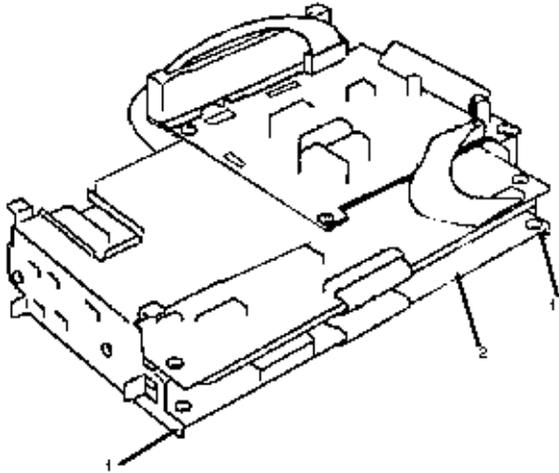
P/N 56628507 Cable: PCNT-2nd Tray PCB [B.2.17](#) 

P/N 56510702 Motor: Registration Stepper [B.2.05](#)  , [B.2.17](#) 

P/N 56510703 Motor: Main Stepper [B.2.05](#) , [B.2.17](#) 

P/N 57001301 Cable: PCNT-S Motor [B.2.17](#) 

P/N 56510902 Fan [B.2.16](#) 



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### 3.2.09 Left Side Cover

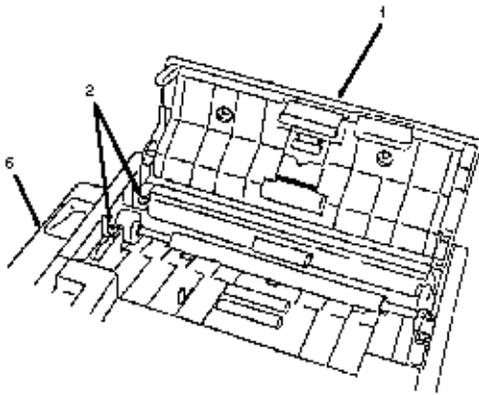
1. Perform this procedure:

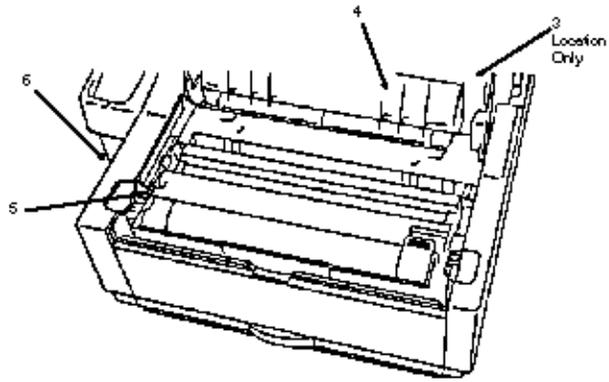
#### 3.2.01

2. Open the control panel unit (1).
3. Remove the two screws (2).
4. Open the document guide assembly (3).
5. Open the copy stacker (4).
6. Remove the screw (5).
7. Remove the left side cover (6).

P/N 50317201 Cover: Cradle **RSPL B.2.01** 

P/N 53069901 Cover: Side (Left) **RSPL B.2.01** 





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### 3.2.10 Hook Switch Board (Hook-SW)

1. Perform these procedures:

[3.2.01](#)

[3.2.09](#)

2. Remove the two screws (1).

3. Detach the two cables (2).

4. Remove the hook switch board (3).

| ID | Connector | Board |    | Connector | Board | Cable P/N | Pin | Description |
|----|-----------|-------|----|-----------|-------|-----------|-----|-------------|
|    | CN1       | Hook  | to | CN5       | NCU   | 56629209  | 4   |             |
|    | CN3       | Hook  | to | CN6       | MCNT  | 56628505  | 2   |             |

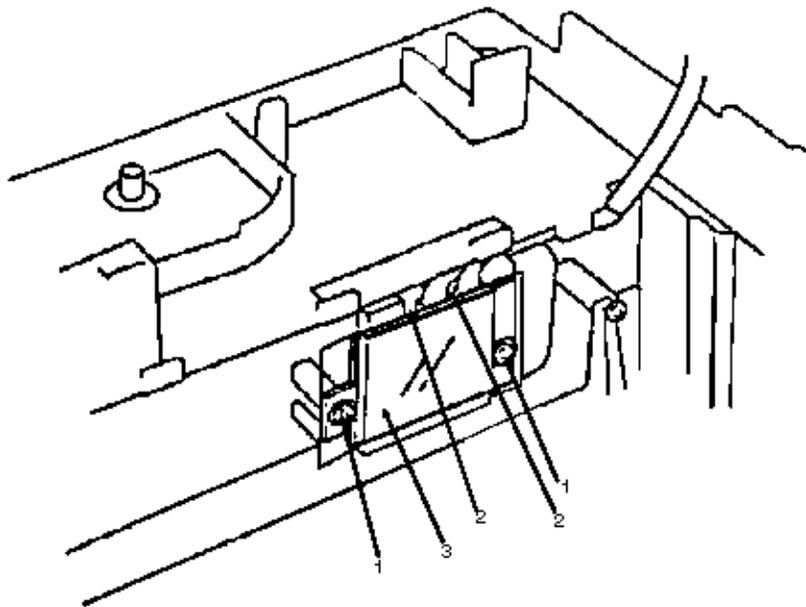
P/N N/A Screw [RSPL B.2.01](#)

P/N 56629209 Cable: NCU-Hook [B.2.16](#)

P/N 56628505 Cable: MCNT-Hook (2 Pin) [B.2.16](#)

P/N 55074002 PCB: Hook Switch RSPL [RSPL B.2.01](#)

P/N 51709801 Insulator: Hook Switch [RSPL B.2.01](#)



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### 3.2.11 Power Supply Unit (PWU)

1. Perform these procedures:

[3.2.01](#)

[3.2.09](#)

2. Remove the two screws (1).
3. Disconnect the four connectors (see below).
4. Remove the power supply unit (2).

| ID | Connector | Board |    | Connector | Board | Cable P/N | Pin | Description |
|----|-----------|-------|----|-----------|-------|-----------|-----|-------------|
|    | CN1       | PWU   | to | N/A       | PSUB  |           |     | hardwired   |
|    | CN2       | PWU   | to | CN2       | PSUB  | 56628512  |     |             |
|    | CN3       | PWU   | to | CN5       | PCNT  | 56628508  | 14  |             |
|    | CN4       | PWU   | to | CN7       | MCNT  | 56628605  | 12  |             |

P/N N/A Screw [B.2.07](#)

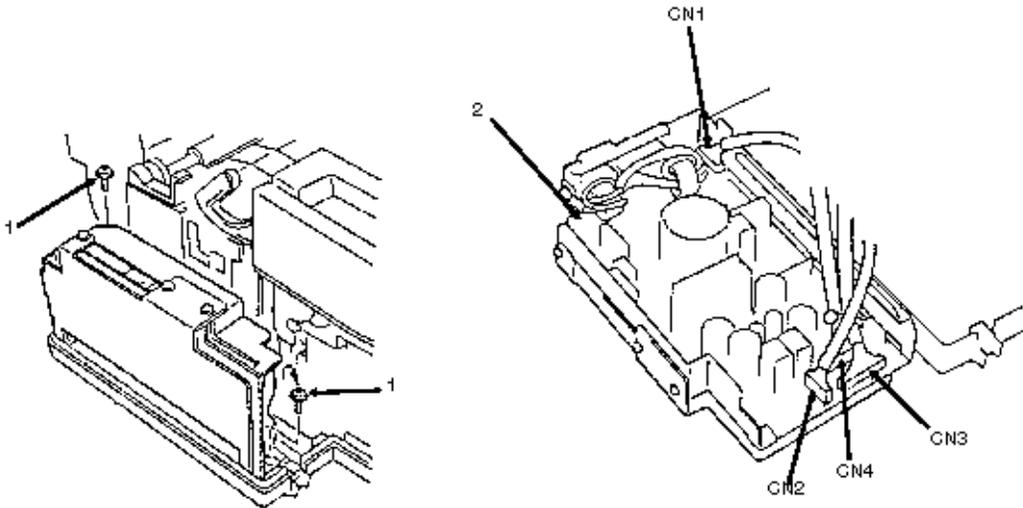
P/N 56628512 Cable: PSUB-PWU (7 Pin) [B.2.16](#)

P/N N/A Cable: PSUB-PWU [B.2.17](#)

P/N 56628605 Cable: PCNT-PWU [B.2.17](#)

P/N 56628508 Cable: MCNT-PWU (12 Pin) [B.2.16](#)

P/N 56413101 Power Supply (120V) RSPL [B.2.07](#)



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### 3.2.12 Gear Frame Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.11](#) 

2. Disconnect the cable from the transmit stepper motor. (Not shown)

3. Remove the five screws (1).

4. Remove the gear frame assembly (2).

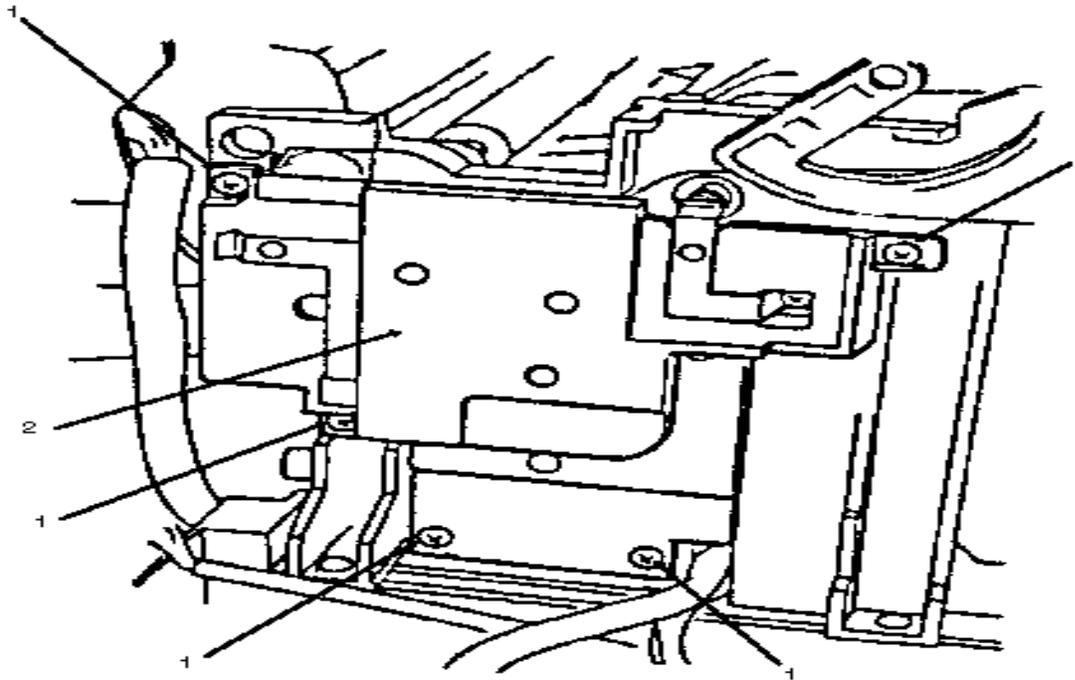
**NOTE:**

The gear frame assembly includes the gear frame, the Z43 gear, the Z31/19 gear, the Z81/15 gear, the heat sink, the ADF earth plate, the F2 earth plate, the screws, and the spring washer. To replace any of these parts, order the assembly.

**Lubrication**

Lightly lubricate the gears in the gear frame assembly. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N 53343401 Frame: Gear Assembly [RSPL B.2.09](#) 



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### 3.2.13 Transmit Stepper Motor

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.12](#) 

2. Remove the two screws (1).
3. Disconnect the connector (2).
4. Remove the transmit stepper motor (3).

**NOTE:**

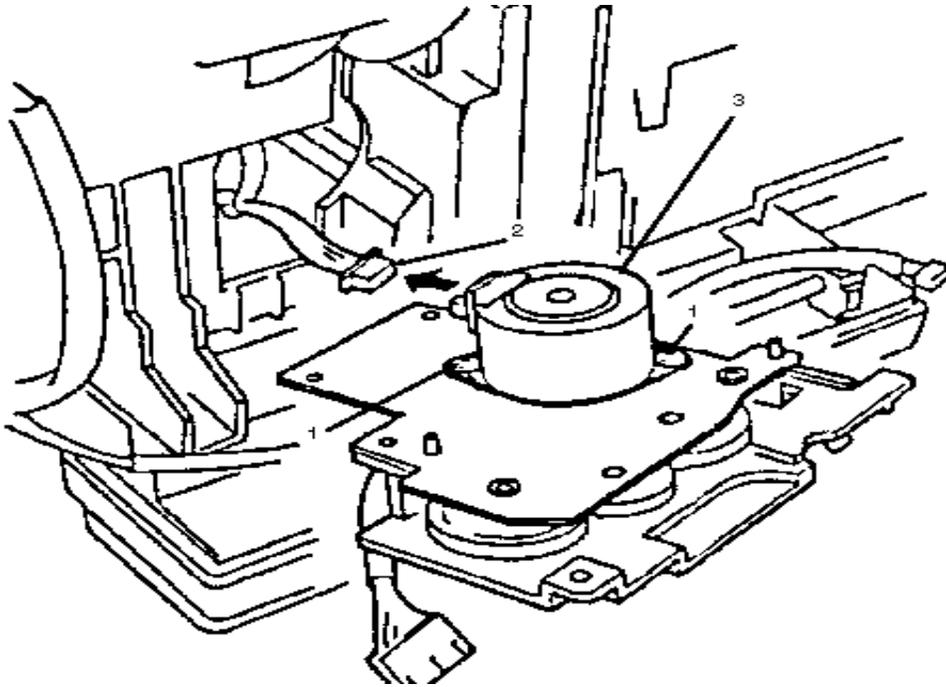
The PCNT-S Motor Cable connects the transmit stepper motor to connector CN 10 of the PCNT board.

**Lubrication**

Lightly lubricate the gearing of the transmit stepper motor. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N 56511101 Motor: Transmit Stepper [RSPL B.2.09](#) 

P/N 57001301 Cable: PCNT-S Motor [B.2.17](#) 



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### 3.2.14 Gear Frame and Gears

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.12](#) 

[3.2.13](#) 

2. Remove the four screws (1).

3. Remove the heat sink (2).

4. Remove the four gears.

Gear Z81 / 15 (3)

Gear Z31 / 19 (4)

Gear Z43 (5)

**NOTE:**

Lubrication

Lightly lubricate the gears. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N N/A Screw [RSPL B.2.09](#) 

P/N N/A Heat Sink [RSPL B.2.09](#) 

P/N N/A Gear: Z81/15 [RSPL B.2.09](#) 

P/N N/A Gear: Z31/19 [RSPL B.2.09](#) 

P/N N/A Gear: Z43 [RSPL B.2.09](#) 

P/N N/A Frame: Gear [RSPL B.2.09](#) 

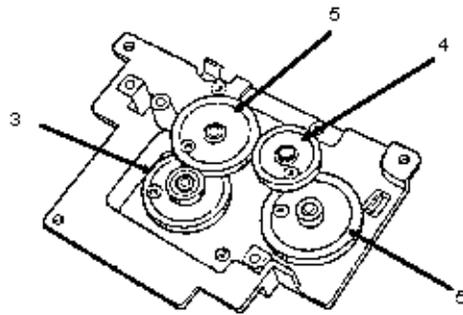
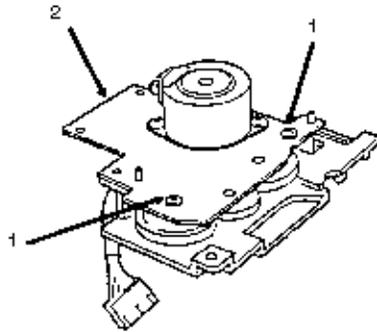
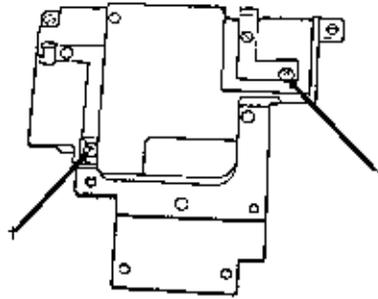
P/N N/A Plate: Earth (ADF) [RSPL B.2.09](#) 

P/N N/A Plate: Earth (F2) [RSPL B.2.09](#) 

P/N N/A Spring Washer [RSPL B.2.09](#) 

P/N N/A Screw [RSPL B.2.09](#) 

P/N N/A Screw [RSPL B.2.09](#) 



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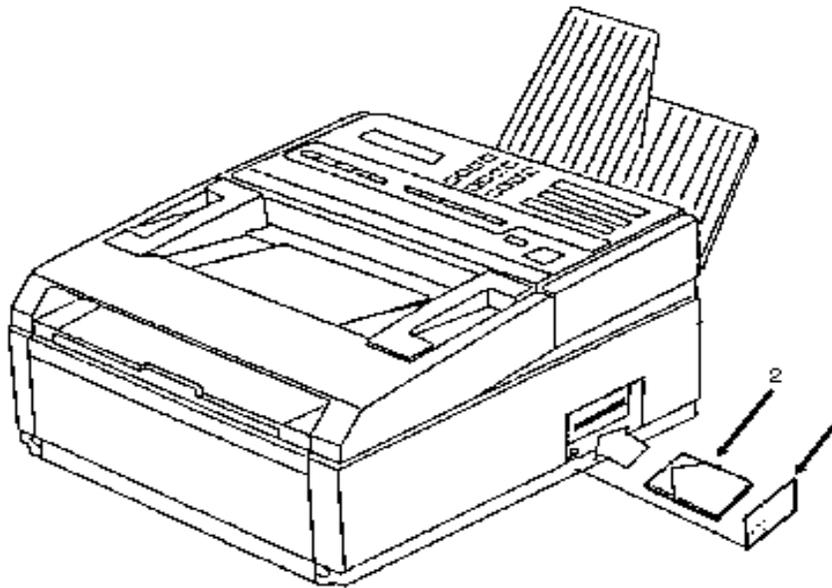
---

### 3.2.15 Memory Card (Option)

1. Power OFF the unit and detach the AC power cord.
2. Remove the memory card cover (1).
3. Remove the memory card (2).

P/N 53070101 Cover: IC Card Cap [RSPL B.2.01](#) 

P/N 70025301 1 MB Memory Expansion Kit Option [B.2.18](#) 



### 3.2.16 Right Side Cover

**CAUTION**

Do NOT attempt to remove the right side cover until the memory card has been removed.  
To completely remove the right side cover, you must also remove the speaker.

1. Perform these procedures:

[3.2.01](#) 

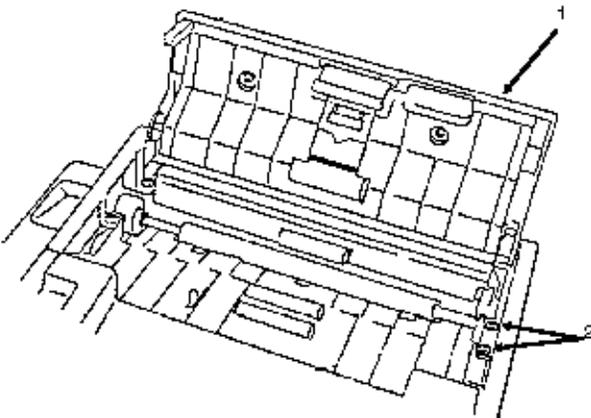
[3.2.15](#) 

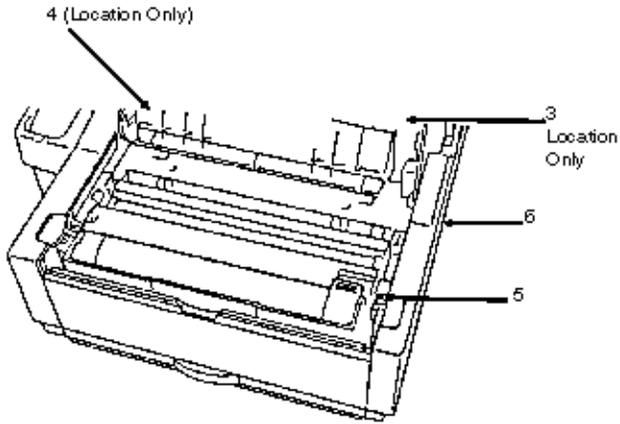
2. Raise the control panel unit (1).
3. Remove the two screws (2).
4. Raise the document guide table (3) and copy stacker (4).
5. Remove the screw (5).
6. Remove the right side cover (6).

P/N N/A Screw [RSPL B.2.01](#) 

P/N 53069801 Cover: Side (Right) [RSPL B.2.01](#) 

P/N 56628507 Cable: PCNT-2nd Tray PCB [B.2.17](#) 





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### 3.2.17 Document Guide Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.15](#) 

[3.2.16](#) 

2. Close the copy stacker (1).

3. Remove the document guide assembly (2).

**NOTE:**

The document guide assembly includes the left and right document guides, the document hopper, and the document guide cover. To replace any of these parts, order the assembly.

**Lubrication**

Lightly lubricate the damper gear. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N 51012201 Guide: Document Assembly [RSPL B.2.02](#) 

P/N N/A Cover: Document Guide [RSPL B.2.02](#) 

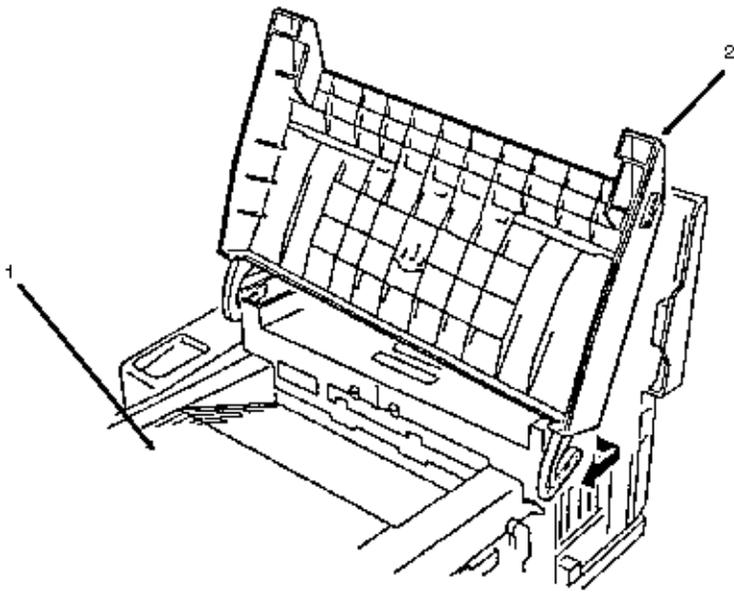
P/N N/A Guide: Document (R) [RSPL B.2.02](#) 

P/N N/A Guide: Document (L) [RSPL B.2.02](#) 

P/N N/A Hopper: Document [RSPL B.2.02](#) 

P/N N/A Screw [RSPL B.2.02](#) 

P/N N/A Gear: Damper [RSPL B.2.02](#) 



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### 3.2.18 Speaker

1. Perform these procedures:

[3.2.01](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.15](#) 

[3.2.16](#) 

2. Remove the screw (1).

3. Remove the speaker bracket (2) and speaker (3).

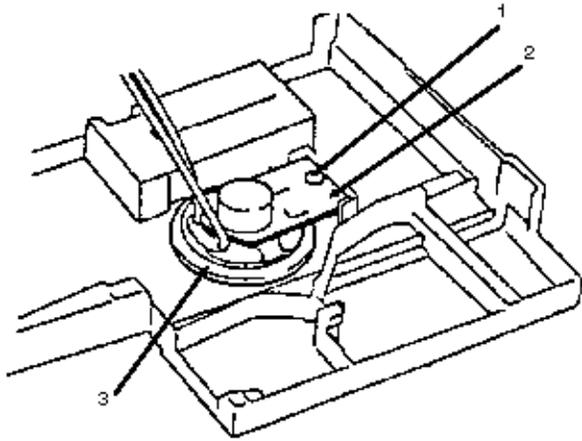
**NOTE:**

The speaker harness goes to connector CN5 of the MCNT board.

P/N N/A Screw [B.2.02](#) 

P/N N/A Bracket: Speaker [B.2.02](#) 

P/N 57001302 Speaker [B.2.02](#)  , [B.2.17](#) 



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### 3.2.19 Separation Rubber Assembly

1. Power OFF the unit and detach the AC power cord.
2. Open the control panel unit (1).
3. Remove the separation rubber assembly (2) by lifting the assembly from its mounting hooks.

**NOTE:**

The separation rubber assembly includes the separation rubber, the separation mylar, and the 10 x 40 mm tape. To replace any of these parts, order the assembly.

**Cleaning**

Clean the assembly as necessary. Use a soft cloth and water to clean. [Refer to Section 3.4 of this Service Handbook for cleaning details](#) .

**Replacement**

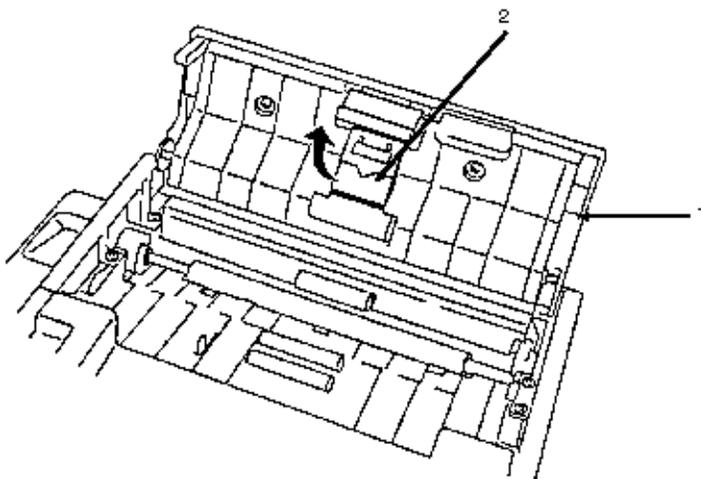
Replace the assembly when it becomes worn.

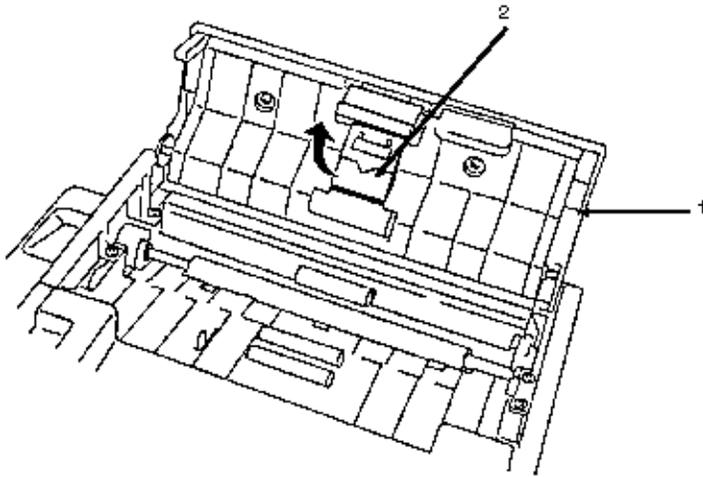
P/N 53344901 Assembly: Separation Rubber [RSPL B.2.14](#) 

P/N N/A Rubber: Separation [RSPL B.2.14](#) 

P/N N/A Mylar: Separation [RSPL B.2.14](#) 

P/N N/A Tape (10 x 40 mm) [RSPL B.2.14](#) 





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### 3.2.20 Control Panel Assembly

1. Power OFF the unit and detach the AC power cord.
2. Open the control panel assembly (1).
3. Remove the two screws (2).
4. Disconnect the connector (3).
5. Remove the screw (4).
6. Remove the control panel assembly.

**NOTE:**

The one touch cover and one touch sheet can be removed without removing the control panel assembly.

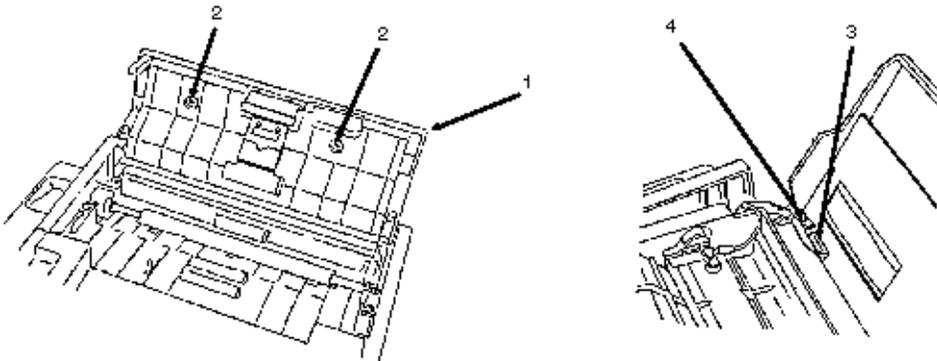
The Cable: OPE-MCNT connects the board (OPE-150) to CN9 of the board (MCNT).

P/N 52067801 Cover: One-Touch Label Covers [RSPL B.2.03](#) 

P/N 58233501 Labels: One-Touch Dial [RSPL B.2.03](#) 

P/N 50102101 Panel: Control Panel Assembly [RSPL B.2.03](#) 

P/N 56628701 Cable: OPE-MCNT [B.2.16](#) 



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### 3.2.21 Upper Paper Guide Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.15](#) 

[3.2.20](#) 

2. Remove the screw (1) and detach the ground wire.
3. Open the upper paper guide assembly (2) to its full upright position.
4. Slide the assembly in the direction of arrow A and remove it.

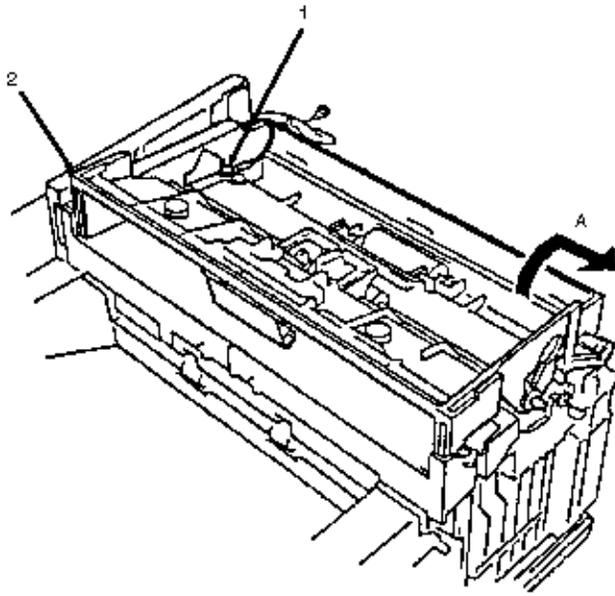
P/N 51012301 Guide: Upper Paper Assembly [RSPL B.2.14](#) 

P/N 51013301 Brush: ADF Ground [RSPL B.2.14](#) 

P/N N/A Brush: ADF Anti-Static [RSPL B.2.14](#) 

P/N N/A Guide: Paper (Upper) [RSPL B.2.14](#) 

P/N N/A Sheet: ADF Ground [RSPL B.2.14](#) 



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### 3.2.22 Upper Feed Roller Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.15](#) 

[3.2.20](#) 

[3.2.21](#) 

2. Remove the three screws (1).

3. Remove the left (2) and right (3) ADF ground plates.

4. Rotate the bearings (4) as shown in Figure A.

5. Lift the feed roller assembly (5) straight up, and then slide it in the direction of Arrow B to remove.

#### **NOTE:**

The upper feed roller assembly consists of the feed roller one, the Z28 gear, the ADF bearings, and the compression washers. To replace of these parts, order the assembly.

#### **Cleaning**

Clean the upper feed roller assembly as necessary. [Refer to Section 3.4 of this Service Handbook for cleaning details](#) .

#### **Lubrication**

Lightly lubricate the Z28 gear. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N N/A Screw [RSPL B.2.14](#) 

P/N 53344601 Plate: ADF Ground (Left) [RSPL B.2.14](#) 

P/N 53344602 Plate: ADF Ground (Right) [RSPL B.2.14](#) 

P/N 50406301 Roller: Upper Feed Assembly [RSPL B.2.14](#) 

P/N N/A Roller: Feed (1) [RSPL B.2.14](#) 

P/N N/A Gear: Z28 [RSPL B.2.14](#) 

P/N N/A Bearing: ADF [RSPL B.2.14](#) 

P/N 50516401 Washer: Compression [RSPL B.2.14](#) 

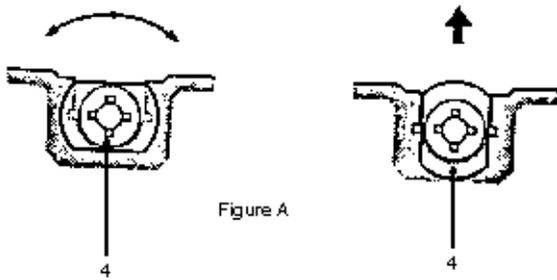
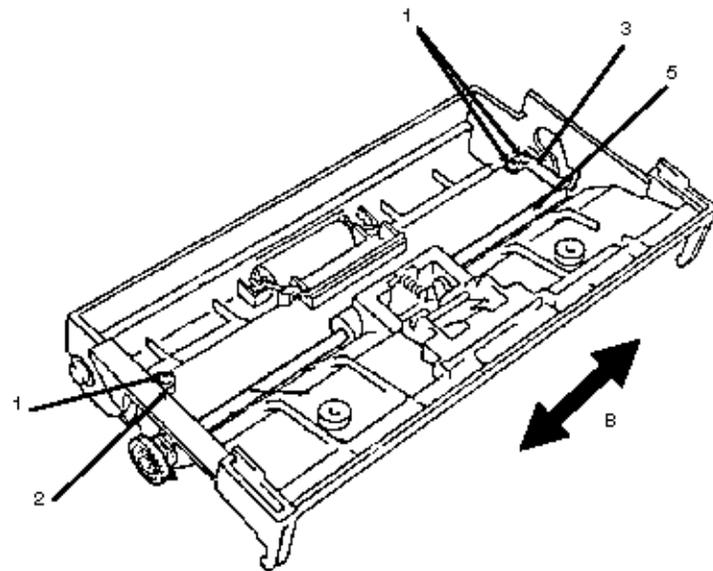


Figure A

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### 3.2.23 Pinch Roller

1. Perform these procedures:

[3.2.01](#) 

[3.2.15](#) 

[3.2.20](#) 

[3.2.21](#) 

2. Using a needle nose pliers, remove the spring (1).
3. Remove the pinch roller (2).
4. Remove the ADF tension arm (Not shown).
5. Remove the ADF back-up plate (Not shown).
6. Remove the pinch roller spring (upper) (Not shown).

**NOTE:**

**Cleaning**

**Clean the pinch roller as necessary. Refer to Section 3.4 of this Service Handbook for cleaning details** .

P/N 50925501 Spring: ADF [RSPL B.2.15](#) 

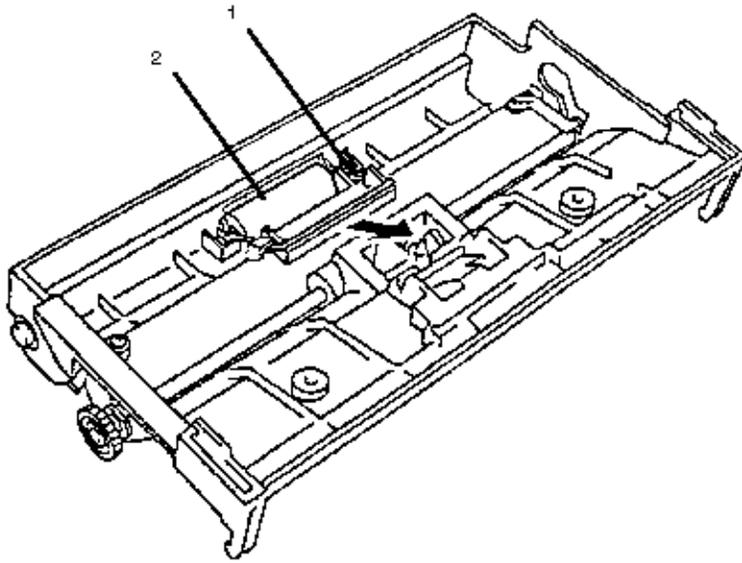
P/N 53061201 Arm: ADF Tension [RSPL B.2.15](#) 

P/N 53339801 Plate: ADF Back-Up [RSPL B.2.15](#) 

P/N 50406201 Roller: Pinch [RSPL B.2.15](#) 

P/N 51112501 Roller: Pinch Shaft [RSPL B.2.15](#) 

P/N 50925701 Spring: Pinch Roller (Upper) [RSPL B.2.15](#) 



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### 3.2.24 Sub Pinch Roller Guide Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.15](#) 

[3.2.20](#) 

[3.2.21](#) 

2. Lift the locking edge of the sub pinch roller guide from the locking tab and slide it forward.

3. Remove the sub pinch roller guide assembly.

**NOTE:**

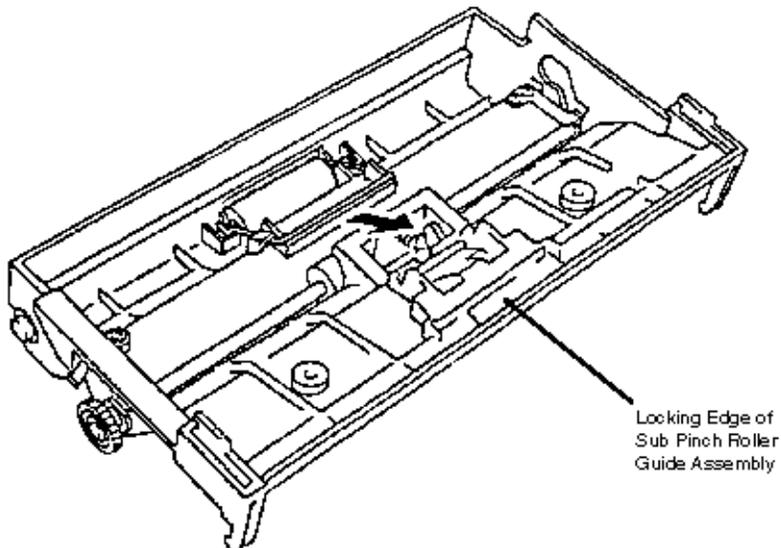
**The sub-pinch roller guide assembly includes the sub pinch roller guide, the rivet, and the sub pinch roller. To replace any of these parts, order the assembly.**

P/N N/A Guide: Sub Pinch Roller Assembly [RSPL B.2.15](#) 

P/N N/A Roller: Sub Pinch [RSPL B.2.15](#) 

P/N N/A Guide: Sub Pinch Roller [RSPL B.2.15](#) 

P/N N/A Rivet [RSPL B.2.15](#) 



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### 3.2.25 Paper Table Guide

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.15](#) 

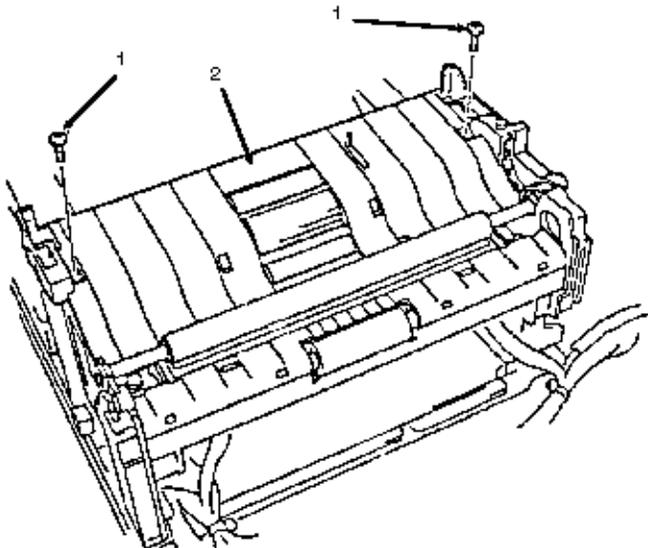
[3.2.16](#) 

2. Remove the two screws (1).

3. Remove the paper table guide (2).

P/N N/A Screw [RSPL B.2.09](#) 

P/N 51012501 Guide: Paper Table [RSPL B.2.09](#) 



### 3.2.26 Sensor Roller Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.25](#) 

2. Remove the sensor roller assembly (1).

#### **NOTE:**

The sensor roller assembly consists of the sensor roller, the Z22 gear, and the bearing. To replace any of these parts, order the assembly.

#### **Cleaning**

Clean the sensor roller assembly as necessary. [Refer to Section 3.4 of this Service Handbook for cleaning details](#) .

#### **Lubrication**

Lightly lubricate the Z22 gear.

[Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

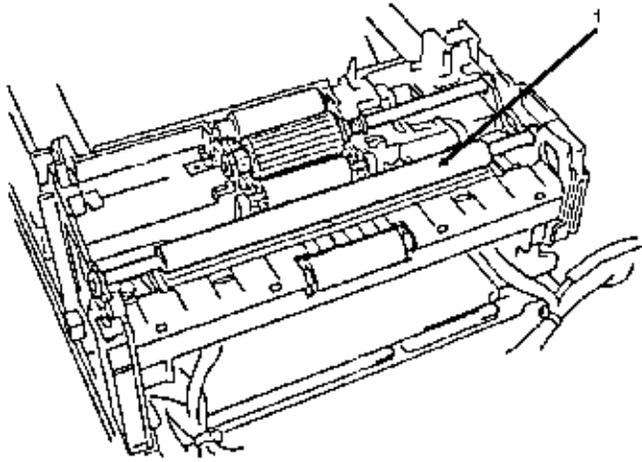
P/N 50405701 Roller: Sensor Assembly [RSPL B.2.11](#) 

P/N N/A Roller: Sensor [RSPL B.2.11](#) 

P/N N/A Bearing [RSPL B.2.11](#) 

P/N N/A Gear: Z22 [RSPL B.2.11](#) 

P/N 50516401 Washer: Compression [RSPL B.2.11](#) 



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### 3.2.27 Sub Roller Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.25](#) 

2. Remove the sub-roller assembly (1).

**NOTE:**

**The sub roller assembly consists of the sub roller and the sub roller shaft. To replace either of the parts, order the assembly.**

**Cleaning**

Clean the sub roller assembly as necessary. [Refer to Section 3.4 of this Service Handbook for cleaning details](#) .

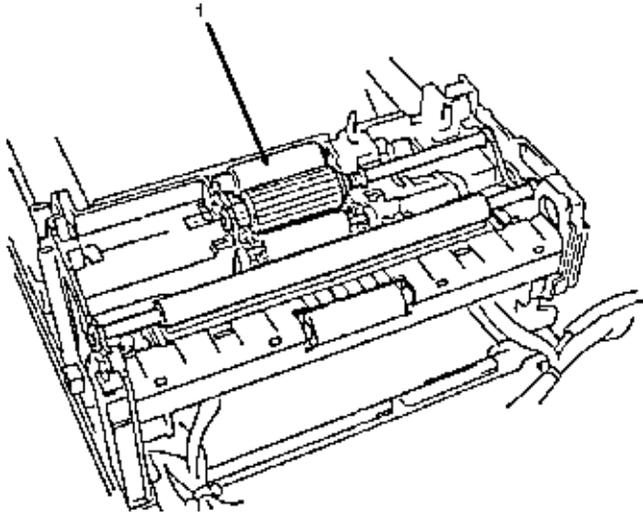
**Lubrication**

Lightly lubricate the gearing on the sub roller shaft. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N 50406101 Roller: Sub Assembly [RSPL B.2.11](#) 

P/N N/A Sub Roller [RSPL B.2.11](#) 

P/N N/A Shaft: Sub Roller [RSPL B.2.11](#) 



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#### 3.2.28 ADF Roller Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.25](#) 

2. Remove the ADF roller assembly (1).

#### NOTE:

The ADF roller assembly consists of the ADF feed roller, the ADF shaft, the ADF (B) collar, the Z49 gear, the ADF roller spring, the ADF bearing, the E-ring, and the compression washer. To replace any of these parts, order the assembly.

#### Cleaning

Clean the ADF roller as necessary. [Refer to Section 3.4 of this Service Handbook for cleaning details](#) .

#### Lubrication

Lightly lubricate the Z49 gear. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N 50405801 Roller: ADF Assembly [RSPL B.2.11](#) 

P/N N/A Bearing: ADF [RSPL B.2.11](#) 

P/N N/A Collar: ADF (B) [RSPL B.2.11](#) 

P/N N/A E-Ring [RSPL B.2.11](#) 

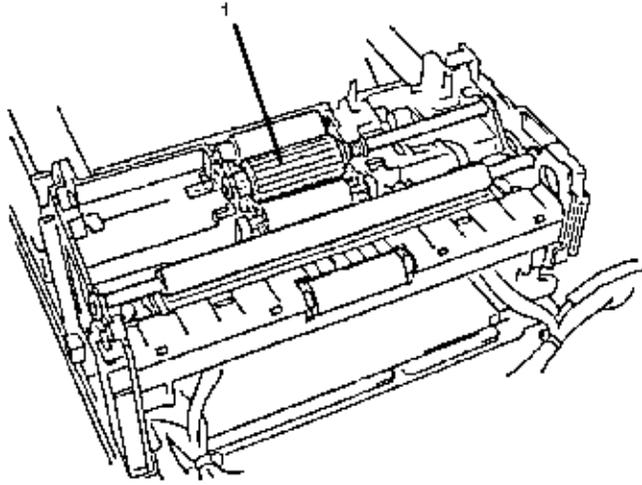
P/N N/A Gear: Z49 [RSPL B.2.11](#) 

P/N N/A Roller: ADF Feed [RSPL B.2.11](#) 

P/N N/A Shaft: ADF [RSPL B.2.11](#) 

P/N N/A Spring: ADF Roller [RSPL B.2.11](#) 

P/N 50516401 Washer: Compression [RSPL B.2.11](#) 



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### 3.2.29 Pinch Roller

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.25](#) 

[3.2.28](#) 

2. Press down and hold the left (1) and right (2) ADF pinch springs.

3. Press down and release the pinch roller (2).

4. Remove the pinch roller (3).

**NOTE:**

**Cleaning**

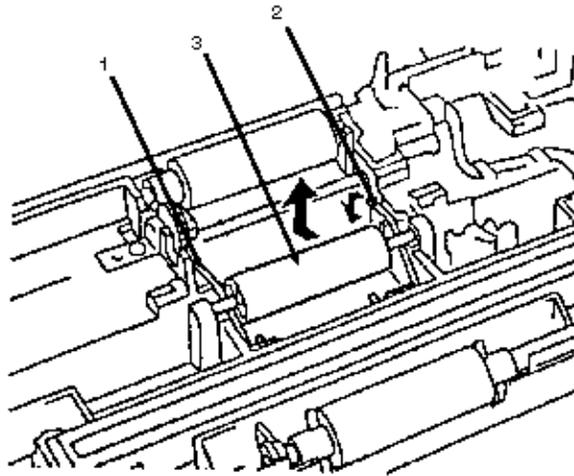
Clean the pinch roller as necessary. [Refer to Section 3.4 of this Service Handbook for cleaning details](#) .

P/N 50406201 Roller: Pinch [RSPL B.2.12](#) 

P/N 50925201 Spring: ADF Pinch (Left) [RSPL B.2.12](#) 

P/N 50925202 Spring: ADF Pinch (Right) [RSPL B.2.12](#) 

P/N 51112501 Roller: Pinch Shaft [RSPL B.2.12](#) 



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### 3.2.30 Document Detect Assembly (PC1)

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.25](#) 

[3.2.28](#) 

2. Disconnect the connector (1).

3. Press in the direction of the arrow and hold the latch (2) then remove the document detect assembly (3).

**NOTE:**

**The same photo sensor is used in both the document detect assembly and the read station assembly.**

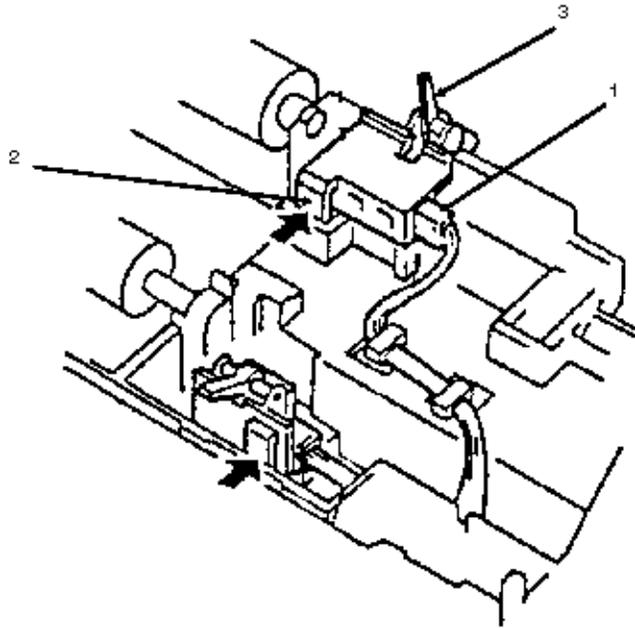
P/N 50218101 Assembly: Document Detect (PC 1) [RSPL B.2.12](#) 

P/N 56628603 Cable: PC 1+2-PCNT [RSPL B.2.12](#) , [B.2.17](#) 

P/N N/A Lever: PC1 [RSPL B.2.12](#) 

P/N N/A Bracket: PC1 [RSPL B.2.12](#) 

P/N N/A Photo Sensor [RSPL B.2.12](#) 



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### 3.2.31 Read Station Sensor Assembly (PC2)

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.25](#) 

[3.2.26](#) 

2. Disconnect the connector (1).

3. Using a flat-head screwdriver, press and hold the latch (2) and remove the read station sensor assembly (3).

**NOTE:**

**The same photo sensor is used in both the document detect assembly and the read station assembly.**

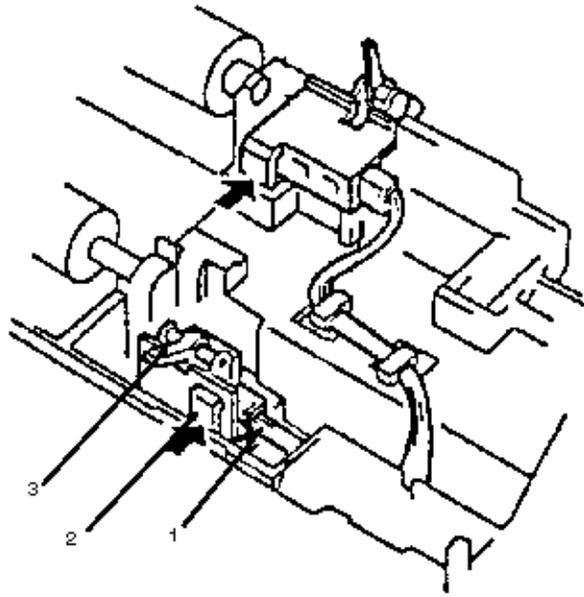
P/N 50218202 Assembly: Read Station Sensor [RSPL B.2.12](#)  (PC2)

P/N 56628603 Cable: PC 1+2-PCNT [RSPL B.2.12](#) , [B.2.17](#) 

P/N N/A Lever: PC2 [RSPL B.2.12](#) 

P/N N/A Holder: Sensor [RSPL B.2.12](#) 

P/N N/A Photo Sensor [RSPL B.2.12](#) 



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### 3.2.32 Exit Guide

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.20](#) 

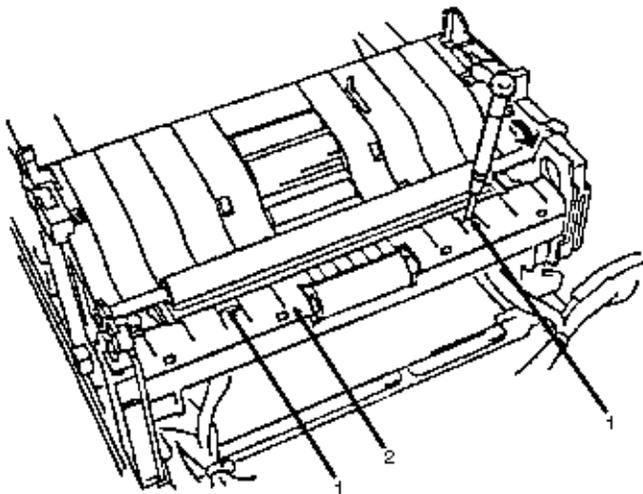
[3.2.21](#) 

[3.2.25](#) 

2. Use a flat screwdriver to release the two latches (1).

3. Remove the exit guide (2).

P/N 51012401 Guide: Exit [RSPL B.2.10](#) 



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### 3.2.33 Lower Feed Roller Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.12](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.20](#) 

[3.2.21](#) 

[3.2.25](#) 

[3.2.32](#) 

2. Remove the lower feed roller assembly (1).

**NOTE:**

The assembly is made of the feed roller two, the Z17 gear, the ADF bearing, and the compression washer. To replace any of these parts, order the assembly.

**Lubrication**

Lightly lubricate the Z17 gear. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

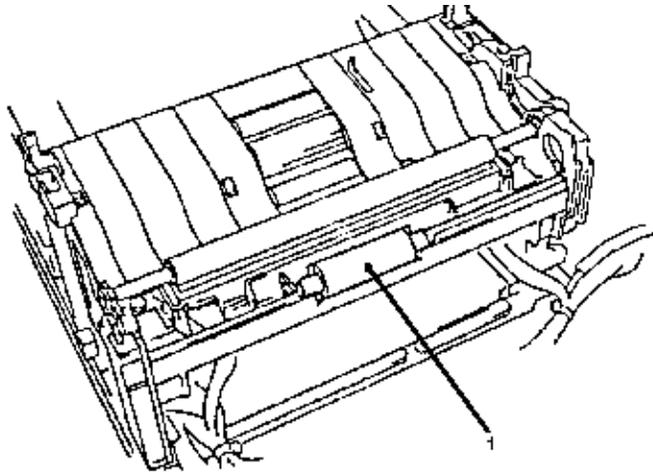
P/N 50406001 Roller: Lower Feed Assembly [RSPL B.2.13](#) 

P/N N/A Roller: Feed (2) [RSPL B.2.13](#) 

P/N N/A Gear: Z17 [RSPL B.2.13](#) 

P/N N/A Bearing: ADF [RSPL B.2.13](#) 

P/N 50516401 Washer: Compression [RSPL B.2.13](#) 



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### 3.2.34 Image Sensor Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.20](#) 

[3.2.21](#) 

[3.2.25](#) 

[3.2.26](#) 

[3.2.32](#) 

2. Remove the four screws (1).
3. Detach the cable from the connector (2).
4. Remove the image sensor assembly (3).

**NOTE:**

The Cable: Image Sensor connects the image sensor to CN 3 of the PCNT board.  
The assembly is made of the sensor, the sensor holder, the ground cable, and the screw. To replace any of these parts, order the assembly.

**Cleaning**

[Refer to Section 3.4 of this Service Handbook for cleaning details](#) .

**Calibration**

[Refer to Section 4.5.02](#)  of this Service Handbook for CIS Calibration information.

P/N 50405901 Sensor: Image Assembly [RSPL B.2.13](#) 

P/N 56628302 Cable: PCNT - Image Sensor [RSPL B.2.13](#) , [B.2.17](#) 

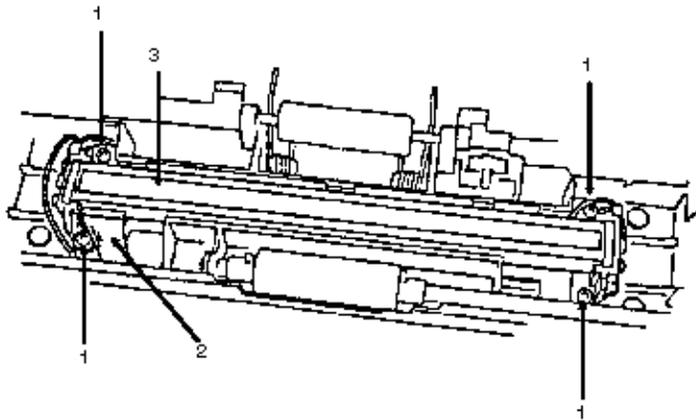
P/N N/A Holder: Sensor [RSPL B.2.13](#) 

P/N N/A Sensor [RSPL B.2.13](#) 

P/N N/A Cable: Earth [RSPL B.2.13](#) 

P/N N/A Screw [RSPL B.2.13](#) 

P/N N/A Screw [RSPL B.2.13](#) 



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### 3.2.35 ADF Idle Gear

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.20](#) 

[3.2.21](#) 

[3.2.25](#) 

[3.2.27](#) 

[3.2.28](#) 

2. Remove the screw.

3. Remove the ADF gear holder.

4. Remove the ADF idle gear.

**NOTE:**

**Lubrication**

Lightly lubricate the ADF gear holder. [Refer to Section 3.5 of this Service Handbook for lubrication details](#)  .

P/N N/A Screw [RSPL B.2.13](#) 

P/N 51229501 Gear: ADF Idle [RSPL B.2.13](#) 

P/N 53343601 ADF Gear Holder [RSPL B.2.13](#) 

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### 3.2.36 Scanner Frame Assembly

**CAUTION:**

Use extreme caution when removing the scanner frame assembly.

The speaker cable is routed through a hole in the scanner frame.

The LED cable and stepper motor cables are clamped to the scanner frame assembly. Release these cables before removing the frame.

Detach the connector from the transmit stepper motor before removing the scanner frame. The connector may be accessed from within the frame.

1. Perform these procedures:

[3.2.01](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.20](#) 

[3.2.21](#) 

2. Remove the six screws (1).

3. Remove the scan frame assembly (2).

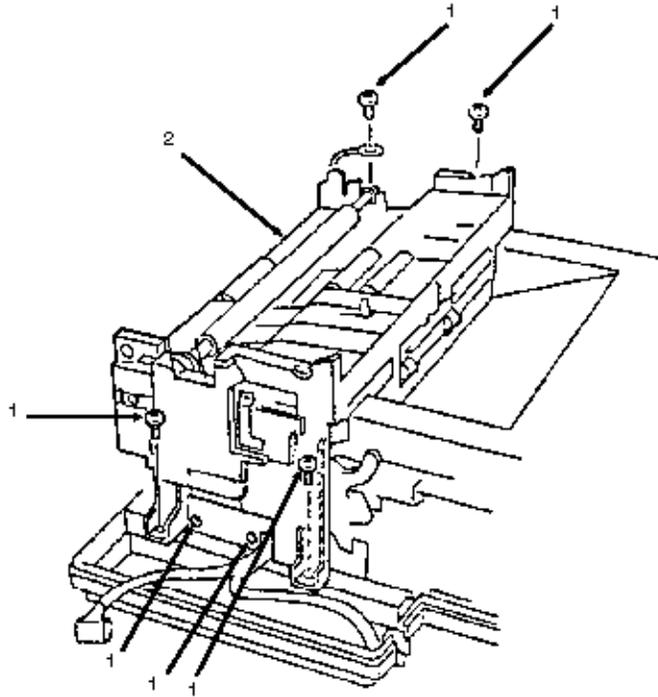
P/N N/A Screw [RSPL B.2.10](#) 

P/N 53343501 Frame: Scanner Assembly [RSPL B.2.10](#) 

P/N 50104401 Frame: Scanner [RSPL B.2.13](#) 

P/N N/A Clamper **RSPL B.2.10** 

P/N 50925601 Spring: Top Cover Release **RSPL B.2.10** 



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### 3.2.37 Release Guide Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.20](#) 

[3.2.21](#) 

[3.2.25](#) 

2. Use a needle nose pliers to remove the spring (1).
3. Release the tabs (2) and remove the release guide assembly (3).

**NOTE:**

**The assembly includes the release guide, the eject roller, and the bias spring. To replace any of the parts, order the assembly.**

P/N 50925401 Spring: Release Guide [RSPL B.2.10](#) 

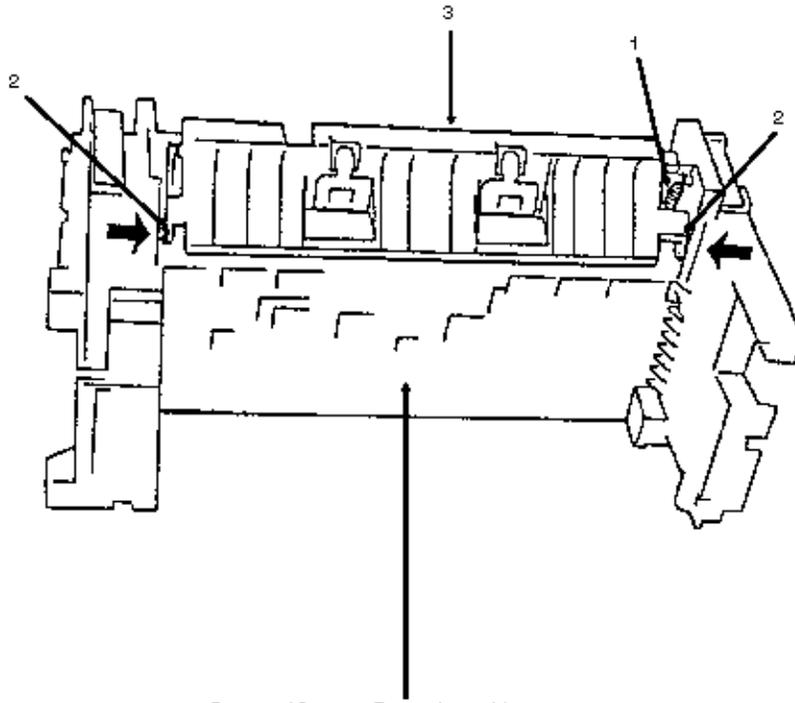
P/N 51012801 Guide: Release Assembly [RSPL B.2.10](#) 

P/N N/A Guide: Release [RSPL B.2.10](#) 

P/N N/A Roller: Eject [RSPL B.2.10](#) 

P/N N/A Bias: Spring [RSPL B.2.10](#) 

P/N 52202801 Mylar: Exit Strip [RSPL B.2.10](#) 



Bottom of Scanner Frame Assembly  
This view is for orientation ONLY.  
Do NOT remove the scanner frame assembly.

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### 3.2.38 Second Tray Interface Board

1. Perform these procedures:

[3.2.01](#) 

[3.2.03](#) 

[3.2.15](#) 

[3.2.16](#) 

2. Detach the cable from connector CN7 of the PCNT board. (Static prevention)
3. Remove the screw (1).
4. Pull the board and cable gently from the base frame.
5. Disconnect the connector (2).
6. Remove the second tray board (3).

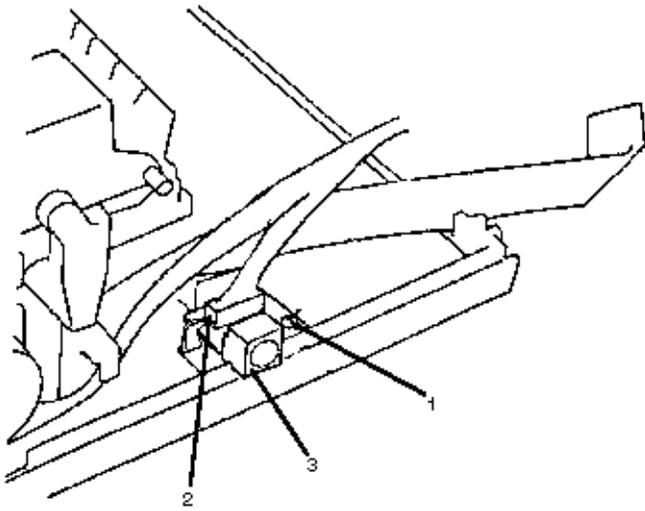
**NOTE:**

**The Cable: PCNT-2nd Tray PCB connects the second tray interface board to CN 7 of the board (PCNT).**

P/N N/A Screw [RSPL B.2.08](#) 

P/N 55073901 PCB: 2nd Tray Interface [RSPL B.2.08](#) 

P/N 56628507 Cable: PCNT-2nd Tray PCB [B.2.17](#) 



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#### 3.2.39 Registration and Main Stepper Motors

1. Perform these procedures:

[3.2.01](#) 

[3.2.05](#) 

[3.2.15](#) 

[3.2.16](#) 

2. Cut the ty-wrap to release the cables.
3. Remove the two screws (1).
4. Carefully work the cables from the frame.
5. Remove the registration stepper motor (2).
6. Remove the two screws (3).
7. Carefully work the cables from the frame.
8. Remove the main stepper motor (4).

| ID | Connector | Board |    | Motor                | Cable P/N | Pin | Description                  |
|----|-----------|-------|----|----------------------|-----------|-----|------------------------------|
|    | CN8       | PCNT  | to | Registration Stepper | 56510702  | 4   | Black, Brown, Yellow, Orange |
|    | CN8       | PCNT  | to | Main Stepper         | 56510703  | 5   | Black, Brown, Yellow, Orange |

#### NOTES:

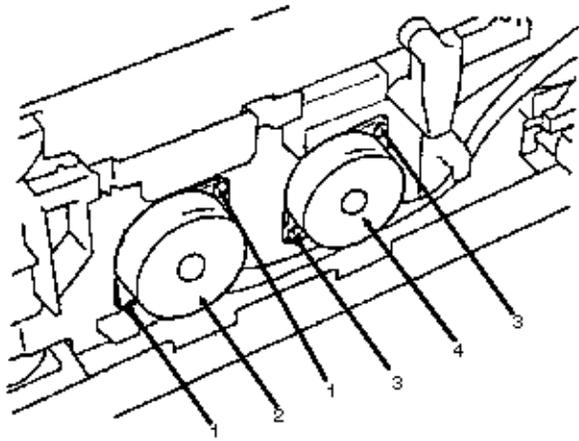
##### Lubrication

Lightly lubricate the gears of the motors. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N N/A Screw [RSPL B.2.04](#) 

P/N 56510702 Motor: Registration Stepper [B.2.05](#) , [B.2.17](#) 

P/N 56510703 Motor: Main Stepper [B.2.05](#) , [B.2.17](#) 



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### 3.2.40 Eject Roller Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.20](#) 

[3.2.21](#) 

[3.2.36](#) 

[3.2.37](#) 

2. Open the copy stacker (1).

3. Release the latch (2) and remove the eject roller assembly (3).

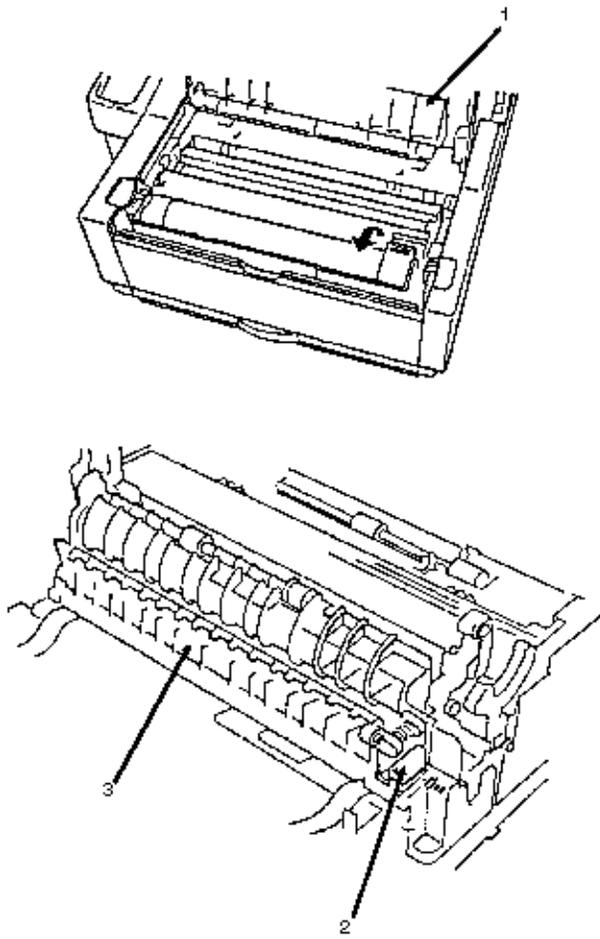
#### **NOTES:**

##### **Lubrication**

**Lightly lubricate the contact points of the roller shaft.** [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N 53342801 Roller: Eject Assembly [RSPL B.2.04](#) 

P/N 51229201 Gear: Eject Roller Idle [RSPL B.2.04](#) 



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### 3.2.41 Manual Feed Guide Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.15](#) 

[3.2.16](#) 

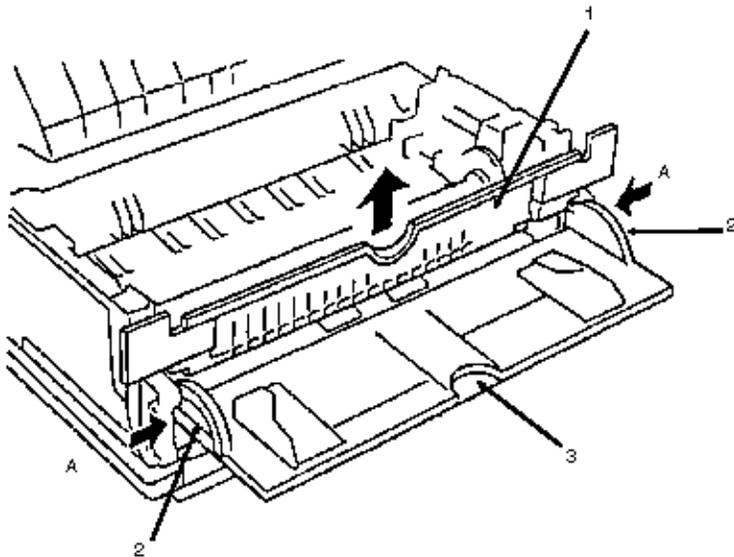
[3.2.17](#) 

2. Lift the inner cover (1).

3. Press the extensions (2) in the direction of the two A arrows and remove the manual feed guide assembly (3).

P/N 53069701 Cover: Inner [RSPL B.2.04](#) 

P/N 51011001 Guide: Manual Feed Assembly [RSPL B.2.04](#) 



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### 3.2.42 Face-Down Stacker Cover Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

2. Disconnect the LED cable (1).

3. Press the extensions (2) in the direction of arrows A and release the face-down stacker cover assembly (3) from the reset levers (4). There are also two points (5 - location only) on the inside of the assembly which must be disconnected from the base frame.

4. Remove the assembly.

#### **NOTES:**

The LED Cable connects the LED Head to CN 4 of the PCNT board.

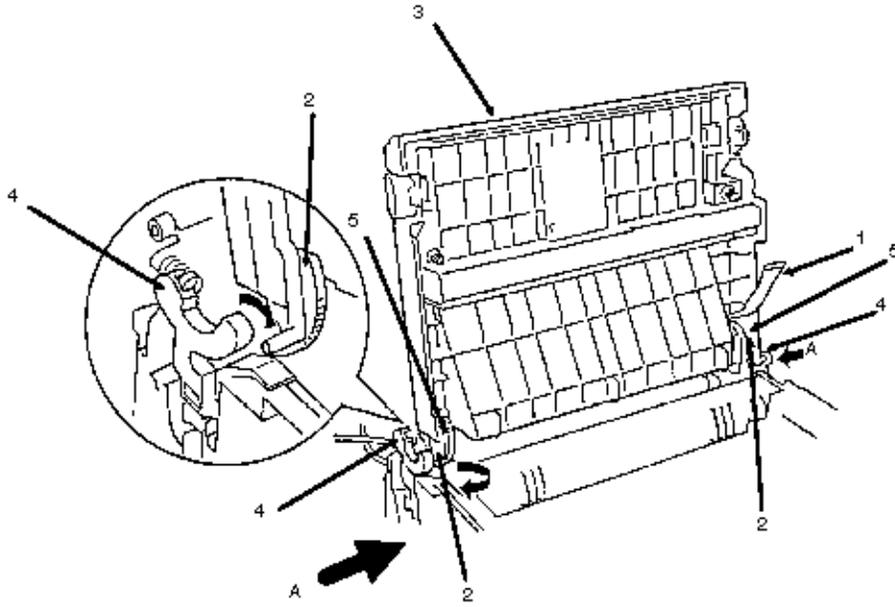
#### **Lubrication**

Lightly lubricate the reset levers. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N 53069001 Assembly: Face Down [RSPL B.2.04](#)  Stacker Cover

P/N 56629101 Cable: LED-PCNT [B.2.17](#) 

P/N 50104801 Tray: Stacker Cover [RSPL B.2.04](#) 



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### 3.2.43 Fuser Unit Assembly

**WARNING:**

**Allow the fuser unit assembly to cool before servicing.**

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.09](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.42](#) 

2. Remove the four screws (1).

3. Remove the fuser unit assembly (2).

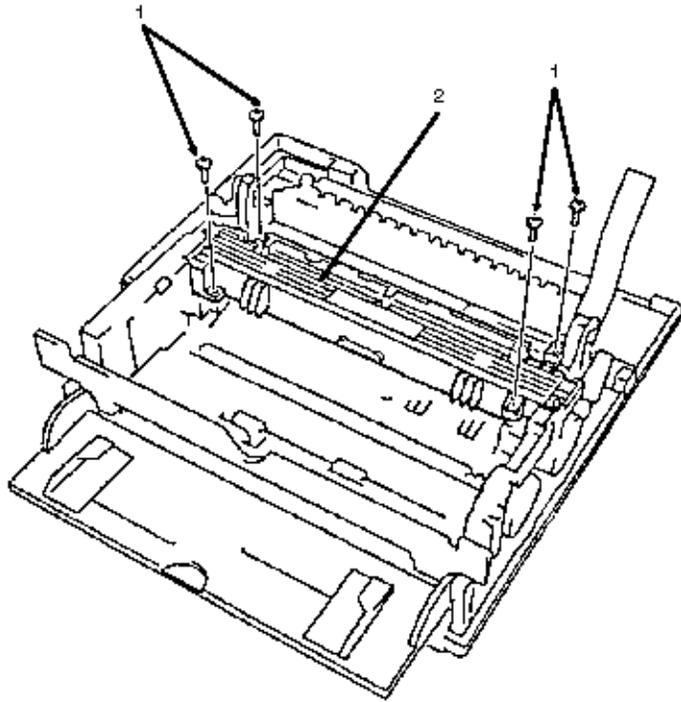
**NOTE:****Installation**

Reset the fuser counter when installing a new fuser unit. [Refer to Section 4.8 of this Service Handbook !\[\]\(2985be42c57c930ae147cf1c7fb4a52f\_img.jpg\) for further details.](#)

**Lubrication**

Lightly lubricate the fuser gear. [Refer to Section 3.5 of this Service Handbook for lubrication details !\[\]\(1337ccdb5fdab55f2b6276ffd5cea8fa\_img.jpg\).](#)

P/N 50217501 Unit: Fuser Assembly (120V) [RSPL B.2.04 !\[\]\(fab66d54e31c7547757c048672bcdaeb\_img.jpg\)](#)



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### 3.2.44 Lower Base Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.28](#) 

[3.2.36](#) 

[3.2.39](#) 

[3.2..40](#) 

[3.2.41](#) 

[3.2.42](#) 

[3.2.43](#) 

2. Remove the seven screws (1).

3. Remove the lower base assembly (2).

**NOTE:**

The lower base assembly is an assembly of many parts.

The lower base assembly frame is the plastic frame at the bottom of the assembly.

P/N 53070401 Frame: Lower Base Assembly [RSPL B.2.04](#) 

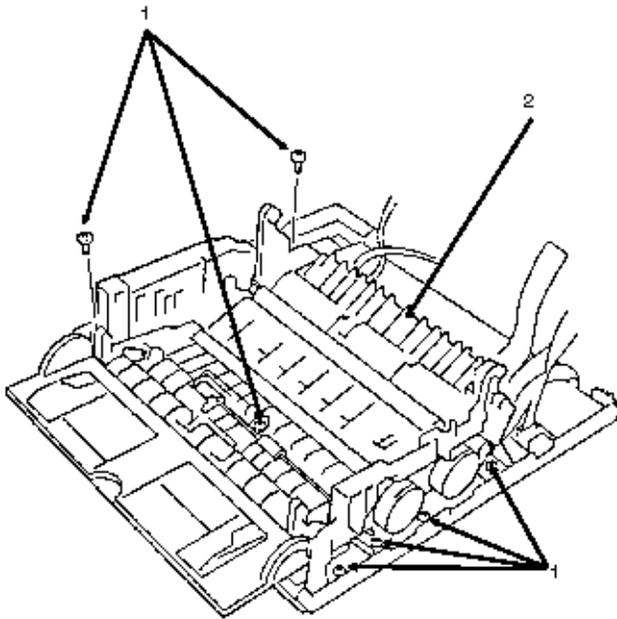
P/N N/A Screw [RSPL B.2.04](#) 

P/N N/A Screw [RSPL B.2.04](#) 

P/N N/A Screw [RSPL B.2.04](#) 

P/N 53344301 Plate: Ground (RE) [RSPL B.2.04](#) 

P/N 53344401 Plate: Ground (BU) [RSPL B.2.04](#) 



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### 3.2.45 Reduction and Stepper Motor Idle Gears

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.28](#) 

[3.2.36](#) 

[3.2.39](#) 

[3.2..40](#) 

[3.2.41](#) 

[3.2.42](#) 

[3.2.43](#) 

[3.2.44](#) 

2. Release the two latches (1) and remove the motor assembly (2).
3. Remove the reduction gear.
4. Remove the stepper motor idle gears.

**NOTE:**

**Lubrication**

Lightly lubricate the gears. [Refer to Section 3.5 of this Service Handbook for lubrication details](#).

P/N 51229301 Gear: Reduction [RSPL B.2.05](#)

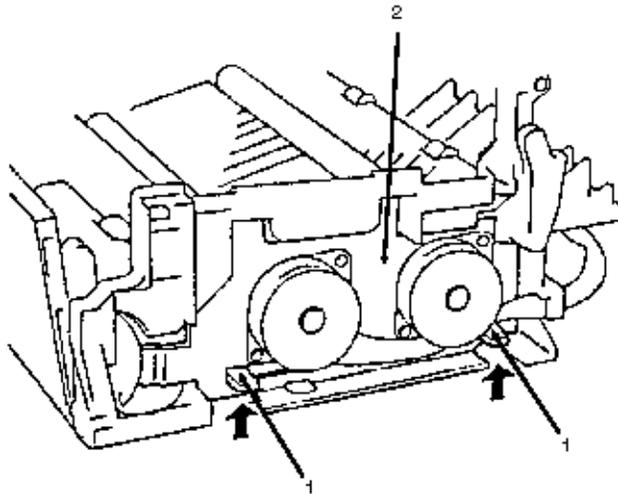
P/N 51225701 Gear: Stepper Motor Idle [RSPL B.2.05](#)

P/N 51709901 Bracket: Motor [B.2.05](#)

P/N N/A Screw [B.2.05](#)

P/N 56510702 Motor: Registration Stepper [RSPL B.2.05](#), [B.2.17](#)

P/N 56510703 Motor: Main Stepper [RSPL B.2.05](#), [B.2.17](#)



---

### 3.2.46 Reset Levers and Pressure Roller

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.28](#) 

[3.2.36](#) 

[3.2.39](#) 

[3.2.40](#) 

[3.2.41](#) 

[3.2.42](#) 

[3.2.43](#) 

[3.2.44](#) 

2. Use a needle nose pliers to remove the stacker cover reset spring (1).

3. Press down on the back-up (pressure) roller (4) to release the tension on the left and right reset levers.

4. Remove the left reset lever (2).
5. Remove the right reset lever (3).
6. Lift the back-up (pressure) roller (4) at A and slide it in the direction of arrow B and remove the roller, using care not to lose the bushings or springs.
7. Remove the fuser roller idle gear (5).
8. Remove the stacker cover damper gear (6).
9. Remove the cover open switch arm from the left reset lever.
10. Remove the stacker cover damper arm (7).

**NOTE:**

**Lubrication**

Lightly lubricate the channels of the reset levers, as necessary. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N 50924201 Spring: Stacker Cover Reset RSPL [B.2.05](#) 

P/N 50805801 Lever: Reset (Left) RSPL [B.2.05](#) 

P/N 50805901 Lever: Reset (Right) RSPL [B.2.05](#) 

P/N 53343701 Roller: Back-up (Pressure) RSPL [B.2.05](#) 

P/N 51607601 Bushing: Pressure Roller RSPL [B.2.05](#) 

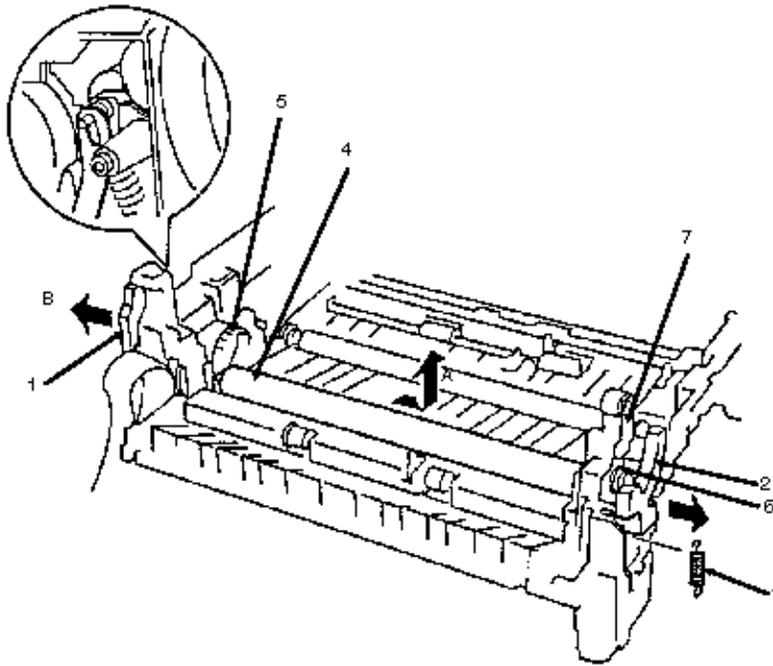
P/N 50924101 Spring: Bias (Pressure Roller) [B.2.05](#) 

P/N 51229101 Gear: Fuser Roller Idle RSPL [B.2.05](#) 

P/N 51229401 Gear: Stacker Cover Damper RSPL [B.2.05](#) 

P/N 53068901 Arm: Cover Open Switch RSPL [B.2.05](#) 

P/N 53069101 Arm: Stacker Cover Damper RSPL [B.2.05](#) 



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### 3.2.47 Transfer Roller

**CAUTION:**

Do NOT touch the transfer roller! Touching the transfer roller may cause incomplete toner transfer, resulting in faded output.

Use extreme care when lifting the transfer roller. The left bearing will break if too much twist or pressure is applied.

1. Power OFF the unit and detach the AC power cord.
2. Remove the image drum cartridge, with the toner cartridge installed.
3. Using a flat-blade screwdriver, wedge the blade between the transfer roller gear the the base frame. Gently pry the transfer gear and roller from the well.
4. Use the screwdriver to support the transfer roller under its shaft.
5. Do NOT lift the roller more than an inch to access the gear and bearing.
6. Remove both the transfer roller gear (1) and bearing.
7. Remove the transfer roller (2).

**NOTE:****Lubrication**

Lightly lubricate the points where the transfer roller contacts either the frame or the bearings. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

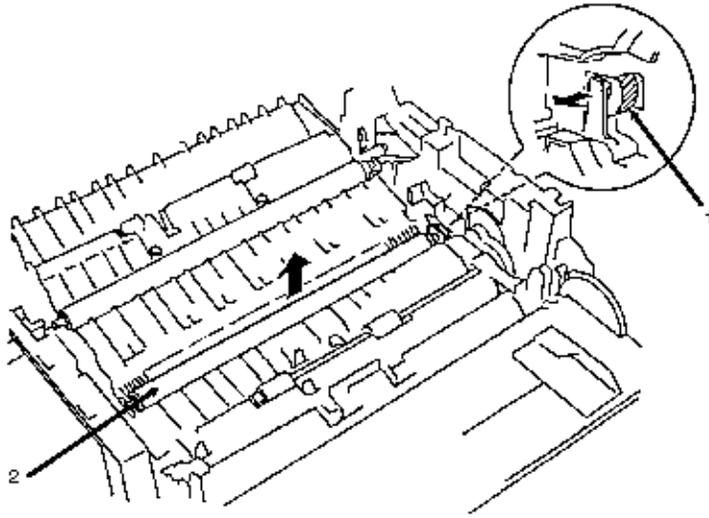
P/N 51229001 Gear: Transfer Roller RSPL [B.2.05](#) 

P/N 53342601 Roller: Transfer Roller RSPL [B.2.05](#) 

P/N 53344501 Plate: Transfer Contact [B.2.05](#) 

P/N 51607402 Bearing RSPL [B.2.05](#) 

P/N 51010903 Strip: Anti-Static [B.2.05](#) 



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### 3.2.48 Registration Roller

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.28](#) 

[3.2.36](#) 

[3.2.39](#) 

[3.2..40](#) 

[3.2.41](#) 

[3.2.42](#) 

[3.2.43](#) 

[3.2.44](#) 

[3.2.45](#) 

2. Remove the hopping roller clutch gear (1).

3. Slide the registration roller (2) in the direction of arrow A and lift at B and remove the roller.

4. Remove the registration roller bearing (3).

**NOTE:**

There are two one-way clutch gears (called the hopping roller clutch gear) used in two places. One is with the registration roller. The other is with the hopping roller assembly.

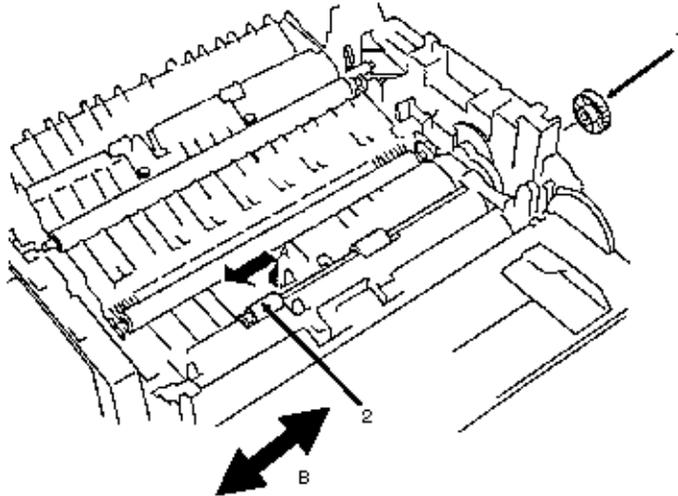
**Lubrication**

Lightly lubricate the points where the registration roller contacts either the frame or the bearing. [Refer to Section 3.5 of this Service Handbook for lubrication details](#) .

P/N 51228901 Gear: Hopping Roller Clutch [RSPL B.2.06](#) 

P/N 53342501 Roller: Registration [RSPL B.2.06](#) 

P/N 51607501 Bearing: Registration Roller [RSPL B.2.06](#) 



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**3.2.49 Hopping Roller Assembly**

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.28](#) 

[3.2.36](#) 

[3.2.39](#) 

[3.2.40](#) 

[3.2.41](#) 

[3.2.42](#) 

[3.2.43](#) 

[3.2.44](#) 

[3.2.45](#) 

2. Remove the hopping roller clutch gear (1).

3. Remove the bearing (2).

4. Slide the hopping roller assembly (3) in the direction of arrow A and remove the roller.

**NOTE:**

The hopping roller assembly consists of the hopping roller shaft and the hopping roller rubber. To replace either of these parts, order the assembly.

There are two one-way clutch gears (called the hopping roller clutch gear) used in two places.

One is with the registration roller. The other is with the hopping roller assembly.

**Lubrication**

Lightly lubricate the points where the hopping roller assembly contacts either the frame or the bearings. [Refer to Section 3.5 of this Service Handbook for lubrication details](#).

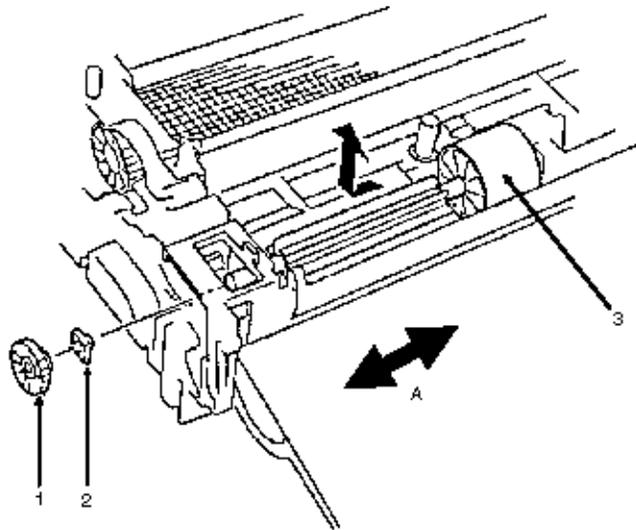
P/N 51228901 Gear: Hopping Roller Clutch [RSPL B.2.06](#)

P/N 51607402 Bearing [RSPL B.2.06](#)

P/N 51112601 Roller: Hopping Assembly [RSPL B.2.06](#)

P/N N/A Rubber: Hopping Roller [RSPL B.2.06](#)

P/N N/A Shaft: Hopping Roller [RSPL B.2.06](#)



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### 3.2.50 Inlet Sensor Plates

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.28](#) 

[3.2.36](#) 

[3.2.39](#) 

[3.2..40](#) 

[3.2.41](#) 

[3.2.42](#) 

[3.2.43](#) 

[3.2.44](#) 

2. Working from underneath, press the latches (1) in the direction of arrows A and lift the plate (2) out.

**NOTE:**

**The same inlet sensor is used in three places.**

3 is inlet sensor plate 2.

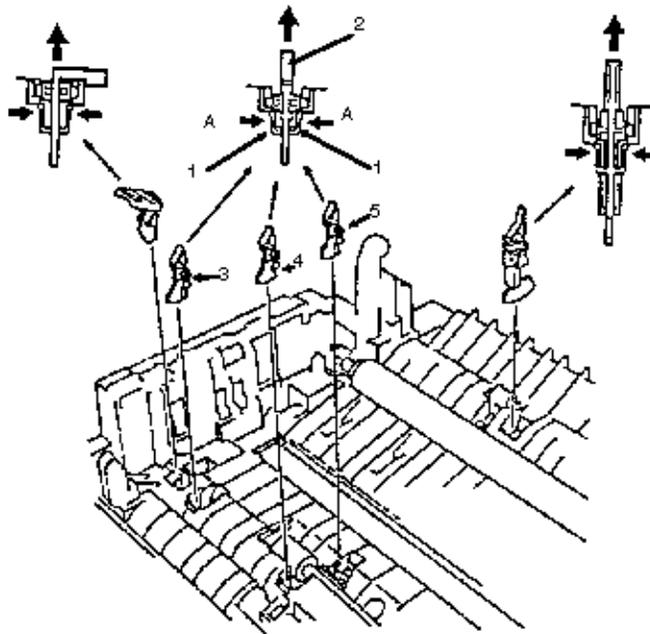
4 is inlet sensor plate 1.

5 is the paper sensor plate.

**CAUTION:**

Do NOT allow lubricant to contact these plates.

P/N 51010701 Plate: Sensor (Inlet) [RSPL B.2.06](#) 



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### 3.2.51 Outlet Sensor Plate

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.28](#) 

[3.2.36](#) 

[3.2.39](#) 

[3.2..40](#) 

[3.2.41](#) 

[3.2.42](#) 

[3.2.43](#) 

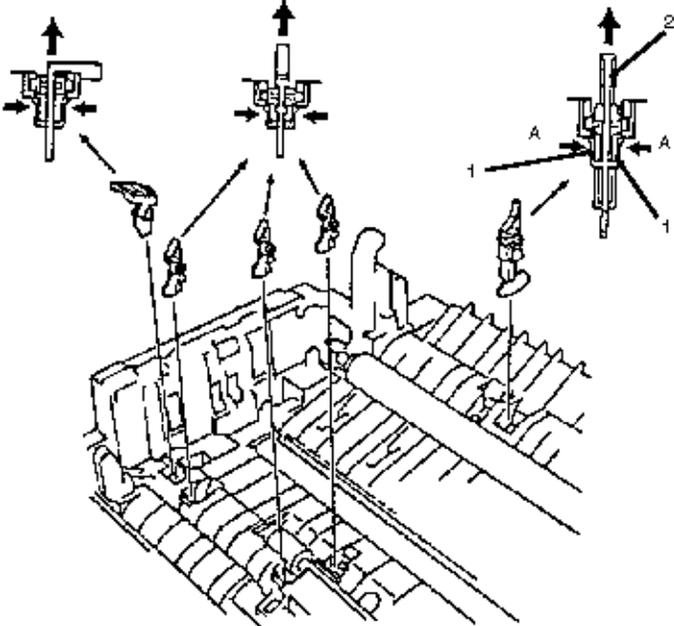
[3.2.44](#) 

2. Working from underneath, press the latches (1) in the direction of arrows A and lift the outlet sensor plate (2) out.

**CAUTION:**

Do NOT allow lubricant to contact the outlet sensor plate.

P/N 51010801 Plate: Sensor (Outlet) **RSPL B.2.06** 



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### 3.2.52 Toner Sensor Plate

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.28](#) 

[3.2.36](#) 

[3.2.39](#) 

[3.2..40](#) 

[3.2.41](#) 

[3.2.42](#) 

[3.2.43](#) 

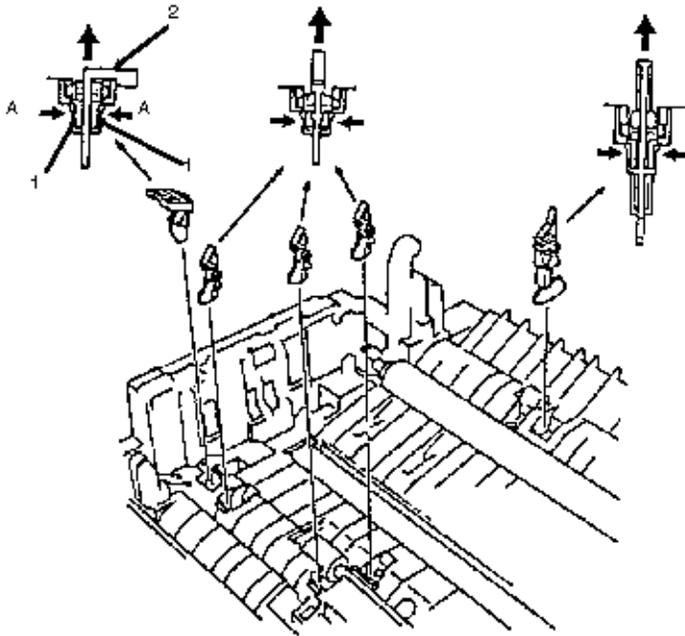
[3.2.44](#) 

2. Working from underneath, press the latches (1) in the direction of arrows A and lift the toner sensor plate (2) out.

**CAUTION:**

Do NOT allow lubricant to contact the toner sensor plate.

P/N 50405501 Plate: Sensor (Toner) [RSPL B.2.06](#) 



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### 3.2.53 Contact Assembly and Sub-Power Supply Board (PSUB)

**CAUTION**  
Do NOT touch the contacts.

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.28](#) 

[3.2.36](#) 

[3.2.39](#) 

[3.2.40](#) 

[3.2.41](#) 

[3.2.42](#) 

[3.2.43](#) 

[3.2.44](#) 

2. Remove the two screws (1).

3. Disconnect the cable from connector CN2 (2).
4. Remove the PSUB board (3) and contact assembly (4).

| ID | Connector | Board |    | Connector | Board | Cable P/N | Pin | Description |
|----|-----------|-------|----|-----------|-------|-----------|-----|-------------|
|    | CN2       | PSUB  | to | CN2       | PWU   | 56628512  | 7   |             |
|    | CN3       | PSUB  | to | CN2       | PCNT  | N/A       | 7   |             |
|    |           | PSUB  | to | CN1       | PWU   | N/A       | 25  | Hardwired   |

P/N N/A Screw **RSPL B.2.08** 

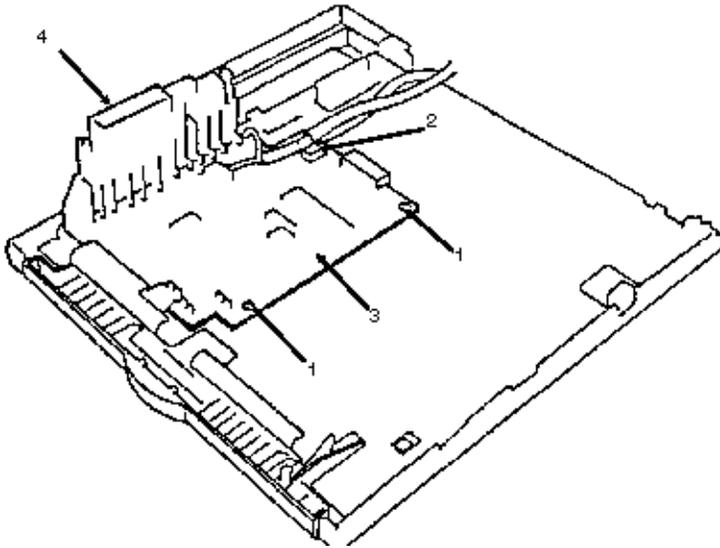
P/N 56628512 Cable: PSUB-PWU (7 Pin) **B.2.17** 

P/N 55073801 PCB: PSUB-150 (Hi-Volt) **RSPL B.2.08** 

P/N 56730001 Assembly: Contact **RSPL B.2.08** 

P/N N/A Cable: PCNT-PSUB **B.2.17** 

P/N N/A Cable: PWU-PSUB **B.2.16** 



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### 3.2.54 Left and Right Cassette Guides and Base Assembly

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.28](#) 

[3.2.36](#) 

[3.2.39](#) 

[3.2..40](#) 

[3.2.41](#) 

[3.2.42](#) 

[3.2.43](#) 

[3.2.44](#) 

[3.2.53](#) 

2. Remove the screw (1).

3. Remove the left paper cassette guide (2).
4. Remove the screw (3).
5. Remove the right paper cassette guide (4).

**NOTE:**

The base assembly consists of the left and right cassette assembly guides, the cassette eject springs, the support spring, the base plate, insulator, and the rubber foot.

To replace any of these parts, order the assembly. The cassette eject springs, the cassette assembly guides, and the rubber feet may also be ordered individually.

P/N 50217801 Base Assembly **RSPL B.2.08** 

P/N N/A Screw **RSPL B.2.08** 

P/N 51112901 Guide: Cassette Assembly (Left) **RSPL B.2.08** 

P/N 51112801 Guide: Cassette Assembly (Right) **RSPL B.2.08** 

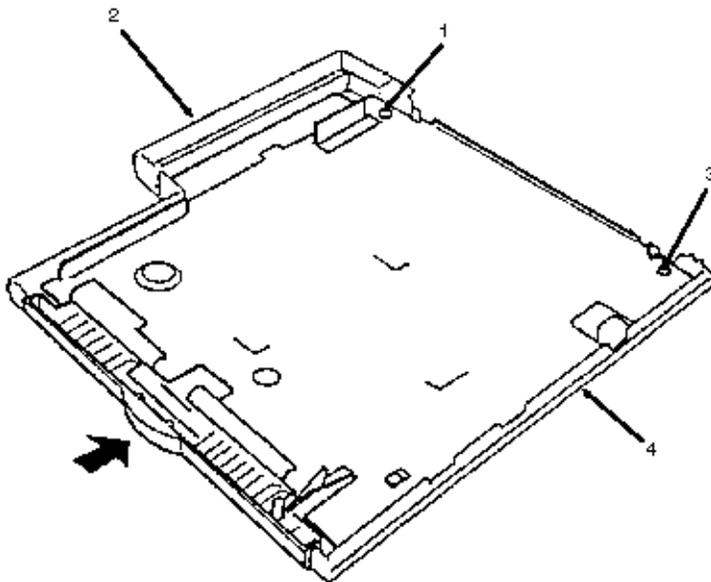
P/N N/A Insulator (1) **RSPL B.2.08** 

P/N 50924401 Spring: Cassette Eject **RSPL B.2.08** 

P/N N/A Spring: Support **RSPL B.2.08** 

P/N N/A Plate: Base **RSPL B.2.08** 

P/N 50806104 Rubber Foot **RSPL B.2.08** 



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### 3.2.55 Paper Supply and Cassette Sensor Plates

1. Perform these procedures:

[3.2.01](#) 

[3.2.02](#) 

[3.2.03](#) 

[3.2.04](#) 

[3.2.05](#) 

[3.2.09](#) 

[3.2.11](#) 

[3.2.15](#) 

[3.2.16](#) 

[3.2.17](#) 

[3.2.28](#) 

[3.2.36](#) 

[3.2.39](#) 

[3.2..40](#) 

[3.2.41](#) 

[3.2.42](#) 

[3.2.43](#) 

[3.2.44](#) 

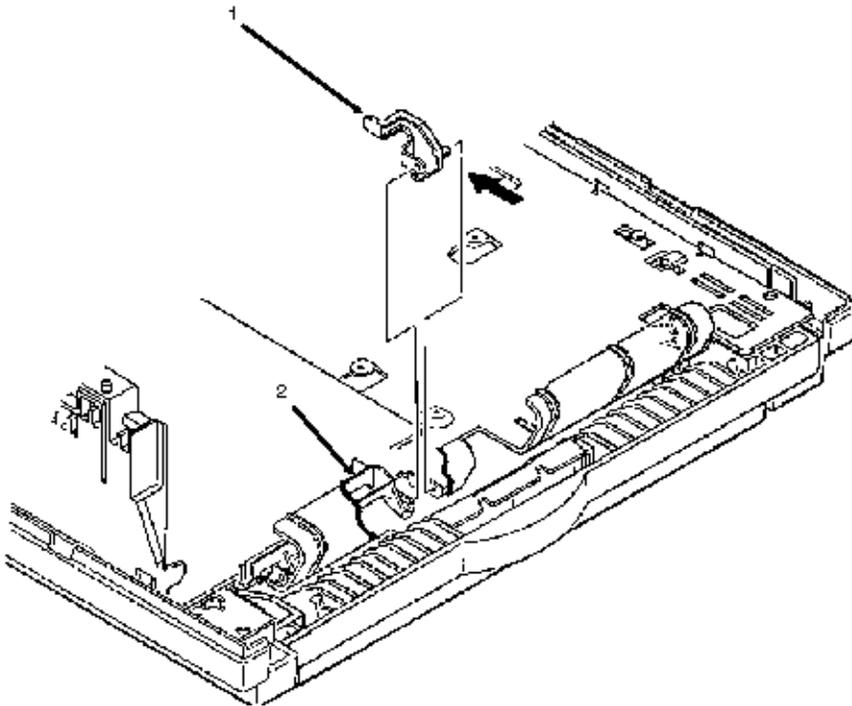
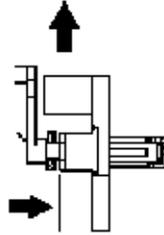
[3.2.53](#) 

2. Remove the paper supply sensor plate (1).

3. Remove the cassette sensor plate (2).

P/N 51011401 Plate: Paper Supply Sensor **RSPL B.2.08** 

P/N 51011501 Plate: Cassette Sensor **RSPL B.2.08** 



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### 3.3 ADJUSTMENTS AND SERVICE SETTINGS

#### 3.3.01 General Information

The Okifax 1000 has one adjustment, the LED Head Drive Time setting. This adjustment is performed by setting the positions 1 through 4 of Switch 1 on the PCNT board.

#### 3.3.02 LED Head Drive Time

##### General Information

This procedure is used to set the LED head drive time. The LED head drive time must be set when the intensity rating of the new LED head is different from the intensity rating of the replaced LED head.

##### LED Head Intensity Rating

The last three numbers of the label on the LED head are the LED intensity rating. Use the LED Intensity Rating / Dip Switch Settings Table to determine the drive time associated with the intensity rating of the LED head.

##### Procedure

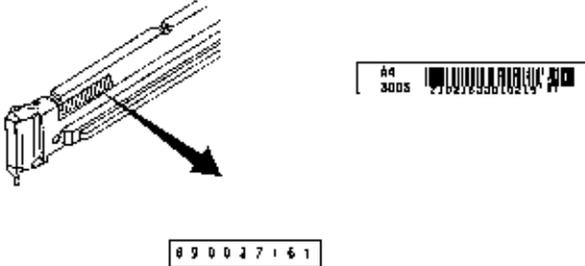
To set the LED Head Drive Time, perform the following procedure.

1. Determine the LED head intensity rating of the installed LED head. The last three numbers of the label on the LED head are the rating.
2. Determine the dip switch settings associated with the head intensity rating. Use the LED Intensity Rating / Dip Switch Settings Table to determine the drive time associated with the intensity rating of the LED head.
3. Power OFF the unit.
4. Remove the package shelf assembly. ([Refer to 3.2.05 !\[\]\(54d88f1c9e3447f98087d62f411d139a\_img.jpg\)](#))
5. Set the the four positions of DIP Switch 1 of the PCNT board to match the requirements for the LED intensity rating of the installed LED head.
6. Assemble the unit.

##### LED Intensity Rating / Dip Switch Settings Table

|                             |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DIP Switches                | Nb. 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |   |
|                             | Nb. 3 |   | 0 | 0 |   | 0 | 0 |   |   | 0 | 0 |   | 0 | 0 |   |   |
|                             | Nb. 2 |   |   |   | 0 | 0 | 0 | 0 |   |   |   | 0 | 0 | 0 | 0 |   |
|                             | Nb. 1 |   |   |   |   |   |   |   |   | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>LED Intensity Rating</b> |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| - 055                       | X     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 057 - 063                   |       | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 064 - 071                   |       |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 072 - 080                   |       |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |
| 081 - 090                   |       |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |
| 091 - 101                   |       |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |
| 102 - 113                   |       |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |
| 114 - 127                   |       |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |
| 128 - 143                   |       |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |
| 144 - 160                   |       |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |
| 161 - 180                   |       |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |
| 181 - 202                   |       |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |
| 203 - 227                   |       |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |
| 228 - 256                   |       |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |
| 257 - 267                   |       |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |
| 268 -                       |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |

**LED Label Diagram**



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## Service Guide OF1000

### Chapter 3 Maintenance & Disassembly

#### LED Intensity Rating / Dip Switch Settings Table

| DIP Switches                | Nb. 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                             | Nb. 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                             | Nb. 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                             | Nb. 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>LED Intensity Rating</b> |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| - 055                       | X     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 057- 063                    |       | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 064- 071                    |       |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 072- 080                    |       |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 081- 090                    |       |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 091- 101                    |       |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |
| 102- 113                    |       |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |
| 114- 127                    |       |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |
| 128- 143                    |       |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |
| 144- 160                    |       |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |
| 161- 180                    |       |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |
| 181- 202                    |       |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |
| 203- 227                    |       |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |
| 228- 256                    |       |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |
| 257- 267                    |       |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |
| 268-                        |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |

| DIP Switches                | Nb. 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                             | Nb. 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                             | Nb. 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                             | Nb. 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>LED Intensity Rating</b> |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| - 055                       | X     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 057- 063                    |       | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 064- 071                    |       |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 072- 080                    |       |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 081- 090                    |       |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 091- 101                    |       |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |
| 102- 113                    |       |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |
| 114- 127                    |       |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |
| 128- 143                    |       |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |
| 144- 160                    |       |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |
| 161- 180                    |       |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |
| 181- 202                    |       |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |
| 203- 227                    |       |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |
| 228- 256                    |       |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |
| 257- 267                    |       |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |
| 268-                        |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |



## Service Guide OF1000

### Chapter 3 Maintenance & Disassembly

### 3.4 CLEANING

#### 3.4.01 General Information

Routine inspection and cleaning should be performed every six months or as needed.

1. Remove any dropped toner and dust.
2. Clean inside and around the printer with a vacuum cleaner (designed to pick-up toner) when necessary.

#### CAUTION:

If you use a vacuum cleaner that does not have a toner filter, you may severely damage the vacuum cleaner.

Do NOT touch the transfer roller! Touching the transfer roller may cause incomplete toner transfer, resulting in faded output.

#### Cleaning Table

| Part                 | Cleaning Procedure  | Disassembly Procedure |
|----------------------|---|-----------------------|
| LED Head             | Clean using LED lens cleaner pad (provided in toner cartridge kit)              | 3.2.02                |
| Separation Rubber    | Clean with water.<br>Replace if worn.   | 3.2.19                |
| Feed Roller 1        | Clean with ethyl alcohol.   | 3.2.22                |
| Pinch Roller         | Clean with ethyl alcohol.   | 3.2.23, 29            |
| Sensor Roller        | Clean with ethyl alcohol.   | 3.2.25                |
| Sub Roller           | Clean with ethyl alcohol.   | 3.2.27                |
| ADF Roller           | Clean with ethyl alcohol.   | 3.2.28                |
| Feed Roller 2        | Clean with ethyl alcohol.   | 3.2.33                |
| Contact Image Sensor | Clean with ethyl alcohol.   | 3.2.34                |
| Printer Unit         | Shop vacuum with toner filter<br>DO NOT touch the transfer roller<br>Damp Cloth | N/A                   |
| Covers               | Shop vacuum with toner filter<br>All-purpose cleaner and cloth                  | N/A                   |

#### 3.4.02 LED Head

The LED head should be cleaned when either of the following occur.

- A new toner cartridge is installed.
- Vertical white lines or stripes (voids and / or light printing) appear on the output.

To clean the LED head, follow this procedure.

1. Use the cleaning pad supplied in the toner cartridge kit, or use lens tissue and ethyl alcohol.
2. Slide the cleaner pad across the lens array several times to clean the head. Use a clean portion of the pad on each pass.

3. Discard the used pad.

### **3.4.03 Printer Unit**

1. Clean the inside of the unit with a vacuum cleaner designed to handle toner.
2. Be sure to thoroughly vacuum around all sensors.

**CAUTION:**

If you use a vacuum cleaner that does not have a toner filter, you may severely damage the vacuum cleaner.

Do NOT touch the transfer roller! Touching the transfer roller may cause incomplete toner transfer, resulting in faded output.

### **3.4.04 Covers**

1. Clean the covers using a soft, lint-free cloth and an all-purpose cleaner.
- 

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### Chapter 3 Maintenance & Disassembly

### 3.5 LUBRICATION

#### 3.5.01 General Information

##### CAUTION:

Do NOT touch the transfer roller! Touching the transfer roller may cause incomplete toner transfer, resulting in faded output.

Lubrication should be performed once a year or as necessary.

Use Dow Corning Molycoat BR-2 or Molycoat EM-30L or equivalent. When applying the molycoat, do NOT overlubricate. Use molycoat sparingly!

Do NOT allow lubricant to contact the surface of any rollers or paper guides.

Lubricate the items listed in the table below.

**Lubrication Table**

| Item  | Disassembly Procedure |
|---|-----------------------|
| All gears of the gear frame assembly                              | 3.2.12, 14            |
| Transmit stepper motor gear                                       | 3.2.13                |
| Reset levers - mounting shafts and channels                       | 3.2.14                |
| Stacker cover damper gear   | 3.2.17                |
| ADF roller gear   | 3.2.28                |
| ADF idle gear   | 3.2.35                |
| Registration and main stepper motor idle gears and shafts         | 3.2.39                |
| Gear on the shaft of the main stepper motor                       | 3.2.39                |
| Gear on the shaft of the registration stepper motor               | 3.2.39                |
| Eject roller assembly (where roller shafts contact the assembly)  | 3.2.40                |
| Eject roller assembly idle gear                                   | 3.2.40                |
| *** Fuser idle gear   | 3.2.43                |
| Teeth of the reduction gear                                       | 3.2.45                |
| Transfer roller gear (Do NOT allow grease to contact the roller!) | 3.2.46                |
| *** Ends of pressure roller shaft                                 | 3.2.46                |
| Inside of the pivot points of the reset levers                    | 3.2.46                |
| Gear on the damper stacker arm                                    | 3.2.46                |
| Inside of bearings of transfer roller                             | 3.2.47                |
| Inside of bearings of hopping roller shaft assembly               | 3.2.49                |
| Hopping roller shaft, above the fins                              | 3.2.49                |

\*\*\* Requires Dow Corning Molycoat "HP-3001" high temperature conductive grease.

---

#### 4.1.01 Introduction

This section is used to isolate problems to the assembly level. Application problems and detection of faulty components on the printed circuit boards are not addressed.

When troubleshooting a defective unit, **refer first to Section 4.4**  **of this Service Handbook.** This section contains tips on preventing problems as well as a list of common problems.

**Next, refer to Section 4.5**  **Repair Analysis Procedures (RAPs)** will ask you questions or require you to make observations. The answers to these questions and the results of your observations determine your next course of action. Use the RAP Index to identify which RAP should be used to resolve the problem with the machine.

If you encounter a situation that is not addressed by the documentation in this kit, please report the problem to Okidata. Send your report to the Okidata Technical Training Group. Refer to the Service Center Reference Guide for information on contacting Okidata.

The following information is provided to detect and analyze failures.

1. Okilink II, Faxable Facts, Technical Service Bulletins
  2. Troubleshooting Tips / Common Problems
  3. Repair Analysis Procedures
  4. Tests
  5. Reports
  6. Resets
  7. Technical Functions
-

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## **4.2 TROUBLESHOOTING UPDATES**

### **4.2.01 General Information**

Okidata distributes updated troubleshooting information in three ways.

1. Okilink II
2. Faxable Facts
3. Technical Service Bulletins

### **4.2.02 Okilink II**

Okilink II is Okidatas Bulletin Board Service. This service is available to all Okidata Certified Service Technicians. Okilink II provides additional troubleshooting and service information. Technicians can download files, ask questions of Okidatas technical support personnel, and participate in round table discussions about Okidata products and services. Technical Service Bulletins, Recommended Spare Parts Lists, Printer Drivers, Product Specifications, and Service Training Information are also available.

Refer to the Service Center Reference Guide for information on accessing Okilink II.

### **4.2.03 Faxable Facts**

Okidatas Faxable Facts is an automated fax document retrieval system. It is maintained by Okidatas Customer Information Center. Answers to common questions about Okidata products are available through faxable facts.

Refer to the Service Center Reference Guide for information on accessing Faxable Facts.

### **4.2.04 Technical Service Bulletins**

Okidatas Technical Service Bulletins (TSBs) contain technical information obtained after product release. Firmware updates, part number changes, and procedural changes are some of the subjects covered by these bulletins. The TSBs are distributed through Okilink II.

Refer to the Service Center Reference Guide for information on accessing Okilink II.

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## **4.3 REPORTING PROBLEMS**

### **4.3.01 General Information**

Okidata strives to provide accurate and detailed service information through its training materials. The Technical Training Group realizes that service technicians have valuable experience, knowledge, and opinions. Okidata strongly encourages you to report any problems you may encounter when using the materials of this training kit. Please be as specific and detailed as possible. Your comments, suggestions, and criticisms are used to update and revise training kits. You should reference the training materials when servicing Okidata products. Most problems can be solved by using the information provided in the training materials. If you encounter a situation that cannot be solved, please let Okidata know.

Refer to the Service Center Reference Guide for information on contacting Okidata.

### **4.3.02 Problem Lists**

Technicians frequently request a list of common problems specific to a product. Technical Training Kits are written before a product is shipped to customers. Therefore, such information is not available when a product is first released.

However, Okidata wants to respond to these requests. Okilink II provides round-table discussions on technical problems. Errors and corrections in the training materials are listed in the Training Section of Okilink II. The Technical Service Bulletins (also known as Okidatas Monthly Mail) are available via Okilink II. Situations that are not addressed in the reference documentation, Technical Service Bulletins, or round tables may be reported to the Dealer Service and Support Engineers (DSSEs) or the Technical Training Group. You will receive a response to your message within one business day.

The information on Okilink II is the most accurate and up-to-date technical information available from Okidata. This is only possible with your assistance. By reporting your suggestions, concerns, and problems, Okidata can provide the best possible information.

Your cooperation is greatly appreciated. Thank you for your help!

### **4.3.03 Reporting Methods**

#### **Okilink II**

You may use Okilink II to report your findings. Refer to the Service Center Reference Guide for information on using Okilink II.

#### **Course Critique**

Use the Course Critique to report any problems you find as you are completing the self-paced training.

#### **Fax Number**

If you wish to fax your response, please use the numbers listed in the Service Center Reference Guide.

**Mailing Address**

If you respond by mail, please use the appropriate address listed in the Service Center Reference Guide.

**Information Provided**

Please provide the following information when reporting problems.

1. Okidata Dealer Number
  2. Technicians Name
  3. Company Name
  4. Companys Address (Street, City, State/Province, ZIP / Postal Code, Country)
  5. Telephone and Fax Numbers (with area / country access codes)
  6. Product Name
  7. Units Serial Number
  8. Description of Problem
  9. Document Name (with page number or procedure) with error or problem.
- 

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## 4.4 TROUBLESHOOTING TIPS

### 4.4.01 Preliminary Checks

1. Is the unit operated under the proper ambient conditions?
2. Is the paper being used made specifically for xerographic printing?
3. Have the toner cartridge and image drum been replaced as recommended?
4. Has the image drum cartridge been installed properly?
5. Is Okidata toner being used?

### 4.4.02 Tips for Preventing Image Problems

1. Do not let anything touch the surface of the image drum.
2. **NEVER** expose the image drum to direct sunlight.
3. Do not touch the fusing unit. Oil from your skin can cause fusing temperature variation.
4. Do not expose the image drum to light for more than five minutes.
5. Do not touch the transfer roller. Touching the transfer roller may cause incomplete toner transfer, resulting in faded output.

### 4.4.03 Common Problems

#### 1. The display is blank.

Check that the power switch is ON.

Check that the power cord is firmly plugged into the Okifax 1000 *and* the wall outlet.

Make sure that power is supplied to the wall outlet.

#### 2. Nothing happens when you press the operator panel keys.

Power OFF the Okifax 1000, wait 10 seconds, then power ON the Okifax 1000.

Check that the power cord is firmly plugged into the Okifax 1000 **and** the wall outlet.

Make sure that power is supplied to the wall outlet.

#### 3. The display tells you to replace paper even though there is paper in the cassette.

Remove the paper cassette and make sure that the paper is firmly stacked in the cassette. Push the paper under the tabs on the sides of the paper cassette.

#### 4. Your original document jams.

Check the document for wrinkles, tears, or other damage.

Make sure there are no staples or paper clips attached and that the paper is clean and dry.

If the problem persists, make a copy of your document on a photocopier and then fax the copy.

Check for contaminants on the contact image sensor.

Make sure the reference roller is clean and free of contaminants.

**5. Your Okifax 1000 will not dial.**

Make sure that the telephone line is connected to the LINE JACK.

Lift the handset and check for a dial tone. If you do not hear one, there may be a problem with your telephone line.

If you hear a dial tone, you may be using the wrong dial method (pulse or tone) for your area. Make sure the telephone jack is an RJ-11C.

**6. The display shows a communication error.**

You may be trying to communicate with a non-group 3 facsimile machine.

The remote machine may not be able to perform the function that you want (such as polling or confidential reception).

The remote machine may be out of paper or experiencing a paper jam.

Bad telephone lines can also cause communication errors. Try sending the fax again.

The receiving facsimile machine may have a service problem. Send a fax to a different location to test your Okifax 1000.

**7. You sent a fax, but it was received completely blank.**

Make sure that you have loaded your document face-down.

**8. You sent a fax, but the image the remote fax received was very poor quality.**

If your document has small type, complex illustrations, photographs or was extremely light or dark, try changing the TRANSMIT RESOLUTION and TYPE OF ORIGINAL Settings.

Copy the document on the Okifax 1000 to see how it will transmit. If the copy looks good, the problem may be telephone line interference or a defective facsimile machine at the receiving side.

**9. Your Okifax 1000 does not receive faxes.**

Check which reception mode is set on your Okifax 1000. The mode will be displayed in the upper right-hand corner of the LCD when the Okifax 1000 is in idle mode.

**10. The image received on your Okifax 1000 is very poor.**

If your document has small type, complex illustrations, photographs or was extremely light or dark, ask the person sending the fax to change the TRANSMIT RESOLUTION and TYPE OF ORIGINAL Settings.

Copy a similar document to test your Okifax 1000. If the copy looks good, the problem may be telephone line interference or a defective facsimile machine at the transmitting side.

**11. You tried dialing with a one-touch key or an auto-dial code but nothing happened.**

Make sure that something is programmed into the One-Touch Key or Auto-dial Code that you are using.

Check the telephone number to make sure it was entered correctly.

When you are dialing with an Auto-dial Code, be sure to press the AUTO-DIAL Key before you enter the code.

If your Okifax 1000 has the AUTO START feature disabled, you must press the START Key to

begin dialing (refer to DIALING PARAMETERS in the Users Documentation for AUTO START information).

Confirm that the correct dial method is set (pulse or tone).

**12. You set your Okifax 1000 for delayed transmission but nothing happened.**

Check your operator panel display to assure that you have set the DATE/TIME correctly.

**13. Your received documents are light or have vertical white streaks on them and you are not out of toner.**

You may need to replace the image drum unit.

**14. Your Okifax 1000 disconnected before you could answer a voice request.**

You have only 15 seconds to answer a voice request. Once you hear the warbling tone, pick up the handset and press VOICE REQUEST.

**15. Your Okifax 1000 will not poll the remote fax machine.**

Call the person at the remote fax machine and make sure they have loaded documents and placed their machine in the Polling Transmission Mode.

Make sure that the remote machines polling number matches the password that you entered.

**16. You cannot program your Okifax 1000.**

During a multiple location polling reception or a multiple location memory transmission, you cannot access your programming menus.

**17. Someone tried to send you a confidential fax but nothing happened.**

You must set up a confidential mailbox and enter a 4-digit password before anyone can send you a confidential fax.

If your message is left in the Okifax 1000 for more than ten days, your fax machine will erase it.

**18. Your received faxes sometimes look distorted.**

If the received document is longer than the paper that you have loaded in the paper cassette, the Okifax 1000 will automatically reduce the length of your document to fit on your paper. A communications problem can cause the received fax to look distorted.

**19. Your Okifax 1000 is connected to a PBX and cannot dial out.**

You must enter your access digit(s) before the telephone number for each number that you dial or program into your machine.

Be sure to use a pause after the access digit(s). Refer to the Operators Manual for a description of PAUSE.

You should enable the PBX Function for it to work (refer to DIALING PARAMETERS in the Users Documentation).

**20. You want to answer the phone but your Okifax 1000 always answers first.**

If you are using an external telephone, change the Okifax 1000s RING RESPONSE setting (USER FUNCTION 24).

If you are using the Telephone/Fax Reception Mode, and require more time to answer the telephone before the Okifax 1000 switches back to fax mode, modify the TEL/FAX TIMER PRG. (USER FUNCTION 10).

**21. You have connected an answering machine to your Okifax 1000 and it does not work.**

For an answering machine to function properly, TECHNICAL FUNCTION 45 should be set ON to enable the TAD Reception Mode. The TAD Reception Mode is enabled when the AUTO REC Key is pressed. Make sure that TAD is displayed on the LCD when the Okifax 1000 is in the idle mode.

**22. The Okifax 1000 is too loud.**

Adjust the monitor volume (USER FUNCTION 05).

Adjust the incoming ring volume (the volume switch is located at the rear of the Okifax 1000).

Adjust the BUZZER VOLUME (USER FUNCTION 16).

If you do not want the Okifax 1000 to beep whenever it runs out of paper, set NO PAPER CALL (USER FUNCTION 11).

**23. You keep getting reports that you do not want.**

Check the USER FUNCTION settings and disable all unwanted reports.

**24. When you receive long faxes or make copies of long documents, the bottom is always cut off.**

Try enabling the RX SPLIT PRINT or COPY SPLIT PRINT functions. These functions will split long documents across two pages.

#### **4.5 REPAIR ANALYSIS PROCEDURES - Using the RAPs**

##### **4.5.01 Using the RAPs**

When using the Repair Analysis Procedures, follow these steps.

- Use the RAP INDEX to find the RAP which is associated with the problem.
  - Go to the appropriate RAP.
  - All of the RAPs will begin with a START Statement, followed by questions or another type of statement.
- 

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**4.5.02 RAP Index**

| <b>RAP Number</b> | <b>Description</b>                         |
|-------------------|--|
| 01                | No LCD Display                             |
| 02                | Alarm LED is lit                           |
| 03                | Local Copy Problem                         |
| 04                | Auto-Dial Problem                          |
| 05                | Data Transmission Problem                  |
| 06                | Auto Reception Problem                     |
| 07                | Reception Problem                          |
| 08                | Self-Diagnosis Failure                     |
| 09                | Scan Operation Test Failure                |
| 10                | LED Test Failure                           |
| 11                | Tone Send Test Failure                     |
| 12                | High-Speed Modem Test Failure              |
| 13                | Multi-frequency Send Test Failure          |
| 14                | Printer Unit Print Test Failure            |
| 15                | Voice Message Test Failure                 |
| 16                | No Acoustic Line Monitor                   |
| 17                | Document Does Not Feed                     |
| 18                | Multiple Document Feeds                    |
| 19                | Document Skews                             |
| 20                | Document Jams                              |
| 21                | Printer Unit Problems Shown on LCD Display |
| 22                | Image Problems                             |

---

**RAP 01: No LCD Display**

START

Is the Okifax 1000 powered ON?

NO Power ON the Okifax 1000.

YES Is + 5 vdc present at CN1, pin 6 of the OPE-150 board?

YES Check the cable between CN1 of the OPE-150 and CN9 of the MCNT-150 for damage. Replace the cable if damaged.

NO Is + 5 vdc present at CN7, pin 8 of the MCNT-150 board?

YES Replace the OPE-150 board.

NO Replace the PWU-150 board.

Is the problem resolved?

YES End of Procedure.

NO Replace the MCNT-150.

---

---

**RAP 02: Alarm LED is Lit**

START

Has a communication error occurred?

YES Press STOP and print an Activity Report ([Refer to the Service Code List in Section 4.7 of this manual](#)).

NO Is the message RELOAD DOCUMENTS CONFIRM AND STOP displayed?

YES [Refer to RAP 17](#), [18](#) or [19](#) as appropriate.

NO Is the message DOCUMENT JAM displayed on the LCD?

YES [Refer to RAP 20](#).

NO Is the message COVER OPEN displayed on the LCD?

YES [Refer to RAP 21A](#).

NO Is the message PRINTER ALARM X displayed on the LCD?

YES [Refer to RAP 21B](#), [21C](#), [21D](#), [21E](#) as appropriate.

NO Is the message PAPER JAM - CONFIRM AND STOP displayed on the LCD?

YES [Refer to RAP 21F](#).

NO Is the message NO PAPER displayed on the LCD?

YES [Refer to RAP 21G](#).

NO Is the message NO TONER displayed on the LCD?

YES Replenish Toner.

NO Call Okidata Technical Support for assistance.

---

**RAP 03: Local Copy Problem**

START

Perform the Scanner Operation / Calibration Test ([Refer to Section 4.6](#) ).

Is the message RESULT OK displayed on the LCD?

NO Replace the contact image sensor.

Perform the Scanner Operation / Calibration Test ([Refer to Section 4.6](#) ).

Is the message RESULT OK displayed on the LCD?

YES End of procedure.

NO Replace the PCNT-150 board.

YES Perform the Printer Unit Print Test ([Refer to Section 4.6](#) ).

Are horizontal lines being printed?

YES Is the print quality acceptable?

NO Refer to [RAP 22](#) .

YES Replace the MCNT-150.

NO Refer to [RAP 14](#) .

---

**RAP 04: Auto-Dial Problem**

**NOTE:**

Make sure that your selected dialing method (tone/pulse) is appropriate for your Telco / PBX needs. Refer to the Dialing Parameters in the Users Documentation.

START

Will the unit perform a manual dial?

NO Can a dial tone be heard when the handset is picked up?

NO Make sure the RJ-11C is connected to the LINE Jack on the Okifax 1000.

Can a dial tone be heard?

YES End of procedure

NO Unplug the Okifax 1000 from the RJ-11C and attach a standard single line telephone to the RJ-11C.

Can a dial tone be heard?

NO Contact your local TELCO.

YES Perform the following in the order listed:

- (1) Replace the modular line cord.
- (2) Replace the NCU-U board.
- (3) Hook switch.
- (4) MCNT-150 board.

YES Replace the MCNT-150.

YES Replace the MCNT-150.

Is the problem resolved?

YES End of procedure.

NO Contact Okidata Technical Support.

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### Chapter 4 Failure & Repair Analysis

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#### RAP 05: Data Transmission Problem

##### NOTE

This RAP determines the cause of a problem which occurs after the Okifax 1000 connects with a remote station.

Before troubleshooting any communication problems, run Self-Diagnosis, then verify that the firmware is the most current version (in accordance with the Technical Service Bulletins - TSBs). If the firmware is not the most current version - replace it before proceeding!

##### START

Printout the Activity Report

Look for common failure items. For instance, is one particular country, area code or phone number always causing the problem?

If possible, substitute the "defective" Okifax 1000 with a known good facsimile unit. If the trouble persists, there may be a problem with the line or at the receiving end.

Check the Okifax 1000 User Functions, Dialing Parameters and Technical Functions.

Perform the High-Speed Modem Transmit Test ([Refer to Section 4.6](#) ). If this test fails, [Refer to RAP 12](#) .

Data communication problems could have many different causes. It would be almost impossible to design a RAP to cover all possible situations. Therefore, once you have performed the above listed steps, replace the following assemblies in the order listed:

- (1) MCNT-150 board.
  - (2) NCU-U board.
  - (3) LINE-JU board.
-

---

**RAP 06: Auto Reception Problem**

START

Place the Okifax 1000 in the manual receive mode. Is manual reception working properly?

NO Replace the following assemblies in the order listed.

(1) NCU-U board.

(2) LINE-U board.

YES Place the Okifax 1000 in the auto-receive mode. Place a call to the Okifax 1000.

Is the ring signal detected at CN7 Pin 9 of the NCU-U board?  
Refer to Section 1 for ring signal specifications.

YES Replace the MCNT-150 board.

NO Replace the NCU-U board.

Is the problem resolved?

YES End of procedure.

NO Replace the LINE-JU board.

---



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### Chapter 4 Failure & Repair Analysis

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#### RAP 07: Reception Problem

##### NOTE

This RAP determines the cause of a problem which occurs after the Okifax 1000 connects with a remote station.

Before troubleshooting any communication problems, run Self-Diagnosis, then verify that the firmware is the most current version (in accordance with the Technical Service Bulletins - TSBs). If the firmware is not the most current version - replace it before proceeding!

##### START

Printout the Activity Report

Look for common failure items. For instance, is one particular, country, area code or phone number always causing the problem?

If possible, substitute the "defective" Okifax 1000 with a known good facsimile unit. If the trouble persists, there may be a problem with the line or at the transmitting end.

Check the Okifax 1000 User Functions, Dialing Parameters and Technical Functions.

Perform the High-Speed Modem Receive Test ([Refer to Section 4.6](#) ). If this test fails, [Refer to RAP 12](#) .

Data communication problems could have many different causes. It would be almost impossible to design a RAP to cover all possible situations. Therefore, once you have performed the above listed steps, replace the following assemblies in the order listed:

- (1) MCNT-150 board.
  - (2) NCU-U board.
  - (3) LINE-JU board.
-

---

**RAP 08: Self-Diagnosis Failure**

START

Perform the Self Diagnosis Test [\(Refer to 4.6 !\[\]\(8bfb220024fe00f38cc38b2c57f565bd\_img.jpg\)\)](#)

Is the quality of the printed output satisfactory?

NO Perform the Printer Unit Print Test. [\(Refer to 4.6 !\[\]\(aa76d573b0706b8788d1f303f92b227d\_img.jpg\)\)](#)

YES Is the M-ROM Hash Check OK?

NO Replace the EPROM on the MCNT-150 board.

YES Is the M-RAM Check OK?

NO Replace the MCNT-150

YES Is the P-ROM Hash Check OK?

NO Replace the EPROM on the PCNT-150 board.

YES Is the P-RAM Check OK?

NO Replace the PCNT-150

YES Is the optional RAM card installed?

NO End of procedure.

YES Is the message RAM CARD OK printed?

YES End of procedure.

NO Power OFF the Okifax 1000, then re-seat the  
RAM Card. Power ON the Okifax 1000 and run the  
Self-Diagnosis.

YES Is the message RAM CARD OK printed?

YES End of procedure.

NO Replace the RAM Card and test again.

Is the problem resolved?

YES End of procedure.

NO Replace the MCNT-150.

---

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**RAP 09: Scan Operation Test Failure**

START

Does the message SCANNING ERROR appear on the LCD when calibrating the CIS?

YES Be sure that plain white bond (A4 size) is loaded on the automatic document feeder.

Is - 12 vdc present at CN6, pin 4 of the PCNT-150 board?

NO Replace the PWU-150 board.

YES Replace the Contact Image Sensor

Is the problem resolved?

NO Replace the PCNT-150 board.

YES End of procedure.

NO Is abnormal feeding observed during the SCANNING CHECK?

NO End of procedure.

YES Is the document not feeding at all?

YES [Refer to RAP 17](#) .

NO Is more than one document feeding?

YES [Refer to RAP 18](#) .

NO Does the document skew?

YES [Refer to RAP 19](#) .

NO Does the document jam?

YES [Refer to RAP 20](#) .

NO Is the problem resolved?

YES End of procedure.

NO Contact Okidata Technical Support.

---

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**RAP 10: LED Test Failure**

START

Do one or more LEDs light?

YES Replace the OPE-150 board.

NO Is + 5 vdc present at CN1, pin 6 of the OPE-150 board?

YES Check the cable between CN1 of the OPE-150 and CN9 of the MCNT-150 for damage. Replace the cable if damaged.

NO Is + 5 vdc present at CN7, pin 8 of the MCNT-150 board?

YES Replace the OPE-150 board.

NO Replace the PWU-150 board.

Is the problem resolved?

YES End of procedure.

NO Replace the MCNT-150.



---

**RAP 11: Tone Test Failure**

START

Is the monitor volume (USER FUNCTION #5) adjusted so the tones will be audible?

NO Modify User Function #5.

YES Is CN11 (speaker harness) connected to CN11 of the MCNT-150?

NO Connect it.

YES Replace the MCNT-150.

---

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---

**RAP 12: High-Speed Modem Test Failure**

START

Place the leads of your multimeter across the RJ-11C data terminals, TIP and RING (you will be measuring rms voltage).

Perform the H-MODEM SEND TEST (transmitter) and the H-MODEM RECEIVE TEST (receiver).

**NOTE:**

You will need two **Okifaxes** to perform this procedure. However, they need not be at the same location.

Are you troubleshooting the transmitting Okifax?

NO Go to POINT - A

YES Does the multimeter read approximately .27 volts rms?

YES Although the Okifax 1000 appears to be transmitting, the validity of the data transfer cannot be assured by this voltage measurement. If you are encountering communication error, replace the following in the order listed.

- (1) MCNT-150 board
- (2) NCU-U board
- (3) LINE-JU board

NO Place the leads of your multimeter across CN7 pins 1 and 4 of the NCU board.

Does the multimeter read approximately .27 volts rms?

YES Replace the NCU-U board.

Is the problem resolved?

YES End of procedure.

NO Replace the MCNT-150 board.

NO Is + 12 vdc present on CN1 pin 14 of the MCNT-150 board and is - 12 vdc present on CN1 pin 15 of the MCNT-15 board?

NO Replace the PWU-150.

Is the problem resolved?

YES End of procedure.

NO Contact Okidata Technical Support.

YES Replace the MCNT-150 board.

Is the problem resolved?

YES End of procedure.

NO Contact Okidata Technical Support.

**POINT - A**

YES Does the multi-meter read approximately .27 volts rms?

NO The line may be bad. Call the TELCO for verification.

YES Place the leads of your multimeter across CN7 pins 1 and 2 of the NCU board.

Does the multimeter read approximately .27 volts rms?

YES Replace the MCNT-150 board.

NO Is + 12 vdc present on CN1 pin 14 of the MCNT-150 board and is - 12 vdc present on CN1 pin 15 of the MCNT-150 board?

NO Replace the PWU-150.

Is the problem resolved?

YES End of procedure.

NO Contact Okidata Technical Support.

YES Replace the NCU-U board.

Is the problem resolved?

YES End of procedure.

NO Replace the LINE-JU board.

Is the problem resolved?

YES End of procedure.

NO Contact Okidata Technical Support.

---

**RAP 13: Multi-Frequency Tone Test Failure**

START

Do **all** keys of the ten-key pad **fail** to generate a tone?

NO Replace the OPE-150 board.

Is the problem resolved?

NO Replace the MCNT-150 board.

YES End of procedure.

YES Is the monitor volume (USER FUNCTION #5) adjusted so the tones will be audible?

NO Modify User Function #5.

YES Is CN11 (speaker harness) connected to CN11 of the MCNT-150?

NO Connect it.

YES Replace the MCNT-150

---

**RAP 14: Printer Unit Print Test Failure**

START

Does the Horizontal Rule Test Pattern print continuously?

YES Is the quality of the printer output satisfactory?

NO [Refer to RAP 22](#) .

YES End of procedure.

NO Is the message PAPER JAM - CONFIRM AND STOP displayed on the LCD?

YES [Refer to RAP 21F](#) .

NO Is the message PRINTER ALARM 1 - CONFIRM AND STOP displayed on the LCD?

YES [Refer to RAP 21B](#) .

NO Is the message PRINTER ALARM 2 - CONFIRM AND STOP displayed on the LCD?

YES [Refer to RAP 21C](#) .

NO Is the message PRINTER ALARM 3 - CONFIRM AND STOP displayed on the LCD?

YES [Refer to RAP 21D](#) .

NO Is the message PRINTER ALARM 4 - CONFIRM AND STOP displayed on the LCD?

YES [Refer to RAP 21E](#) .

NO IS the message NO PAPER - REPLACE PAPER displayed on the LCD?

YES Is paper installed in the paper cassette?

YES [Refer to RAP 21G](#) .

NO Add paper.

Is the problem resolved?

YES End of procedure.

NO Contact Okidata Technical Support.

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**RAP 15: Voice Message Test Failure**

START

Is the monitor volume (USER FUNCTION #5) adjusted so the Voice Message will be audible?

NO Modify User Function #5.

YES Is CN11 (speaker harness) connected to CN11 of the MCNT-150?

NO Connect it.

YES Replace the MCNT-150.

---

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**RAP 16: No Acoustic Line Monitor**

START

Is the monitor volume (USER FUNCTION #5) adjusted so the Voice Message will be audible?

NO Modify User Function #5.

YES Is CN11 (speaker harness) connected to CN11 of the MCNT-150?

NO Connect it.

YES Replace the MCNT-150.

---

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**RAP 17: Document Does Not Feed**

START

Place a document on the automatic document feeder.

Does the sub-roller rotate?

NO Is the document touching PC1?

NO Remove obstructions so the document can contact PC1.

YES Replace the following items in the order listed.

(1) PC1

(2) Transmit Stepper motor

(3) PCNT-150

YES Is the leading edge of the paper curled?

YES Remove the curl and reload the document.

NO Is the document too thick

[\(Refer to Section 1 for paper specifications !\[\]\(88c7e36e1584c98f53b7f77f538945e5\_img.jpg\)\)?](#)

YES Photocopy the original on 20 lb. bond, then load the photocopy.

NO Are there too many documents on the ADF tray (maximum of 30)?

YES Reduce the number of documents on the ADF.

NO Is the original document on a coated paper?

YES Photocopy the original to 20 lb bond then reload the photocopy.

NO Are bits of paper or adhesive materials blocking the document feed route?

YES Clean the document feed route, then clean the contact image sensor.

NO Replace the separation rubber.

Is the problem resolved?

YES End of procedure.

NO Replace ADF assembly.

---

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**RAP 18: Multiple Documents Feed**

START

Remove the original documents, fan them, then load the documents again.

Is the problem resolved?

YES End of procedure.

NO Clean the separation rubber.

Is the problem resolved?

YES End of procedure.

NO Push on the separation rubber. Does it spring back to its original position?

NO Replace the ADF assembly.

YES Replace the separation rubber.

Is the problem resolved?

YES End of procedure.

NO Check the tension of the ADF spring.

Is the problem resolved?

NO Replace the ADF assembly.

YES End of procedure.

---

---

**RAP 19: Document Skews**

START

Make sure the document guides are set to the width of the document.

Is the problem resolved?

YES End of procedure.

NO Clean the separation rubber, feed rollers, sub-roller and ADF roller.

Is the problem resolved?

YES End of procedure.

NO Push on the separation rubber. Does it spring back to its original position?

NO Replace the ADF assembly.

YES Replace the separation rubber.

Is the problem resolved?

YES End of procedure.

NO Check the tension of the ADF spring.

Is the problem resolved?

NO Replace the ADF assembly.

YES End of procedure.

---

---

**RAP 20: Document Jams**

START

Place a document on the automatic document feeder.

Does the document feed at all?

NO Is the document touching PC1?

NO Remove obstructions so the document can contact PC1.

YES Replace the following items in the order listed.

- (1) PC1.
- (2) Transmit Stepper motor.
- (3) PCNT-150.

YES Does the document feed approximately 8 mm then stop (the message SELECT LOCATION should be displayed on the LCD)?

NO Replace the following items in the order listed.

- (1) PC2.
- (2) Transmit Stepper motor.
- (3) PCNT-150.

YES Press the COPY key.

Does the document jam?

NO End of procedure.

YES Is the leading edge of the paper curled?

YES Remove the curl and load the document again.

NO Is the document too thick (Refer to Section 1 for paper specifications)?

YES Photocopy the original to 20 lb. bond, then load the photocopy.

NO Are there too many documents on the ADF tray (maximum of 30)?

YES Reduce the number of documents on the ADF.

NO Is the original document on a coated paper?

YES Photocopy the original to 20 lb. bond, then load the photocopy.

NO Are bits of paper or adhesive materials blocking the document feed route?

YES Clean the document feed route, then clean the contact image sensor.

NO Replace the separation rubber.

Is the problem resolved?

YES End of procedure.

NO Replace the ADF assembly.

---

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**RAP 21: Printer Unit Problems Shown On LCD Display**

| Category                  | LCD Message Display                         | Trouble   | Refer to RAP Number |
|---------------------------|---|---|---------------------|
| Cover Open                | 01/31/93 23:59 [T/F]<br>COVER OPEN          | The cover (scan unit) is open.  | 21A                 |
| Printer Interface Error   | PRINTER ALARM 1 [TEL]<br>CONFIRM AND "STOP" | Error in the interface between the MCNT and the PCNT.                             | 21B                 |
| Printer Engine Errors     | PRINTER ALARM 2 [TEL]<br>CONFIRM AND "STOP" | Printer controller ROM / RAM error  | 21C                 |
| ^                         | PRINTER ALARM 3 [TEL]<br>CONFIRM AND "STOP" | Fan motor rotation error  | 21D                 |
| ^                         | PRINTER ALARM 4 [TEL]<br>CONFIRM AND "STOP" | Fuser unit thermal error  | 21E                 |
| Recording Paper/Jam Error | PAPER JAM [TEL]<br>CONFIRM AND STOP         | Recording paper feed jam<br>transport jam<br>ejection jam<br>recording size error | 21F                 |
| Paper Cassette Request    | NO PAPER [TEL] REPLACE PAPER                | No recording paper cassette or no recording paper.                                | 21G                 |

|              |                                       |  |  |
|--------------|---------------------------------------|--|--|
| Daily Status | 01/31/93 23:59 [T/F]<br>WAIT A MOMENT | The<br>printer<br>is<br>warming<br>up. |  |
| ^            | NO TONER [FAX] REPLACE<br>TONER CART. | Toner is<br>running<br>out.            |  |

**NOTE:**

The Action Items Referred to in RAP 21A through RAP 21G are listed at the end of the LCD Problem Charts.

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**RAP 21A: Cover Open**

START

Are both sides of the face-down stacker cover completely closed?

NO Close the cover completely.

YES Remove the rear cover. As you open and close the face-down stacker cover, can you hear the "click" of the cover open microswitch as it opens and closes?

NO Remove the package shelf assembly so you can see the PSUB-150 board.

Is the cover open switch arm actuating the cover open switch as you open and close the face-down stacker cover?

YES Replace the PSUB-150

NO Is the cover open switch arm broken?

YES Replace the cover open switch arm.

NO Make sure that the left reset lever and face-down stacker cover are functioning properly.

Is the problem resolved?

YES End of procedure.

NO Contact Okidata Technical Support

YES Is fuse F2 on the power supply (PWU-150) open?

YES Replace the PWU-150.

NO Is + 38 vdc present at CN2 Pins 1 and 2 on the PSUB-150 board?

NO Replace the harness between the PSUB board (CN2) and the PWU-150.

Is the problem resolved?

YES End of procedure.

NO Replace the PWU-150.

YES Replace the PSUB-150 board.

Is the problem resolved?

YES End of procedure.

NO Replace the PCNT-150 board.

---

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**RAP 21B: Printer Alarm 1**

START

Power the Okifax 1000, Off then On again. Is the problem resolved?

YES End of procedure.

NO Is the harness between CN1 of the PCNT-150 board and CN3 of the MCNT-150 board undamaged and properly connected?

NO Replace or properly attach the harness.

YES Replace the PCNT-150 board.

Is the problem resolved?

YES End of procedure.

NO Replace the MCNT-150 board.

---

---

**RAP 21C: Printer Alarm 2**

START

Power the Okifax 1000, Off then On again.

Is the problem resolved?

YES End of procedure.

NO Is the harness between CN1 of the PCNT-150 board and CN3 of the MCNT-150 board undamaged and properly connected?

NO Replace or properly attach the harness.

YES Are all connections on the PCNT-150 properly attached?

YES Replace the PCNT-150 board.

NO Re-seat all of the connectors.

Is the problem resolved?

YES End of procedure.

NO Contact Okidata Technical Support.

---

---

**RAP 21D: Printer Alarm 3**

START

Is the fan operating?

YES Replace the PCNT-150 board.

NO Remove the rear cover. Are the fan blades obstructed?

YES Remove the obstruction.

NO Is the fan harness connected to CN11 of the PCNT-150 board?

NO Connect the harness.

YES Replace the fan, then replace PCNT-150 board.

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**RAP 21E: Printer Alarm 4**

START

Remove the fuser unit.

Check the resistance of the thermistor. Is it approximately 100K ohms at room temperature?

NO Replace the thermistor.

YES Check the resistance of the fuser lamp. Is it zero ohms? (Zero ohms - lamp is good, Infinite Ohms - lamp is bad)

NO Replace the fuser lamp.

YES Install the fuser unit.

Is the problem resolved?

YES End of procedure.

NO Replace the following assemblies in the order listed:

- (1) Power Supply Unit (PWU-150).
  - (2) PCNT-150 board.
  - (3) PSUB-150 board.
-

---

**RAP 21F: Paper Jam - Confirm and Stop**

START

Is the paper cassette properly installed (loading too much paper may cause a paper jam)?

NO Install the paper cassette / load the paper properly.

YES Is the correct size paper (letter / legal) loaded?

NO Load the correct size paper.

YES Remove the paper from the paper cassette, fan the paper, and load it again.  
Does the paper jam still occur?

NO End of procedure.

YES Does the paper jam also occur when manually feeding a sheet of paper?

NO GO TO POINT - A

YES Open the face-down stacker cover and remove the image drum.

Does the paper jam occur while the paper is in the paper cassette?

YES Does the inlet sensor 1 lever move freely?

NO Remove obstructions so the lever will move freely.

YES Is the hopping roller obstructed (the hopping roller should turn freely) ?

YES Remove the obstruction.

NO Replace the following items in the order listed:

- (1) Hopping roller assembly.
- (2) Hopping roller clutch gear.
- (3) Registration Motor.
- (4) PCNT-150 board.

NO Does the paper jam occur while the paper is under the image drum?

YES Does the paper sensor lever move freely?

NO Remove obstructions so the lever will move freely.

YES Is the registration roller obstructed (the registration roller should turn freely) ?

YES Remove the obstruction.

NO Replace the following items in the order listed:

- (1) Registration roller assembly.
- (2) Registration Motor.
- (3) PCNT-150 board.

NO Does the paper jam occur while the paper is at the exit sensor?

YES Does the exit sensor lever move freely?

NO Remove obstructions so the lever will move freely.

YES Are the fusing roller and pressure roller being prevented from turning? To determine this you must remove the right-hand cover . Look for gear mesh problems.

YES Remove the obstruction or replace the defective gear(s).

NO Replace the following items in the order listed.

- (1) Main stepper motor.
- (2) Fuser roller idle gear.
- (3) PCNT-150 board.

#### **POINT - A**

Is the hopping roller obstructed (the hopping roller should turn freely) ?

YES Remove the obstruction.

NO Replace the following items in the order listed:

- (1) Hopping roller assembly.
- (2) Hopping roller clutch gear.
- (3) Registration Motor.



---

**RAP 21G: No Paper**

START

Is paper installed in the paper cassette?

NO Load paper into the paper cassette.

YES Is the paper cassette installed properly?

NO Install the paper cassette properly.

YES Does the paper-end sensor lever move freely?

NO Remove obstructions so the lever will move freely.

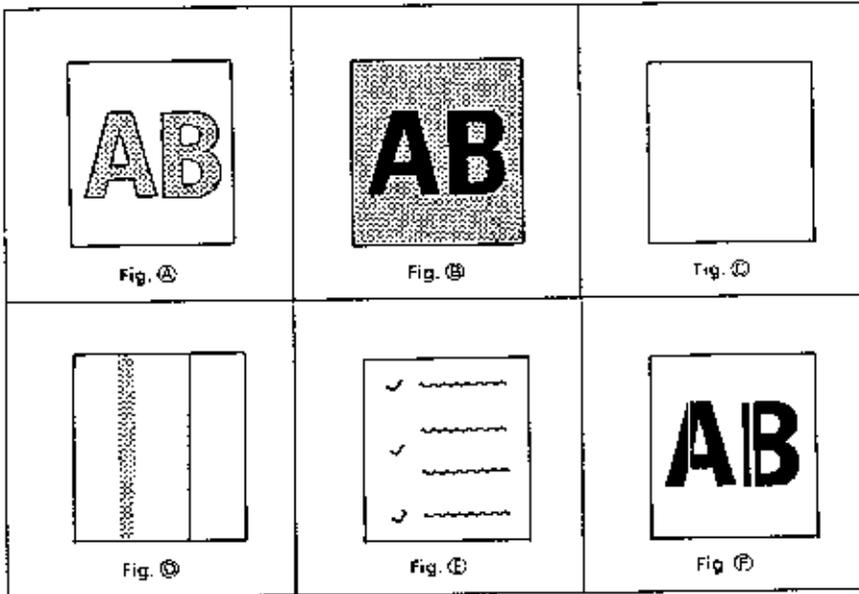
YES Replace the following assemblies in the order listed:

- (1) PSUB-150 board.
- (2) PCNT-150 board.

**RAP 22: Image Problems****Index to Image Problems**

| <b>Symptom</b>  | <b>Reference Figure</b> | <b>Troubleshooting Flowchart Number</b> |
|---|-------------------------|---|
| Poor Print Quality (images are light or blurred as a whole) | Figure A                | 22A                                     |
| Dark Background Density                                     | Figure B                | 22B                                     |
| Printed Output is Blank.                                    | Figure C                | 22C                                     |
| Vertical Black Stripes on Printed Output                    | Figure D                | 22D                                     |
| Repetitive Spaced Marks on Printed Output                   | Figure E                | 22E                                     |
| Vertical White Stripes on Printed Output                    | Figure F                | 22F                                     |
| Areas Missing From Printed Output                           | N/A                     | 22G                                     |
| Poor Fusing (image smears when touched)                     | N/A                     | 22H                                     |

**Sample Outputs**



Examples of Abnormal Images

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**RAP 22A: Poor Print Quality (Images Light or Blurred as a Whole)**

**NOTE:**

If the output is of poor print quality upon receiving a fax, perform local copy before assuming that your Okifax 1000 is defective. It is possible that the transmitting facsimile is defective.

**START**

Is the TONER LOW message displayed?

YES Add toner.

NO Is the paper used designed for use in laser printers?

NO Use paper designed for use in laser printers.

YES Is the lens surface of the LED head dirty?

YES Clean the lens.

NO Is the LED head installed properly (Check connector CN4 of the printer control board (PCNT-150) for proper connection)?

NO Properly install the LED head.

YES Power OFF the Okifax 1000, then power ON the Okifax 1000 to initiate a printer cleaning cycle.

**NOTE:**

All documents in memory will be lost when power is removed from the Okifax 1000.

Is the problem resolved?

YES End of procedure.

NO Are the contacts of the developing roller clean and properly touching the high-voltage contact assembly?

NO Clean / replace the high-voltage contact assembly.

YES Replace the transfer roller.

Has the problem been resolved?

YES End of procedure.

NO Replace the image drum cartridge.

Has the problem been resolved?

YES End of procedure.

NO Replace the sub-power supply board (PSUB-150).

Has the problem been resolved?

YES End of procedure.

NO Replace the printer controller board (PCNT-150).

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**RAP 22B: Dark Background Density**

**NOTE:**

If dark background density is on the output upon receiving a fax, perform local copy before assuming that your Okifax 1000 is defective. It is possible that the transmitting facsimile is defective.

START.

Has the image drum been exposed to external light?

YES Place the image drum cartridge into the Okifax 1000 and wait about 30 minutes before testing or replacing image drum.

NO Is the fuser roller of the fusing unit dirty?

YES Clean the roller.

NO Is the cleaning roller (of the image drum) clean and properly touching the high-voltage contact assembly?

NO Clean / replace the high-voltage contact assembly.

YES Replace the image drum cartridge.

Has the problem been resolved?

YES End of procedure.

NO Replace the sub-power supply board (PSUB-150).

Has the problem been resolved?

YES End of procedure.

NO Replace the printer control board (PCNT-150).

---

---

**RAP 22C: Printed Output is Blank**

**NOTE:**

If blank paper is output upon receiving a fax, perform local copy before assuming that your Okifax 1000 is defective. It is possible that the transmitting facsimile is defective.

START.

Is the LED head connected (check connector CN4 on the printer control board (PCNT-150))?

NO Connect the LED head.

YES Is the image drum cartridge touching the ground contact on the high-voltage contact assembly?

NO Clean / replace the high-voltage contact assembly.

YES Replace the LED head.

Has the problem been resolved?

YES End of procedure.

NO Replace the printer control board (PCNT-150).

Has the problem been resolved?

YES End of procedure.

NO Replace the sub-power supply board (PSUB-150).

Has the problem been resolved?

YES End of procedure.

NO Replace the power supply board (PWU-150).

---

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**RAP 22D: Vertical Black Stripes on Printed Output**

**NOTE:**

If vertical black stripes are on the output upon receiving a fax, perform local copy before assuming that your Okifax 1000 is defective. It is possible that the transmitting facsimile is defective.

START.

Is the TONER LOW message displayed?

YES Add toner.

NO Replace the image drum cartridge.

Has the problem been resolved?

YES End of procedure.

NO Replace the LED head.

Has the problem been resolved?

YES End of procedure.

NO Replace the printer control board (PCNT-150).

Has the problem been resolved?

YES End of procedure.

NO Replace the sub-power supply board (PSUB-150).

---

---

**RAP 22E: Repetitive Spaced Marks on Printed Output**

**NOTE:**

If repetitive spaced marks are on the output upon receiving a fax, perform local copy before assuming that your Okifax 1000 is defective. It is possible that the transmitting facsimile is defective.

START.

Identify the problem by measuring the distance between marks:

**Distance Between**

**Marks**

**Corrective Action**

|             |  |
|-------------|--|
| 1.66 inches | Replace or clean the image drum cartridge. |
| 3.71 inches | Replace the image drum cartridge.          |
| 2.27 inches | Replace the image drum cartridge.          |
| 1.56 inches | Replace the image drum cartridge.          |
| 1.24 inches | Replace the image drum cartridge.          |
| 2.01 inches | Replace the transfer roller.               |
| 2.47 inches | Replace the fusing unit assembly.          |
| 2.23 inches | Replace the pressure roller.               |

---

---

**RAP 22F: Vertical White Streaks on Printed Output**

**NOTE:**

If vertical white streaks appear on the output upon receiving a fax, perform local copy before assuming that your Okifax 1000 is defective. It is possible that the transmitting facsimile is defective.

**START**

Is the LED lens dirty?

YES Clean the LED lens.

NO Is the contact of the transfer roller clean and properly touching the high-voltage contact assembly?

NO Clean / replace the high-voltage contact assembly.

YES Replace the transfer roller.

Has the problem been resolved?

YES End of procedure.

NO Is the LED head properly installed? Check connector CN4 on the printer control board (PCNT-150).

NO Install the LED head properly.

YES Replace the image drum cartridge.

Has the problem been resolved?

YES End of procedure.

NO Replace the LED head.

Has the problem been resolved?

YES End of procedure.

NO Replace the printer control board (PCNT-150).

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**RAP 22G: Areas Missing From Printed Output**

**NOTE:**

If print is missing from the output upon receiving a fax, perform local copy before assuming that your Okifax 1000 is defective. It is possible that the transmitting facsimile is defective.

START.

Are the contacts of the transfer roller, developing roller, image drum, and charging roller clean and properly touching the contact assembly?

NO Clean / replace the high-voltage contact assembly.

YES Replace the image drum cartridge.

Has the problem been resolved?

YES End of procedure.

NO Is the LED head installed properly? Check connector CN4 on the printer control board (PCNT-150) ?

NO Properly install the LED head.

YES Replace the LED head.

Has the problem been resolved?

YES End of procedure.

NO Replace the printer control board (PCNT-150).

Has the problem been resolved?

YES End of procedure.

NO Replace the sub-power supply board (PSUB-150).

Has the problem been resolved?

YES End of procedure.

NO Replace the power supply board (PWU-150).

Has the problem been resolved?

YES End of procedure.

NO Contact Okidata Technical Support.

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**RAP 22H: Poor Fusing****NOTE:**

If the fusing unit is not functioning, the message PRINTER ALARM 4 will be displayed on the LCD. In this case, [Refer to RAP 21](#) .

This RAP applies to situations where the printed output smears when touched.

START.

Is the paper used designed for use in laser printers?

NO Use paper designed for use in laser printers.

YES Are the springs for the pressure roller functioning properly (compress when pushed)?

NO Replace the springs.

YES Replace the printer control board (PCNT-150).

Has the problem been resolved?

YES End of procedure.

NO Replace the sub-power supply board (PSUB-150).

Has the problem been resolved?

YES End of procedure.

NO Replace the fuser assembly.

---

---

#### 4.6 LOCAL DIAGNOSTIC TESTING

The operator or service technician can perform the following local diagnostic tests by using the Ten-Key Operation Pad.

- Self-Diagnosis
- Scan Operation / CIS Calibration
- LED Test
- Tone Test
- High-Speed Modem Transmission Test
- High-Speed Modem Reception Test
- Multi-Frequency Tone Test
- Printer Unit Print Test
- Voice Message Test

**NOTE:**

**Before running the local diagnostic tests, the Okifax 1000 must be in the idle mode.**

---

---

#### 4.6.01 Self-Diagnosis

The Self-Diagnosis verifies operation of the LED Page Printer, and confirms the presence of Random Access Memory (RAM) and Read-Only Memory (ROM). The ROM Version is also displayed on the printout. Refer to RAP 08 if the Self-Diagnosis should fail.

##### Procedure

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press **LEFT ARROW** three times.

##### NOTE:

**After approximately 90 seconds, the test results will be printed.**

Interpret the report (Refer to the sample) as follows.

- Pattern 1 - All White Image for 64 lines
- Pattern 2 - Alternating Black/White Image (64 columns by 64 lines)
- Pattern 3 - All Black Image for 64 lines
- Pattern 4 - Gray Image for 128 lines
- Pattern 5 - All White Image for 64 lines
- M-ROM Version (Main Controller)
- M-ROM Check (Main Controller)
- M-RAM Check (Main Controller)
- P-ROM Version (Printer Controller)
- P-ROM Check (Printer Controller)
- P-RAM Check (Printer Controller)
- Status of optional RAM card (if installed)
- Printout of TX and RX Counters

##### NOTE:



---

#### 4.6.02 Scan Operation Test / CIS Calibration

The Scan Operation Test checks the automatic document feed system (ADF) and calibrates the contact image sensor (CIS). Refer to RAP 09 if the Scan Operation / CIS Calibration Test should fail.

##### ADF Test

###### Procedure

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press **LEFT ARROW** twice.
4. Press the "2" Key on the ten-key pad.
5. Load paper in the document feed area.

The following message will be displayed.

```
SCANNING CHECK  
YES NO
```

6. Press **LEFT ARROW**.

##### NOTE:

The Okifax 1000 will allow you to feed paper continually. When you have finished feeding paper, press **STOP**. The following message will be displayed.

```
SCAN OPERATION
```

7. Press **STOP** three times to exit the test.

##### CIS Calibration

###### Procedure

1. Set Technical Function 25 (Sensor Calibration) to ON ([Refer to Section 4.10 !\[\]\(1e3e827f0b23c491cb7672f7c83def62\_img.jpg\)](#)).
2. Press **SELECT FUNCTION**.
3. Press **COPY** twice.
4. Press **LEFT ARROW** twice.

5. Press the "2" Key on the ten-key pad.
6. Load a sheet of white letter size paper in the document feed area.

The following message will be displayed.

```
SENSOR CALIBRATION  
YES NO
```

7. Press LEFT ARROW.

**NOTE:**

**The Okifax 1000 will calibrate the CIS and display the following sequence of messages.**

```
SENSOR CALIBRATION  
CALIBRATING  
SENSOR CALIBRATION  
RESULT = OK  
SCANNING CHECK  
YES NO
```

**NOTE:**

**Refer to RAP 09  should the CIS calibration fail.**

Technical Function 25 (Sensor Calibration) will automatically be set to OFF upon completion of the sensor calibration.

8. Press RIGHT ARROW to remove the document.
9. Press STOP three times to exit the test.

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#### 4.6.03 LED Test

The LED Test verifies the operation of the LEDs on the Operator Panel. Refer to RAP 10() if the LED Test should fail.

##### Procedure

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press **LEFT ARROW** twice.
4. Press the "3" Key on the ten-key pad.
5. Press **LEFT ARROW**.

The following message will be displayed.

3: LED TEST  
BLINKING

Each LED will be turned ON sequentially for approximately one second in the following order.

- ALARM
- DARK
- NORMAL
- LIGHT
- STD
- FINE
- EX. FINE
- PHOTO
- All LEDs are lit

6. Press **STOP** four times to exit the test.
-

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#### 4.6.04 Tone Test

The Tone Test allows service technicians to test the frequencies used in handshaking. Refer to RAP 11  if the Tone Test should fail.

##### Procedure

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press **LEFT ARROW** twice.
4. Press the "4" Key on the ten-key pad.
5. Press **LEFT ARROW**.

##### **NOTE:**

The CML Relay will energize connecting the Okifax 1000 to the phone line. Each frequency will be sent from the LINE terminal for about five seconds. After the 1100 hz tone is sent, the CML Relay will de-energize automatically.

6. Press **STOP** four times to exit the test.
-

---

#### 4.6.05 High-Speed Modem Transmit Test

This test must be run in conjunction with an Okifax 1000 at a remote location. The remote Okifax 1000 must be set up to run the High Speed Modem Receive Test. **Refer to RAP 12  if the High-Speed Modem Test should fail.**

##### Procedure

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press **LEFT ARROW** twice.
4. Press the **"5"** Key on the ten-key pad.
5. Press **LEFT ARROW**.

The following message will be displayed.

H-M/D SEND TEST

9600 01 38" 0000

Where:

9600: Data Transfer Rate

01 38" : Transmission Time in Minutes ( ' ) and Seconds ( " )

0000: Data Transfer Error Counter

6. Press **STOP** four times to exit the test.
-

---

#### 4.6.06 High-Speed Modem Receive Test

This test must be run in conjunction with an Okifax 1000 at a remote location. The remote Okifax 1000 must be set up to run the High Speed Modem Transmit Test. Refer to RAP 12  if the High-Speed Modem Test should fail.

##### Procedure

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press **LEFT ARROW** twice.
4. Press the "6" Key on the ten-key pad.
5. Press **LEFT ARROW**.

The following message will be displayed.

H-M/D REC. TEST

9600 01 38" 0000

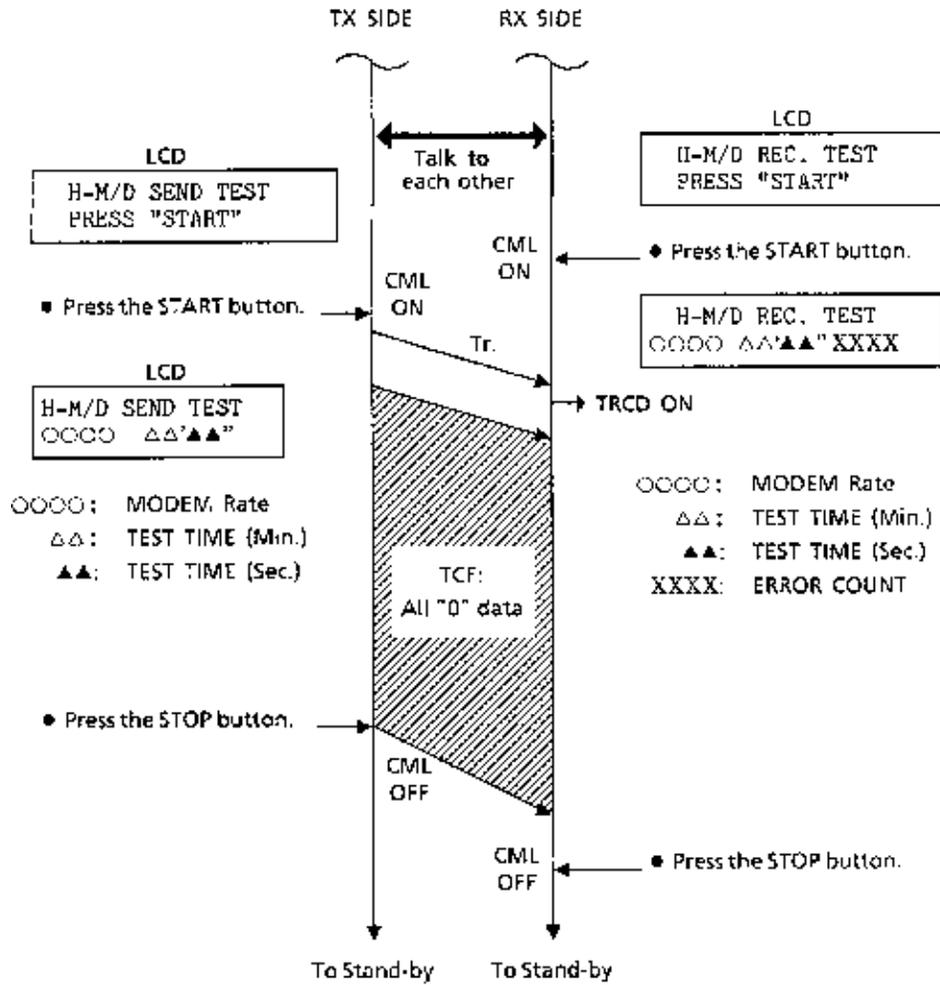
Where:

9600: Data Transfer Rate

01 38" : Transmission Time in Minutes (') and Seconds (")

0000: Data Transfer Error Counter

6. Press **STOP** four times to exit the test.



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#### 4.6.07 Multi-Frequency Tone Test

This test is used to verify the operation of the multi-frequency touch-tone signals from the LINE terminal. **Refer to RAP 13  if the Multi-Frequency Tone Test should fail.**

##### Procedure

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press **LEFT ARROW** twice.
4. Press the "7" Key on the ten-key pad.
5. Press **LEFT ARROW**.
6. Press each key of the ten-key pad keys.

The multi-frequency signal of the key will be continuously sent after each key is pressed.

7. Press **STOP** four times to exit the test.
-

---

#### 4.6.08 Printer Unit Print Test

This print test is used to test the printer unit independent of the facsimile device. [Refer to RAP 14](#)  [if the Printer Unit Print Test should fail.](#)

##### Procedure

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press **LEFT ARROW** twice.
4. Press the "8" Key on the ten-key pad.
5. Press **LEFT ARROW**.
6. Press **STOP** once to halt printing.

Printing will continue until the print buffer is empty.

7. Press **STOP** three times to exit the test.
-

#### 4.6.09 Voice Message Test

This voice message test verifies the proper operation of the Okifax 1000s voice message capability. All languages are tested, regardless of the selected language. The voice message function is used in the TEL/FAX Mode. **Refer to RAP 15  should the Voice Message Test fail.**

##### Procedure

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press **LEFT ARROW** twice.
4. Press the "9" Key on the ten-key pad.
5. Press **LEFT ARROW**.

The following message will be displayed.

```
9: VOICE MSG. TEST  
MESSAGE SENDING
```

6. Press **STOP** four times to exit the test.
-

---

## 4.7 REPORTS

### 4.7.01 Activity

The Activity Report lists the Date, Time, Length of Session (in minutes), Total Pages, and the Service Code. The Service Code represents the result of each activity. Service Codes are used to determine if the session ended normally or not and are grouped as follows.

| <b>Service Code Type</b>                     | <b>Service Code Group</b> |
|--|---------------------------|
| Normal Termination Service Code in all modes | 0000                      |
| Error while dialing - Phase A                | 1xxx                      |
| G3 Transmission - Phase B                    | 2xxx                      |
| G3 Reception - Phase C                       | 3xxx                      |
| G3 Transmission - Phase D                    | 41xx                      |
| Miscellaneous Service Codes                  | 6xxx & 9xxx               |

The Activity Report can be requested in two ways.

- Automatic

The Activity Report will be printed after every 30 transmit or receive sessions

- Manual

The Activity Report will list the 30 most recent sessions.

**NOTE:**

To enable the Manual Activity Report, Refer to **REPORTS - ACTIVITY REPORT**, in the **Okifax 1000 Operators Guide**.

---

**Service Codes List**

| Code | Description   |
|------|---|
| 0000 | Successful end of communication.  |
| 1080 | STOP key has been pressed while calling a remote fax.                     |
| 10A2 | Busy tone detected.   |
| 14A3 | Second dial tone not detected   |
| 14C0 | Dial tone not detected.   |
| 14C1 | Line current not detected.  |
| 14C2 | Calling-and-waiting for line connection time out.                         |
| 14C3 | Dialing limit time out.   |
| 21A0 | Received signal other than DIS/DTC.                                       |
| 21A1 | Contents of received DIS/DTC are faulty.                                  |
| 21A2 | TCF is sent three times and DIS/DTC is received each time in response.    |
| 21A3 | TCF is sent three times and the receiver has not responded.               |
| 21A4 | TCF fall-back is not possible.  |
| 21A5 | Received signal other than the desired signal in response to sending TCF. |

|      |  |
|------|--|
| 21B0 | Transmitter tried to perform Confidential Transmission but the remote receiver is not capable of Confidential Reception. |
| 21B1 | Transmitter tried to transmit by Broadcast Initiate Function but the remote fax is not capable of Broadcast.             |
| 21C0 | In Closed Network Setting TSI/CIG/CST is either not received or if received it is not authorized.                        |
| 22A6 | Tried to perform Polling Reception but could not communicate because the remote fax is G2.                               |
| 22B0 | Tried to perform Confidential Transmission but could not communicate because the remote fax is G2.                       |
| 22B1 | Tried to perform Relay Broadcast Initiate but could not communicate because the remote fax is G2.                        |
| 22B2 | Tried to perform Broadcast but could not communicate because the remote fax is G2  |
| 29B1 | Confidential Reception was specified by transmitter in Phase B but the amount of available memory was insufficient.      |
| 29B6 | In Confidential Reception the mail box specified by the transmitter is not set up and open.                              |
| 39A0 | The number of continuous-error lines have exceeded the specified limit.  |
| 39A1 | The number of random-error lines have exceeded the specified limit.  |
| 39B0 | Memory Overflow has occurred while receiving in memory.  |
| 39B1 | Memory Overflow occurred during Confidential Reception.  |
| 39C0 | Decoder hardware error (Cannot reproduce picture).   |
| 39C1 | Decoder hardware error (Cannot detect end of picture).   |

|      |  |
|------|--|
| 41A0 | There was no response to the post command in three attempts.                     |
| 41A3 | RTN received in response to the post command.                                    |
| 41A6 | Received a signal other than the desired signal in response to the post command. |
| 41A9 | Fall-back in Phase C is not possible.  |
| 41AA | Received PIN for the post command.   |
| 41C8 | T5 time out  |
| 41CC | Received a signal other than the desired signal in response to RNR.              |
| 41CD | Command not received in response to RNR.   |
| 41CE | Received negative signal in response to the post command                         |
| 41DB | CTC baud rate mismatched.  |
| 60A0 | Broadcast completed.   |
| 6803 | DCN received in response to NSF/DIS without sending a single picture.            |
| 68A0 | Multiple Polling Reception completed.  |
| 9080 | STOP key was pressed during a transmission.                                      |
| 9081 | T1 time out.   |
| 9082 | T2 time out.   |
| 9083 | T3 time out.   |
| 9084 | No recording paper.  |
| 9087 | Document jam.  |
| 9088 | 60 minute or 70 minute time out.   |
| 9089 | Document length has exceeded its maximum limit.                                  |

|      |   |
|------|---|
| 908E | Recording paper jam.  |
| 9090 | Received DCN.   |
| 9091 | Voltage reversal was detected because of line disconnection.  |
| 90B1 | Picture memory checksum error.  |
| 90C1 | Document removed prior to transmission.   |
| 90C6 | Normal or error-free lines not received for 13 seconds.   |
| 90C7 | Error frame protocol received.  |
| 90D0 | Encoder hardware error (Picture storage fault).   |
| 90D1 | Encoder hardware error (Cannot detect the end of picture).  |
| 90D2 | Encoder hardware error (Cannot detect completion of transmission).  |
| 90D3 | Hardware error in transmission system (Sending protocol signals not completed).                               |
| 90D4 | Hardware error in transmission system (Response of modem not detected).                                       |
| 90E0 | Decoder hardware error (Picture storage fault).   |
| 90E6 | Occurrence of AC power failure.   |
| 90F0 | Engine error.   |
| 90F1 | Fan motor error.  |
| 90F2 | Fuser error.  |
| 90F3 | Recording paper size error.   |
| 90F4 | Cover open.   |
| 90F5 | Interface (I/F) error. Defective interface between the main controller board and the printer interface board. |

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#### 4.7.02 Protocol Dump

The Protocol Dump Report provides the service technician with a tool to analyze the control signals of G3 protocol transmissions and receptions. This report can be generated manually or automatically. In either case, the SERVICE BIT (Technical Function #27) must be ON in order to print this report.

##### Manual Generation

1. Press **SELECT FUNCTION**.
2. Press **RIGHT ARROW**.
3. Press the "\*" Key.
4. Press **LEFT ARROW**
5. Press **STOP** to exit.

##### Automatic Generation

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press **LEFT ARROW**.
4. Press **RIGHT ARROW**.
5. Press **LEFT ARROW**.
6. Enter "02".
7. Press **RIGHT ARROW** until the desired setting (YES or NO) is selected.
8. Press **LEFT ARROW** to save the setting.
9. Press **SELECT FUNCTION** to exit.

##### **NOTE:**

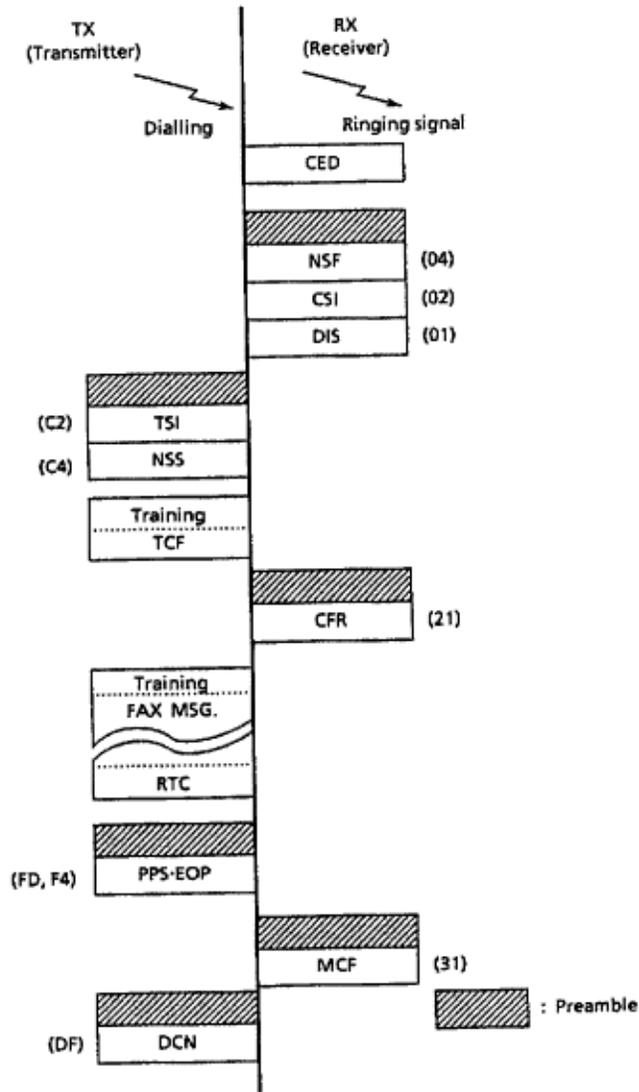
Once Technical Function #02 is set to ON, a Protocol Dump Report will be generated immediately after each communication session.



**Sample Analysis of Protocol Dump Data**

**Analysis of the data**

The printed out data permits analysis of G3 facsimile communication procedures between two facsimile machines.



Result of Analysis (Example)

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#### Facsimile Control Field Conversion Table

This chart shows all facsimile control field (FCF) signals which are needed to analyze the printed out protocol dump data.

Some signals have two different hexadecimal codes, in accordance with the calling party or called party.

| Abbreviation | Hexadecimal Codes | Description of Function                |
|--------------|-------------------|--|
| NSF          | 04                | Non-Standard Facilities                |
| CSI          | 02                | Called Subscriber Identification       |
| DIS          | 01                | Digital Identification Signal          |
| NSC          | 84                | Non-Standard Facilities Command        |
| CIG          | 82                | Calling Subscriber Identification      |
| DTC          | 81                | Digital Transmit Command               |
| NSS          | 44 C4             | Non-Standard Set-up                    |
| TSI          | 42 C2             | Transmitting Subscriber Identification |
| DCS          | 41 C1             | Digital Command Signal                 |
| CFR          | 21 A1             | Confirmation to Receive                |
| MCF          | 31 B1             | Message to Confirmation                |
| FTT          | 22 A2             | Failure to Train                       |
| MPS          | 72 F2             | Multi-Page Signal                      |
| EOM          | 71 F1             | End of Message                         |
| EOP          | 74 F4             | End of Procedure                       |
| RTP          | 33 N3             | Retrain Positive                       |
| RTN          | 32 B2             | Retrain Negative                       |
| PIP          | 35 B5             | Procedure Interrupt Positive           |
| PIN          | 34 B4             | Procedure Interrupt-Negative           |
| PRI-MPS      | 7A FA             | Procedure Interrupt-MPS                |
| PRI-EOM      | 79 F9             | Procedure Interrupt-EOM                |
| PRI-EOP      | 7C FC             | Procedure Interrupt-EOP                |
| DCN          | AF DF             | Disconnect                             |
| CRP          | 58 D8             | Command to Repeat                      |
| CTC          | 48 C8             | Continue to Correct                    |
| CTR          | 23 A3             | Response to End of Transmission        |
| EOR          | 73 F3             | End of Transmission                    |
| ERR          | 38 B8             | Response to End of Retransmission      |
| FCD          | 60                | Facsimile Coded Data                   |
| PPS          | 7D FD             | Partial Page Signal                    |
| PPR          | 3D BD             | Partial Page Request                   |
| RCP          | 61                | Return to Control for Partial Page     |
| RNR          | 37 B7             | Receive Not Ready                      |
| RR           | 76 F6             | Receive Ready                          |

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#### 4.8 RESETS

The following Okifax 1000 counters must periodically be reset.

- Toner Counter
- Drum Counter
- Fuser Counter

**WARNING:**

**Although there is a PRINTER COUNTER RESET Option available, DO NOT reset the counter. This counter is used to keep track of the total number of printed pages.**

You must do the following in order to RESET any of the counters.

- Power ON the Okifax 1000.
  - Set the Service Bit (TECHNICAL FUNCTION 27) to ON.
-

---

#### 4.8.01 Toner Counter Reset

You must reset the Toner Counter whenever you replenish toner. To reset this counter, perform the following actions.

1. Press **SELECT FUNCTION**.
2. Press **RIGHT ARROW** twice.
3. Press the **"7"** Key.

The following message will be displayed.

```
7: PRT. COUNTER CLEAR?  
YES NO
```

4. Press **LEFT ARROW** twice.

The following message will be displayed.

```
ARE YOU SURE?
```

5. Press **LEFT ARROW** to reset the toner counter.
6. Press **SELECT FUNCTION** to exit the procedure.

Verify the counter has been RESET as follows.

1. Press **SELECT FUNCTION**.
2. Press **RIGHT ARROW**.
3. Press the **"9"** Key.
4. Press **LEFT ARROW**.

The contents of the counter will be displayed on the LCD for approximately four seconds.

5. Press **STOP** to exit the procedure.
-

---

#### 4.8.02 Drum Counter Reset

You must reset the Drum Counter whenever the image drum is replaced. To reset this counter, perform the following actions.

1. Press **SELECT FUNCTION**.
2. Press **RIGHT ARROW** twice.
3. Press the **"7"** Key.

The following message will be displayed.

```
7: PRT. COUNTER CLEAR?  
YES NO
```

4. Press **LEFT ARROW**.
5. Press the **"2"** Key.
6. Press **LEFT ARROW**.

The following message will be displayed.  
ARE YOU SURE?

7. Press **LEFT ARROW** to reset the drum counter.
8. Press **SELECT FUNCTION** to exit the procedure.

Verify the counter has been RESET as follows.

1. Press **SELECT FUNCTION**.
2. Press **RIGHT ARROW**.
3. Press the **"7"** Key.
4. Press **LEFT ARROW**.

The contents of the counter will be displayed on the LCD for approximately four seconds.

5. Press **STOP** to exit the procedure.
-

---

#### 4.8.03 Fuser Counter Reset

You must reset the Fuser Counter whenever the Fuser Unit is replaced. To reset this counter, perform the following actions.

1. Press **SELECT FUNCTION**.
2. Press **RIGHT ARROW** twice.
3. Press the **"7"** Key.

The following message will be displayed.

```
7: PRT. COUNTER CLEAR?  
YES NO
```

4. Press **LEFT ARROW**.
5. Press the **"3"** Key.
6. Press **LEFT ARROW**.

The following message will be displayed

```
ARE YOU SURE?
```

7. Press **LEFT ARROW** to reset the fuser counter.
8. Press **SELECT FUNCTION** to exit the procedure.  
Verify the counter has been RESET as follows.

1. Press **SELECT FUNCTION**.
2. Press **RIGHT ARROW**.
3. Press the **"8"** Key.
4. Press **LEFT ARROW**.

The contents of the counter will be displayed on the LCD for approximately four seconds.

5. Press **STOP** to exit the procedure.
-

---

## 4.9 CLEARING THE RANDOM ACCESS MEMORY (RAM)

**CAUTION:**

Clearing the RAM will cause the loss of all previously programmed user and service data. This data will be reset to factory default settings. To prevent the loss of your customized settings, print a copy of the Configuration Report, Service Default Report and Telephone Directory Report before clearing the RAM.

### 4.9.01 General Information

In order to CLEAR the Random Access Memory (RAM), perform the following actions.

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press the "3" Key.

The following message will be displayed.

SYSTEM RESET ?

4. Press **LEFT ARROW**.
5. Press the appropriate key.

**LEFT ARROW**: ALL DATA CLR. - or

**"2" Key**: LOCATION DATA CLR. - or

**"3" Key**: CONFIG DATA CLR. - or

**"4" Key**: TX PAGES CLR. - or

**"5" Key**: RX PAGES CLR.

6. Press **LEFT ARROW**.

The following message will be displayed.

ARE YOU SURE?

7. Press **LEFT ARROW** to CLEAR the selected data.
8. Press **SELECT FUNCTION** to exit the procedure.

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## 4.10 TECHNICAL FUNCTION (TF) SETTINGS

### 4.10.01 Accessing the Technical Function Settings

In order to access the Technical Function settings, perform the following actions.

1. Press **SELECT FUNCTION**.
2. Press **COPY** twice.
3. Press **LEFT ARROW**.
4. Press **RIGHT ARROW**.
5. Press **LEFT ARROW**.

The following message will be displayed.

```
FUNCTION NUMBER? [ ]  
01 - 45
```

6. Select the desired TF (e.g.. "01" **NOT** "1")
7. Press **LEFT ARROW** or **RIGHT ARROW** to select the desired setting for the Technical Function (TF).
8. Press **LEFT ARROW** to store the selected setting and display the next Technical Function.
9. Press **SELECT FUNCTION** to exit the procedure.



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#### Technical Function (TF) Listing

| TF No | Name  | Purpose   | Default |
|-------|---|---|---------|
| 01    | Line Monitor Control  | Change the monitoring range:<br>ON: Off-Hook to DCN OFF:<br>Off-Hook to DIS   | OFF     |
| 02    | Automatic Protocol Dump Select                              | Reports handshaking and protocol data for each communication  | OFF     |
| 03    | Automatic MCF printout upon detecting a communication error | Selecting automatic printout of the Message Confirmation Report upon detecting a communication error  | OFF     |
| 04    | TSI Print   | Selects the printing of TSI data from the sending FAX on the received picture. TSI is printed at the leading edge of the first page only.   | ON      |
| 05    | Reverse Polling   | Selects the reverse poll function   | OFF     |
| 06    | Continuous Polling  | Placing a document on the ADF tray selects the polling mode without the need to operate the SELECT FUNCTION Key. Allows continuous loop RX poll of auto-dial group.                               | OFF     |
| 07    | MH Only   | Limits image compression to Modified Huffman Code only.   | OFF     |
| 08    | Shorten Protocol  | Shortens protocol to save transmission time.  | ON      |
| 09    | Call-Back Message   | In a case where the remote station does not respond to a Voice Request a fax is sent requesting a voice callback.   | ON      |
| 10    | Personal ID   | Enables the transmission of the upper 16 characters of the sender ID as the Personal ID. The Personal ID will appear on the remote station's display and on the remote station's Activity Report. | ON      |

|    |   |   |       |
|----|---|---|-------|
| 11 | Relay Broadcast Initiate                    | Enables Relay Broadcast Function prompts.   | ON    |
| 12 | Confidential TX                             | Enables the Confidential TX Function.   | ON    |
| 13 | H-Modem Rate                                | Selection of the modem's starting speed 9600 bps or 4800 bps.   | 9600  |
| 14 | Ignoring the First DIS                      | This function can be selected to compensate for poor phone line quality. This function causes the Okifax 1000 to ignore the first DIS and "listen" for the second DIS. This allows time for line echo to settle so a clear DIS can be recognized. | OFF   |
| 15 | Interval Between CED and DIS                | Allows selection of 75 ms or 1.5 Seconds. Use 1.5 Seconds if poor quality phone lines are encountered.  | 75 ms |
| 16 | Protective Tone Against the Echo Suppressor | This tone enables the telco echo suppressers to compensate for echo on overseas lines. Please note that this is a "global" setting affecting all calls. This function is also available as a one-touch parameter.                                 | OFF   |
| 17 | Manual TX CNG                               | Used in selecting the function of the CNG signal from the transmitter during manual transmission.   | ON    |
| 18 | Manual RX CED                               | Used in selecting the function of the CED signal from the receiver during manual reception.   | OFF   |
| 19 | Off-Hook Bypass                             | Allows communications to be established without having the handset installed.   | OFF   |
| 20 | Long Document TX                            | Long Document Transmission<br>Select: ON: 60 minutes maximum<br>OFF: 14 inches maximum  | OFF   |
| 21 | Attenuator                                  | Adjusts the attenuation of the transmit signal power level. The range is 0 dB to 15 dB (in 1 dB increments).  | 10 dB |
| 22 | Non-Loaded (NL) Equalizer                   | Selects the equalizing level of the received signal. Selections are 0 dB 4 dB 8 dB and 12 dB.   | 4 dB  |

|    |   |  |      |
|----|---|--|------|
| 23 | Document Top Feed                                 | Adjusts the Start of Scan Position of the ADF. The selectable range is from -7 mm to +10 mm in 1 mm increments.                                    | 0 mm |
| 24 | Document End Feed                                 | Adjusts the End of Scan Position of the ADF. The selectable range is from -10 mm to +10 mm (in 1 mm increments).                                   | 0 mm |
| 25 | Sensor Calibration                                | Select ON to enable calibration of the scanner sensor (CIS). This setting returns to OFF once the scanner calibration procedure has been executed. | OFF  |
| 26 | Phone Dial  | Switches the alternate FAX telephone number to a regular phone number for voice communication.   | OFF  |
| 27 | Service Bit                                       | ON: Technician's features are available. OFF: Technician's features are not available.   | OFF  |
| 28 | Video Parameter                                   | Selects the non-photo mode parameter (P1) and the photomode parameter (P2) in the form P1*P2.  | 1*1  |
| 29 | MDY / DMY   | Switches Operator Panel display and report printing date format between: MDY: Month/Day/Year<br>DMY: Day/Month/Year                                | DMY  |
| 30 | CCITT ECM   | Enables the use of the CCITT Error Correction Mode.  | ON   |
| 31 | Receive in Memory                                 | Enables the Memory RX Function under the following conditions:<br>NO PAPER COVER OPEN PAPER JAM  | ON   |
| 32 | Page Retransmission                               | Enables page retransmission from memory if a communications error exists in non-ECM mode.  | ON   |
| 33 | Local Date and Time Print                         | Enables the printing of the Date/Time at the top of the first received page.   | OFF  |
| 34 | XTTO Value  | Selects the time duration (in seconds) that the Okifax 1000 will wait for a remote station's answer.   | 000  |
| 35 | Receive in Memory when Low Toner Condition Exists | Enables the Memory RX Function when a low toner condition exists.  | ON   |
| 36 | RX Error Message Print                            | Enables or disables the printing of the message RECEIVE STOPPED when reception is interrupted.   | ON   |

|    |   |   |           |
|----|---|---|-----------|
| 37 | MMR Function                              | Enables/disables MMR communication  | ON        |
| 38 | 75% Reduction                             | Enables/disables 75% reduction (letter to legal reduction)  | ON        |
| 39 | Print Counter on LCD in the stand-by mode | Continuously displays the value of the print counter on the operator panel LCD while the Okifax 1000 is in the idle mode.   | OFF       |
| 40 | Voice Message Attenuator                  | Adjusts the attenuation for the voice message power level. Can be adjusted from 0 to 15 dB (in one dB increments).  | 9 dB      |
| 41 | Real-time Dialing                         | Selects one of three dialing capabilities: TYPE 1: Dialing is available when the handset is OFF-HOOK. TYPE 2: Dialing is available when the handset is OFF-HOOK or press the HOOK Key. OFF              | TYPE 2    |
| 42 | Ring Duration Detection Time              | Selects the minimum Ring Detection Time. Can be adjusted from 100 msec. to 990 msec. (in 10 msec. increments).  | 110 msec. |
| 43 | CML Timing                                | Sets the time from the end of the ring to CML ON. Can be adjusted from 100 msec. to 1900 msec. in 100 msec. increments.   | 300 msec. |
| 44 | Activity Report Distant ID Printing       | For security purposes enables/disables the printing of the distant ID in the activity report. This function applies to message confirmation reports confidential receive reports and power off reports. | ON        |
| 45 | TAD Mode                                  | Enables/disables the TAD Mode. TAD Mode is activated when Auto RX Mode is selected.   | ON        |

---

## 4.11 TELEPHONE ANSWERING DEVICE (TAD) INTERFACE

### 4.11.01 General Information

The Telephone Answering Device (TAD) Interface allows Okifax units to share the same phone line with a telephone answering device. The Okifax unit and answering device work together to process incoming voice and fax calls, each to their own function. For the TAD Interface to function properly, the following User Functions must be set:

1. TAD Mode (Technical Function #45) must be enabled. The default setting is OFF.
2. Ring Response Time (User Function #24)(User Function #25 when optional High Capacity Cassette is installed) should be set to "1" ring. This is the default setting.
3. Tel/Fax Timer (User Function #10) should be set to 35 seconds. This is the default setting.

To properly connect the Okifax unit to an answering device and phone line, the physical hook-up must be as follows:

1. The line cord from the RJ11C jack should be connected to the jack marked "Line" on the Okifax unit.
2. The answering device must have its line cord connected to the jack marked "Tel" on the Okifax unit.

#### **NOTE:**

**A single line telephone may then be connected to the jack marked "TEL" or "PHONE" on the answering device, although this is optional.**

Once the physical connections have been established and the function settings programmed, the TAD Interface functions as follows:

1. When an incoming call is received, the Okifax will monitor the line for 35 seconds (Tel/Fax Timer setting determines this period). The timing period begins when the first incoming ring is detected. During this time, the Okifax unit listens for two things, and acts on them as follows:
  - (a) CNG (Calling tone) from a remote fax unit. This 1100 Hz tone is sent by most facsimile units that dial automatically. The Okifax unit will seize the line from the answering device and begin automatic reception if the CNG tone is detected.
  - (b) The Okifax unit waits for the answering device to disconnect the line. Once the Okifax unit senses that the answering device has dropped the line, it begins automatic reception.

#### **EXPLANATION:**

Normally, the answering device will answer an incoming call and play its announcement. When the answering device disconnects the line, the Okifax unit will seize the line and attempt automatic

reception. If the remote caller decides to leave a voice message, the Okifax will attempt automatic reception when the caller had completed their message. This gives the remote caller an opportunity to manually send a fax whether or not they decide to leave a voice message.

**NOTE:**

If the answering device does not answer an incoming call within 35 seconds, the Okifax unit will begin automatic reception. It is recommended that the answering device be set to answer incoming calls on as few rings as possible.

There are times that the remote caller may have no intention of manually sending a fax. Because the Okifax always provides the opportunity for the remote caller to send a fax, the Okifax begins automatic reception whenever the answering device drops the line. The Okifax will hold the line open for 60 seconds while it attempts to receive.

When the Okifax attempts to receive after an incoming call, the receive tones can be heard through the line monitor. Because the TAD Interface is designed to be used when nobody is available to take phone calls, this would not normally be a problem. In a situation where the user finds the line monitor to be annoying, the volume of the line monitor may be lowered or disabled (User Function #5). Be aware, however, that once the line monitor is disabled, it becomes unavailable for transmit functions.

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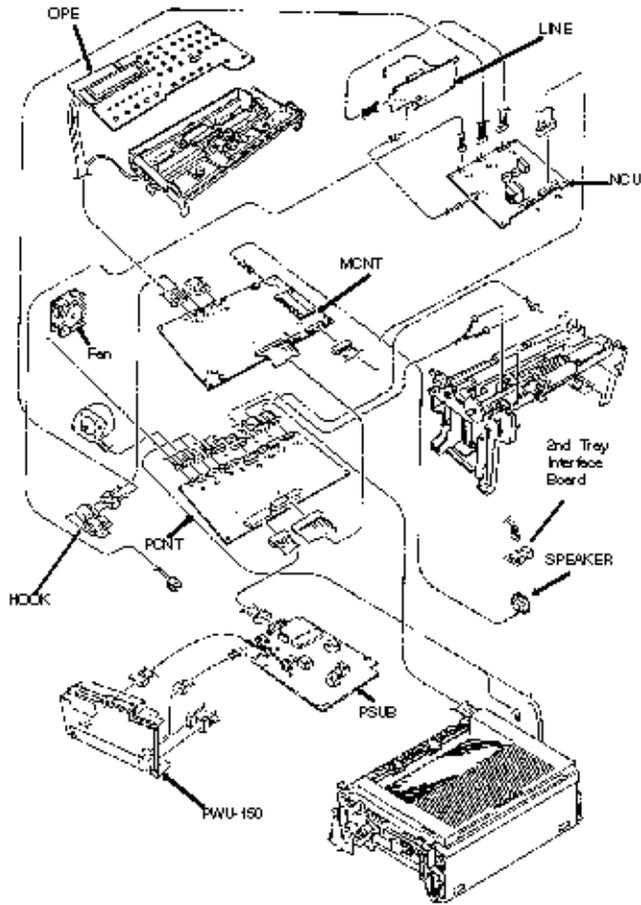
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#### **A.1.01 General Information**

This section describes the characteristics of the printed circuit boards used in the Okifax 1000. The following areas are covered.

- Function
- Firmware
- Fuses
- Jumpers
- Switches
- Sensors
- Test Points

Where an item is not applicable, the word **NONE** will be listed.



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**A.2 INDEX TO CHARTS**

| Description                 | Board Designation | Section  |
|-----------------------------|-------------------|--|
| Main Control Board          | MCNT-150          | <a href="#">A.2.01</a>    |
| Printer Control Board       | PCNT-150          | <a href="#">A.2.02</a>    |
| Power Supply Unit           | PWU -150          | <a href="#">A.2.03</a>    |
| Network Control Unit        | NCU-U             | <a href="#">A.2.04</a>    |
| Line Board                  | LINE-JU           | <a href="#">A.2.05</a>    |
| Hook Switch                 | HOOK-150          | <a href="#">A.2.06</a>  |
| Operator Panel Board        | OPE-150           | <a href="#">A.2.07</a>  |
| Sub-Power Supply Board      | PSUB-150          | <a href="#">A.2.08</a>  |
| Second Tray Interface Board | NONE              | <a href="#">A.2.09</a>  |

---

**A.2.01 Main Control Board (MCNT-150)****Function**

The MCNT-150 controls the speaker, converts parallel send data to serial data, converts serial receive data to parallel data, modulates / demodulates data, and generates Multi-Frequency signals for tone dialing. The board contains a 3-volt, non-rechargeable lithium battery, which supplies voltage to the static RAM and real time clock circuit (month, day, year) whenever the unit is powered OFF. IC22 provides voice answering in Tel/Fax Mode, in accordance with signals received from the input / output gate array IC21 and the microprocessor IC1. VR1 is used for modem voltage control, which is set at the factory. This board contains a modem IC. A 256K P-RAM is used for memory broadcast, delayed broadcast, and ECM operation.

**Firmware**

· IC1 : 256 Kbyte ROM - Contains main control program

**Fuses**

NONE

**Jumpers**

NONE

**Sensors**

NONE

**Switches**

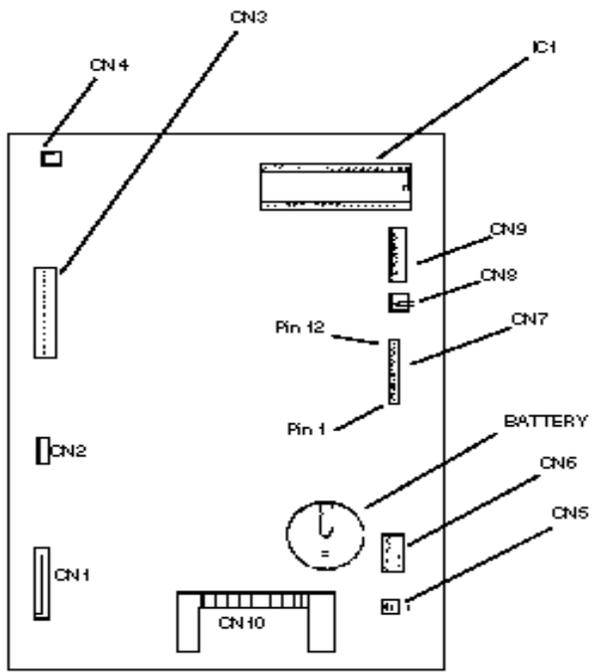
NONE

**Test Points**

CN7, Pins 08, 09, 10 : +5 vdc

CN7, Pins 01, 02 : +12 vdc

CN7, Pins 03, 04 : -12 vdc



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**A.2.02 Printer Control Board (PCNT-150)****Function**

This board controls the drum, resist, scan, and fan motors. It controls the fuser unit temperature and high voltage circuit, stores buffer memory (DRAM) of picture data, and generates head strobe signals (which enable the LED print head).

**Firmware**

· IC 21: 32 Kbyte ROM - Contains printer control program

**Fuses**

NONE

**Jumpers**

NONE

**Sensors**

NONE

**Switches**

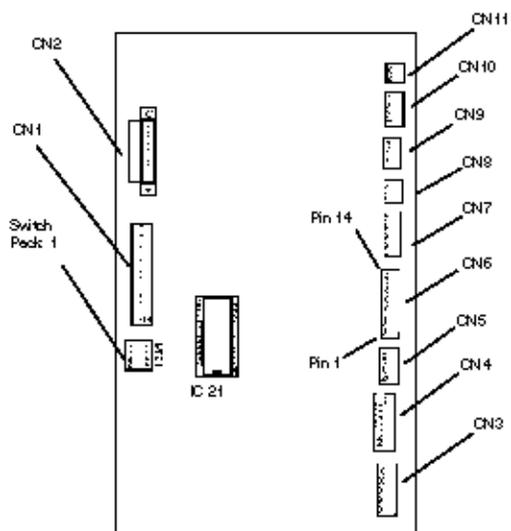
Switches (1-4) on Switch Pack 1 are used to set the LED head drive time. [Refer to Section 3.3 of this Service Handbook for LED Drive Time Settings.](#) 

**Test Points**

CN6, Pins 02, 03: + 38 vdc

CN6, Pin 01: + 12 vdc

CN6, Pin 04: - 12 vdc



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### Chapter A Reference Charts

#### A.2.03 Power Supply Board (PWU-150)

##### Function

The power supply board converts the AC input voltage into +5 vdc, +/-12 vdc, and +38 vdc for use throughout the printer.

##### Firmware

NONE

##### Fuses

F1: 6.3 amp 125 vac. AC line protective fuse.

F2: 3.5 amp 125 vdc. Protects the +38 volt circuit. (Soldered)

F3: 5.0 amp 125 vdc. Protects the +5 volt circuit. (Soldered)

##### Jumpers

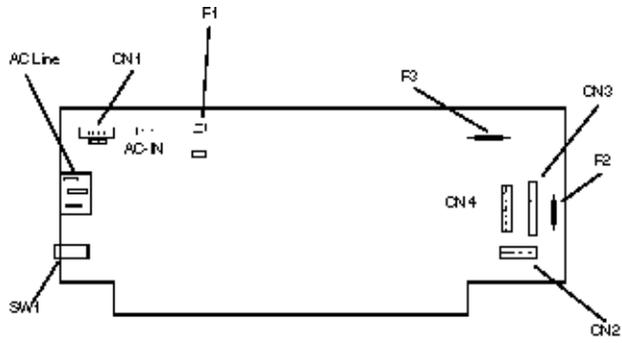
NONE

##### Switches

SW1: AC power switch

#### Test Points and Output Ratings

| Pin Number                                       | Rated Voltage | Rated Current | Current Range | Voltage Range | Output Ripple |
|--|---------------|---------------|---------------|---------------|---------------|
| CN3 Pins 8 9<br>CN2 Pins 6 7<br>CN4 Pins 8 to 10 | + 5 vdc       | 2.5 A         | .3 to 5.3 A   | +5V +/- 5%    | 100 mV        |
| CN3 Pins 2 3<br>CN2 Pins 1 2                     | + 38 vdc      | 2.2 A         | 0 to 2.8 A    | +34V to +41V  | 1000 mV       |
| CN3 Pin 1 CN4 Pins 1 2                           | + 12 vdc      | 0.3 A         | 0.1 to 0.5 A  | +12V +/- 5%   | 100 mV        |
| CN3 Pin 4 CN4 Pins 3 4                           | - 12 vdc      | 0.1 A         | 0.1 A         | -12V +/- 5%   | 100 mV        |



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**A.2.04 Network Control Unit (NCU-U)****Function**

This board contains the CML relay, detects the Off-Hook condition, converts received data to digital signal levels, generates dial pulses, and detects ring signals, dial tones, and busy signals.

**Firmware**

NONE

**Fuses**

NONE

**Jumpers**

NONE

**Sensors**

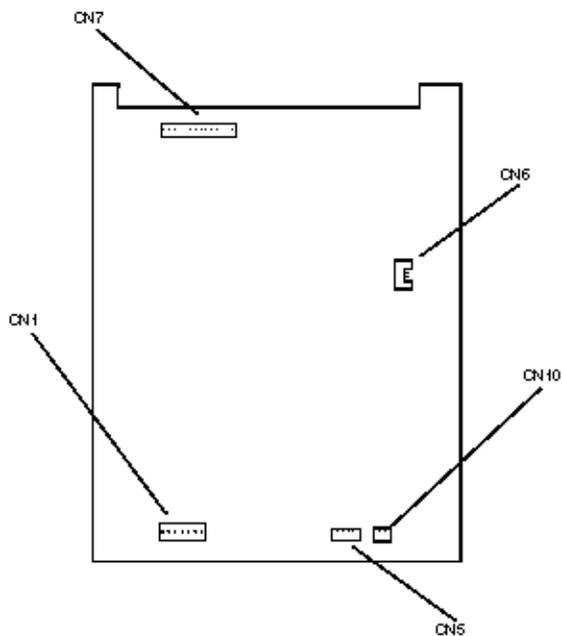
NONE

**Switches**

NONE

**Test Points**

NONE



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### Chapter A Reference Charts

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#### A.2.05 Line Board (LINE-JU)

**Function**

This board sends and receives data to and from the telephone line.

**Firmware**

NONE

**Fuses**

NONE

**Jumpers**

NONE

**Sensors**

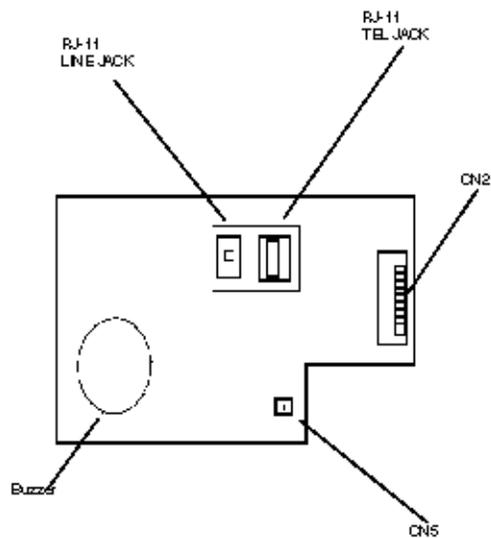
NONE

**Switches**

NONE

**Test Points**

NONE



---

**A.2.06 Hook Switch (HOOK -150)****Function**

This board provides the On-Hook / Off-Hook conditions, depending on the placement of the handset.

**Firmware**

NONE

**Fuses**

NONE

**Jumpers**

NONE

**Sensors**

NONE

**Switches**

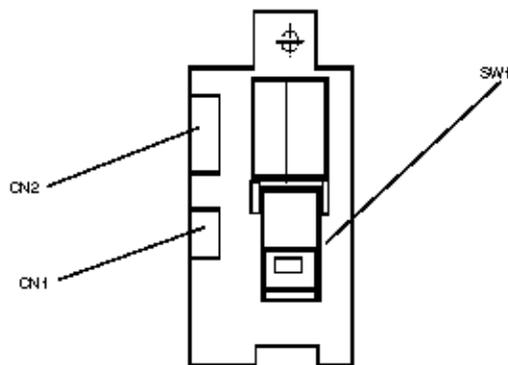
SW1

Activated: On-Hook

Deactivated: Off-Hook

**Test Points**

NONE



**A.2.07 Operator Panel Board (OPE-150)****Function**

This board contains the LCD and the LEDs, and board provides the operator interface to the Okifax 1000.

**Firmware**

NONE

**Fuses**

NONE

**Jumpers**

NONE

**Sensors**

NONE

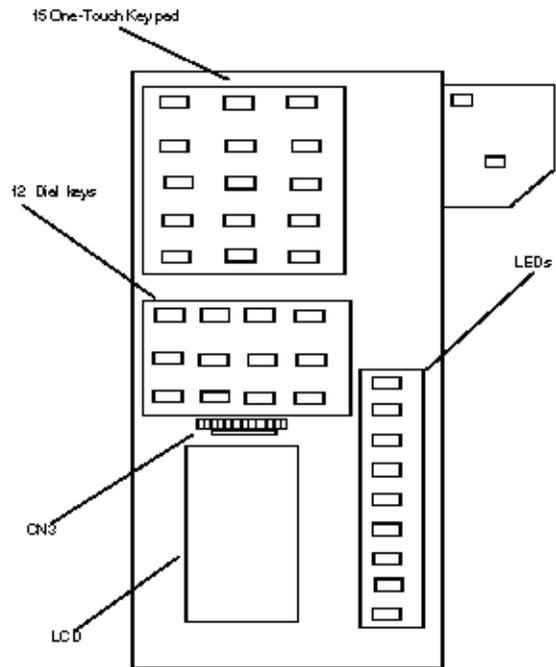
**Switches**

SW1 through SW40

Refer to the Users Documentation for functional descriptions of these switches.

**Test Points**

NONE



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**A.2.08 Sub-Power Supply Board (PSUB- 150)****Function**

This board generates the high voltages needed for the electrostatic printing process.

**Firmware**

NONE

**Fuses**

NONE

**Jumpers**

NONE

**Sensors**

**The functions of the photosensors are described in Section 2  of this Service Handbook.**

PS1: Outlet Sensor Detects paper jams at the paper exit path

PS2: Paper Sensor Monitors paper feed and paper length

PS3: Inlet Sensor Detects the leading edge of the paper

PS4: Paper End Sensor Detects the presence of paper in the cassette

PS5: Inlet Sensor 2 Detects the width of the receive paper

PS6: Toner Sensor Detects a lack of toner

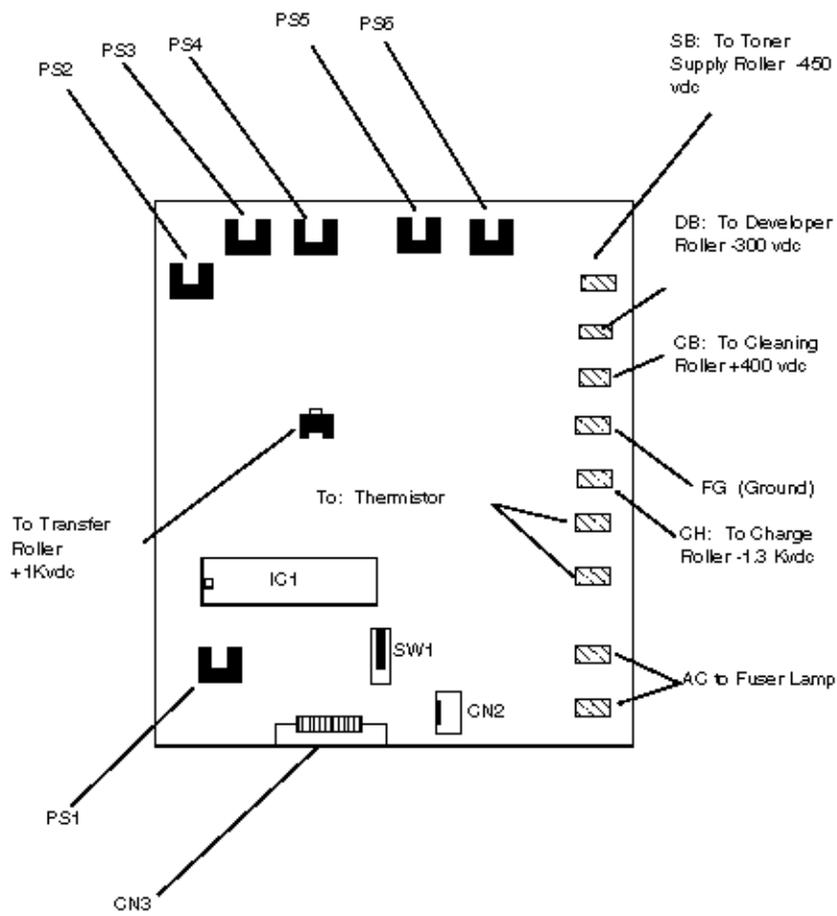
**Switches**

SW1:

Cover Open Switch (micro-switch)

**Test Points**

NONE



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**A.2.09 Second Tray Interface Board****Function**

This board connects the optional second paper tray unit to the PCNT board.

**Firmware**

NONE

**Fuses**

NONE

**Jumpers**

NONE

**Sensors**

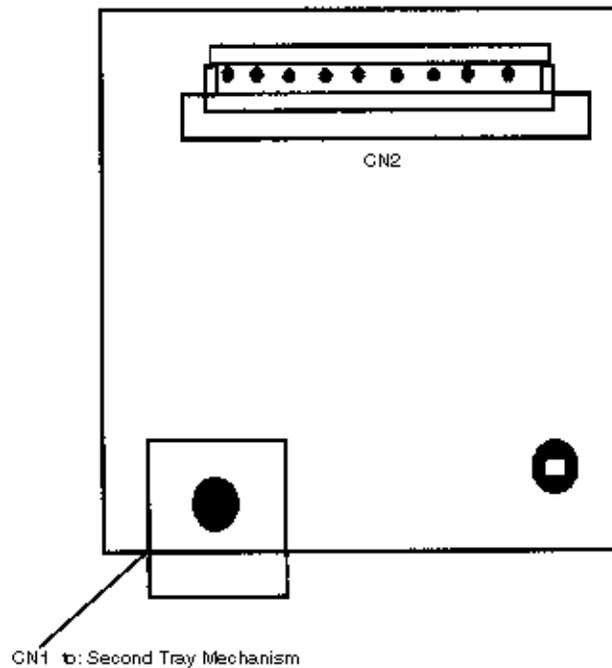
NONE

**Switches**

NONE

**Test Points**

NONE



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## **B.1 ILLUSTRATED PARTS LISTING**

### **B.1.01 General Information**

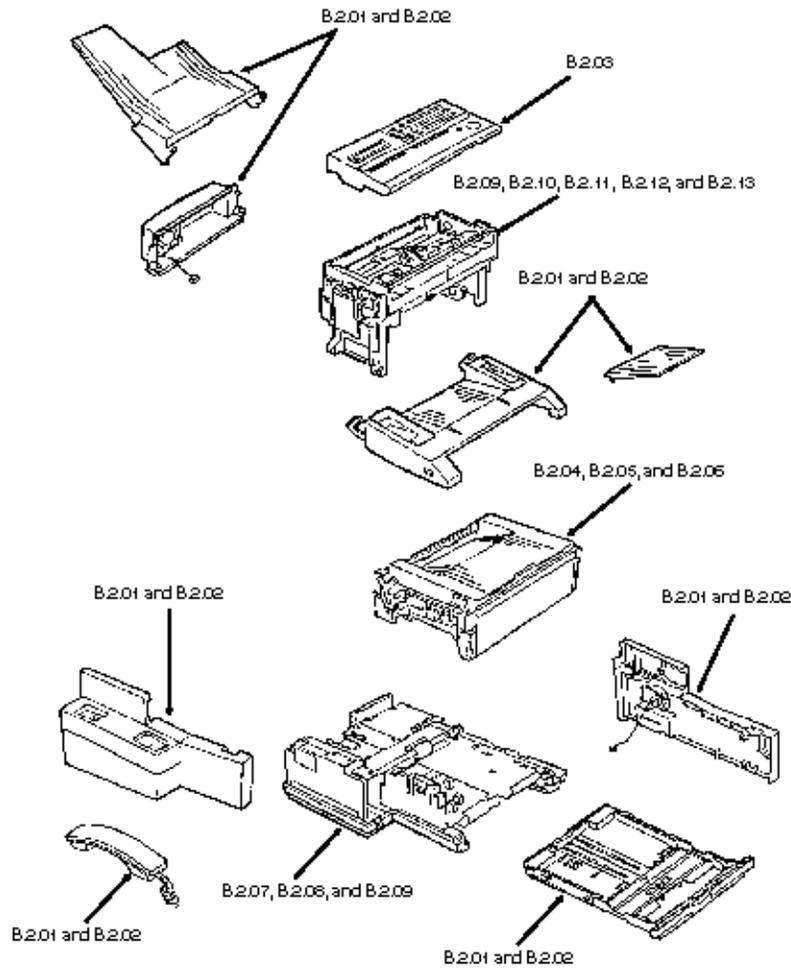
This appendix will assist you in identifying the assemblies and parts of the Okifax 1000. Once you have used Section Four (Failure Analysis) to find a defective part, you can locate the part number in this section. This appendix is cross-referenced to Section Three (Maintenance) to assist you in servicing the Okifax 1000.

The format for this appendix is a series of tables with diagrams. The table contains the item reference number, the Okidata and Oki-Japan (Oki-J) part numbers, the part description, a comments section, and the disassembly procedure. Items with the comment RSPL (Recommended Spare Parts List), Consumable, or Option are available from Okidata. Items without these comments are usually not stocked. Also note that some items are only available as assemblies. Every effort has been made to clearly indicate which items are in assemblies and which are not.

Please refer to the RSPL, which can be found on Okidatas Electronic Bulletin Board (Okilink II), for current part numbers, prices, and recommended stocking levels for each item listed as a recommended spare part. For instructions on accessing Okilink II, refer to the Service Center Reference Guide.

N/A will appear where a part number is not available.

Please read the Definition of Terms in the following section carefully. It is important that you understand the different types of classifications and their availability.



**REMEMBER**

Current part numbers, recommended stocking levels, and pricing information are available through Okilink II. Refer to the Service Center Reference Guide for information on accessing Okilink II.

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### **B.1.02 Definition of Terms**

#### **RSPL**

Okidata recommends that this part/assembly be on hand for servicing.

#### **Consumable**

A consumable is a supply item which has a specified life and needs to be replaced periodically. It is purchased and installed by the end user. Okidata machines are designed to work *exclusively* with Okidata consumables. By using genuine Okidata consumable products, the investment made in the equipment will be protected.

#### **Option**

An option is a part/assembly which is added to a Okifax 1000. The option expands the Okifax 1000s functionality. An option may or may not be installed by the end-user. Instructions for installation accompany each option.

#### **Option RSPL**

Okidata recommends that this part/assembly be on hand for servicing installed options.

#### **Document**

A document is a printed item which supports the service and marketing of a product. Various documents are available from Okidata.

#### **Blank**

Okidata does not recommend stocking this item. This item should be purchased on an **As Required Basis only**. The availability of this item is not guaranteed by Okidata.

---

### **B.1.03 Parts Ordering Information**

#### **General Information**

All authorized Okidata resellers may order spare parts and consumables for Okidata products. Orders are placed through Okidatas Logistics Department.

When a technician has successfully completed a product certification course and the dealer has become service authorized, an information package will be provided to the dealer. The Okidata Service Center Reference Guide outlines the following.

- Responsibilities of Okidata Service Centers
- Spare parts and consumables information
- Procedures for warranty repairs
- Product training, certification, and authorization
- Product support information
- Okidata depot information and services
- Third party service information
- Information about Okidatas Customer Information Center
- Okidata service and support telephone numbers.

The Service Center Reference Guide contains detailed procedures to follow when ordering parts. Please **read, understand, and follow** these procedures. Service authorization for a specific product **must** be obtained before a dealer can submit warranty claims.

Questions regarding the Service Center Reference Guide should be directed to Okidata Dealer Service.

#### **Placing a Parts Order**

Please refer to your Service Center Reference Guide for details on ordering parts. You should have the following available **before** you place your order.

- Okidata Dealer Authorization Number
- Your Purchase Order number
- Okidata Part Number(s)

Use this Appendix, Okilink II, or contact Okidata Technical Support to find the correct part number. Refer to the Service Center Reference Guide for information on contacting Okidata.

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## B.2 CHARTS

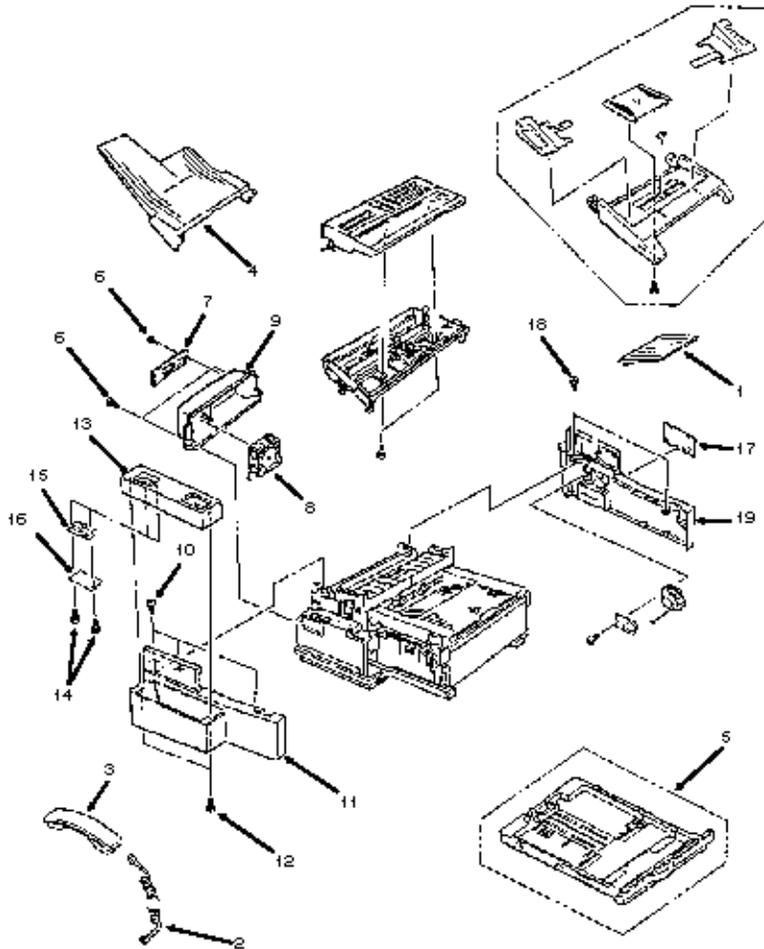
Below is an index to the illustrated parts breakdown charts.

| Description                         | Section  |
|-------------------------------------|--|
| Cabinet Assembly (1 of 2)           | B.2.01    |
| Cabinet Assembly (2 of 2)           | B.2.02    |
| Control Panel Assembly              | B.2.03    |
| Printer Assembly (1 of 3)           | B.2.04    |
| Printer Assembly (2 of 3)           | B.2.05    |
| Printer Assembly (3 of 3)           | B.2.06    |
| Base Assembly (1 of 2)              | B.2.07  |
| Base Assembly (2 of 2)              | B.2.08  |
| Scan Assembly (1 of 2)              | B.2.09  |
| Scan Assembly (2 of 2)              | B.2.10  |
| Scan Unit (1 of 3)                  | B.2.11  |
| Scan Unit (2 of 3)                  | B.2.12  |
| Scan Unit (3 of 3)                  | B.2.13  |
| Upper Paper Guide Assembly (1 of 2) | B.2.14  |
| Upper Paper Guide Assembly (2 of 2) | B.2.15  |
| Cables                              | B.2.16  |
| Options                             | B.2.17  |
| Packaging                           | B.2.18  |
| Consumables                         | B.2.19  |
| Documentation                       | B.2.20  |

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#### B.2.01 Cabinet Assembly (1 of 2)

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.

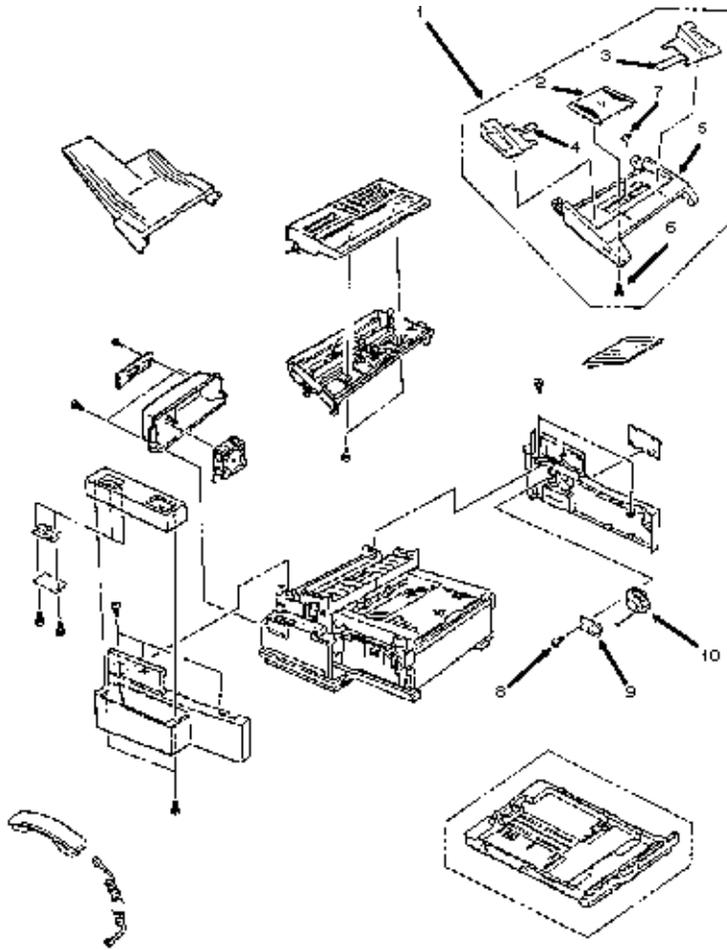


| Item | Okidata P/N<br>Oki-J P/N   | Description                  | Comments<br><u>Refer to</u><br><u>B.1.02</u> | Disassembly<br>Procedure |
|------|----------------------------|------------------------------|--|--------------------------|
| 1    | 50103401<br>2PP3529-5012P1 | Tray:<br>Document<br>Support | RSPL   | <u>3.2.01</u>            |
| 2    | 56628101<br>4YS3522-1252G2 | Cord: Handset                | RSPL   | <u>3.2.01</u>            |

|    |                                  |                                |      |  |
|----|----------------------------------|--------------------------------|------|--|
| 3  | 53549709<br>4YB3522-1212P9       | Handset                        | RSPL | <a href="#">3.2.01</a>    |
| 4  | 50102001<br>1PP3529-5062P1       | Tray:<br>Document<br>Stacker   | RSPL | <a href="#">3.2.01</a>    |
| 5  | 50101901<br>1PA4083-6200G1       | Cassette:<br>Paper<br>Assembly | RSPL | <a href="#">3.2.01</a>    |
| 6  | +D3-8-G                          | Screw                          |      | <a href="#">3.2.03</a>    |
| 7  | 53070206<br>2PP3529-5017P6       | Cover:<br>Terminal Cap         | RSPL | <a href="#">3.2.03</a>    |
| 8  | 56510902<br>3PB4128-<br>1085P001 | Fan                            | RSPL | <a href="#">3.2.03</a>    |
| 9  | 53070002<br>1PP3529-5015P1       | Cover: Rear                    | RSPL | <a href="#">3.2.03</a>    |
| 10 | 4PB4083-2500P1<br>0              | Screw                          |      | <a href="#">3.2.09</a>    |
| 11 | 53069901<br>1PP3529-5014P1       | Cover: Side<br>(Left)          | RSPL | <a href="#">3.2.09</a>    |
| 12 | N/A<br>4PB3529-5116P1            | Screw                          |      | <a href="#">3.2.09</a>   |
| 13 | 50317201<br>1PP3529-5016P1       | Cover: Cradle                  | RSPL | <a href="#">3.2.09</a>  |
| 14 | N/A<br>4PB3529-5116P1            | Screw                          |      | <a href="#">3.2.10</a>  |
| 15 | 55074002<br>4YB3529-1030P2       | PCB: Hook<br>Switch            | RSPL | <a href="#">3.2.10</a>  |
| 16 | 51709801<br>4PP3529-5101P1       | Insulator:<br>Hook Switch      |      | <a href="#">3.2.10</a>  |
| 17 | 53070101<br>3PP3529-5022P1       | Cover: IC<br>Card Cap          | RSPL | <a href="#">3.2.15</a>  |
| 18 | 4PB4083-2500P1<br>0              | Screw                          |      | <a href="#">3.2.16</a>  |
| 19 | 53069801<br>1PP3529-5013P1       | Cover: Side<br>(Right)         | RSPL | <a href="#">3.2.16</a>  |

#### B.2.02 Cabinet Assembly (2 of 2)

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N   | Description                 | Comments<br><a href="#">Refer to</a><br><a href="#">B.1.02</a> | Disassembly<br>Procedure |
|------|----------------------------|-----------------------------|--|--------------------------|
| 1    | 51012201<br>2PA3529-5074G1 | Guide: Document<br>Assembly | RSPL<br>Inc. 2 - 7   | <a href="#">3.2.17</a>   |
| 2    | N/A<br>2PP3529-5008P1      | Cover: Document<br>Guide    |  | <a href="#">3.2.17</a>   |
| 3    | N/A<br>2PP3529-5009P1      | Guide: Document<br>(R)      |  | <a href="#">3.2.17</a>   |

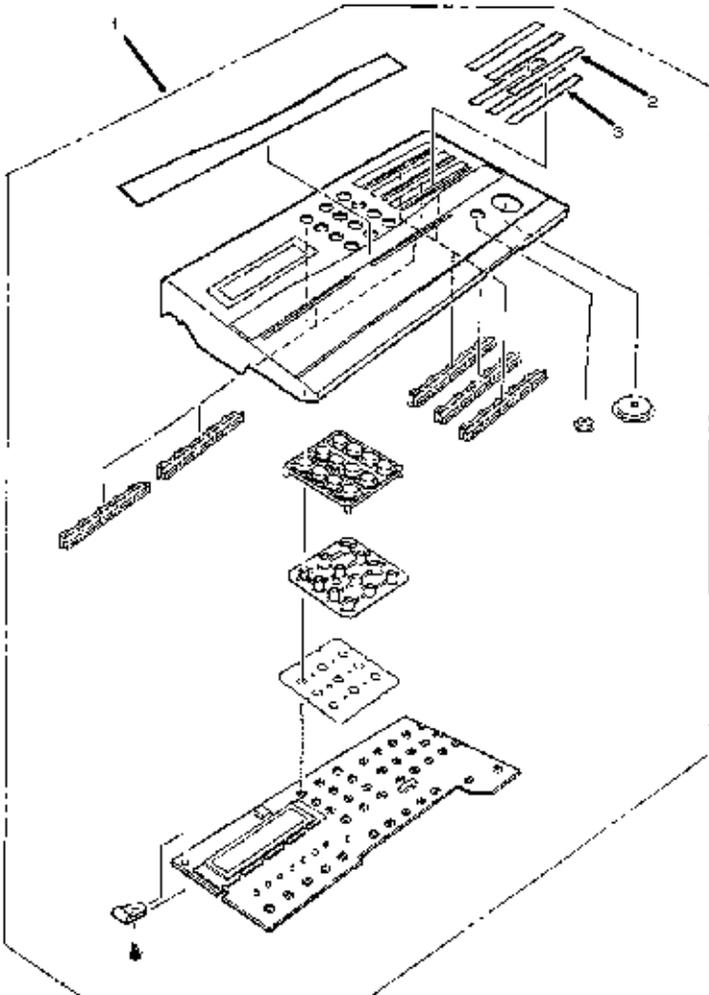
|    |                            |                        |  |  |
|----|----------------------------|------------------------|--|--|
| 4  | N/A<br>2PP3529-5010P1      | Guide: Document<br>(L) |  | <a href="#">3.2.17</a>  |
| 5  | N/A<br>1PP3529-5007P1      | Hopper:<br>Document    |  | <a href="#">3.2.17</a>  |
| 6  | N/A<br>4PB3529-5116P1      | Screw                  |  | <a href="#">3.2.17</a>  |
| 7  | N/A<br>4YB3527-1037P1      | Gear: Damper           |  | <a href="#">3.2.17</a>  |
| 8  | N/A<br>4PB3529-5116P1      | Screw                  |  | <a href="#">3.2.18</a>  |
| 9  | N/A<br>4PP3512-4707P1      | Bracket:<br>Speaker    |  | <a href="#">3.2.18</a>  |
| 10 | 57001302<br>4YS3529-1040P2 | Speaker                |  | <a href="#">3.2.18</a>  |

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**B.2.03 Control Panel Assembly**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N   | Description                   | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly Procedure  |
|------|----------------------------|-------------------------------|---|------------------------|
| 1    | 50102101<br>4YB3529-1054P1 | Panel: Control Panel Assembly | RSPL  | <a href="#">3.2.20</a> |
| 2    | 52067801 N/A               | Cover: One-Touch Label Covers | RSPL  | <a href="#">3.2.20</a> |

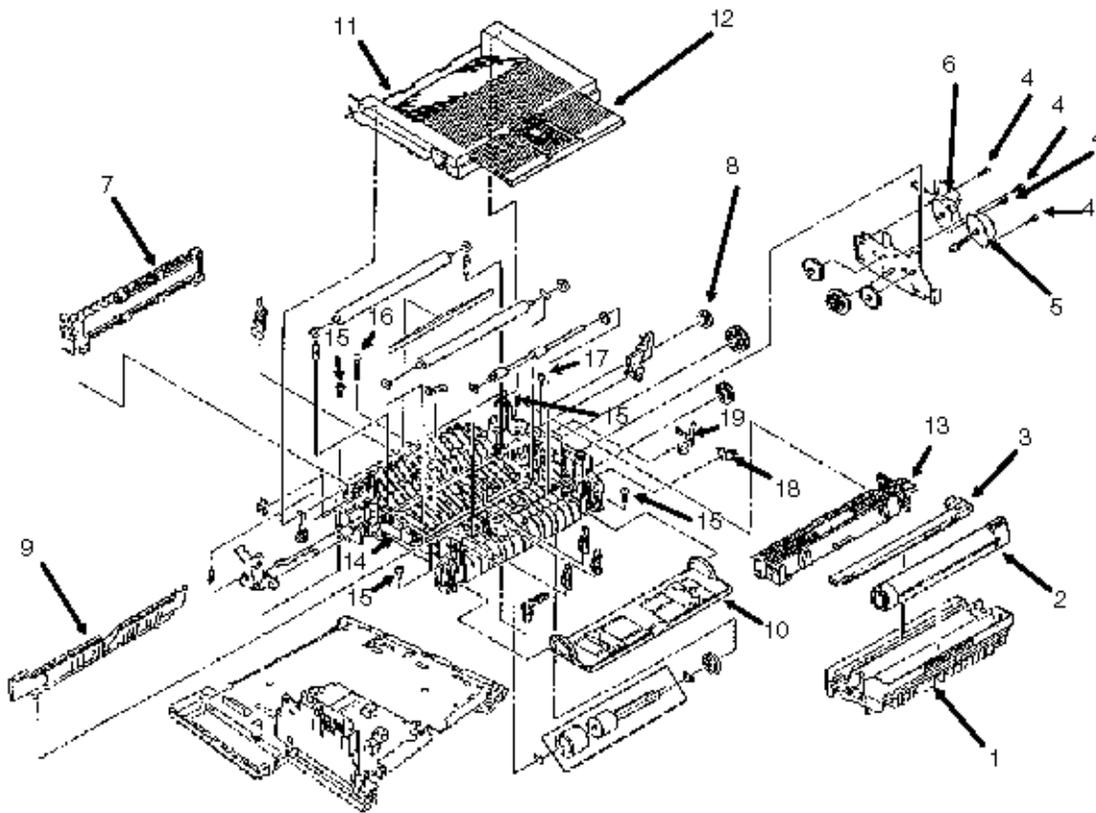
|   |              |                           |      |   |
|---|--------------|---------------------------|------|---|
| 3 | 58233501 N/A | Labels: One-Touch<br>Dial | RSPL | <u>3.2.20</u>  |
|---|--------------|---------------------------|------|---|

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#### B.2.04 Printer Assembly (1 of 3)

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.

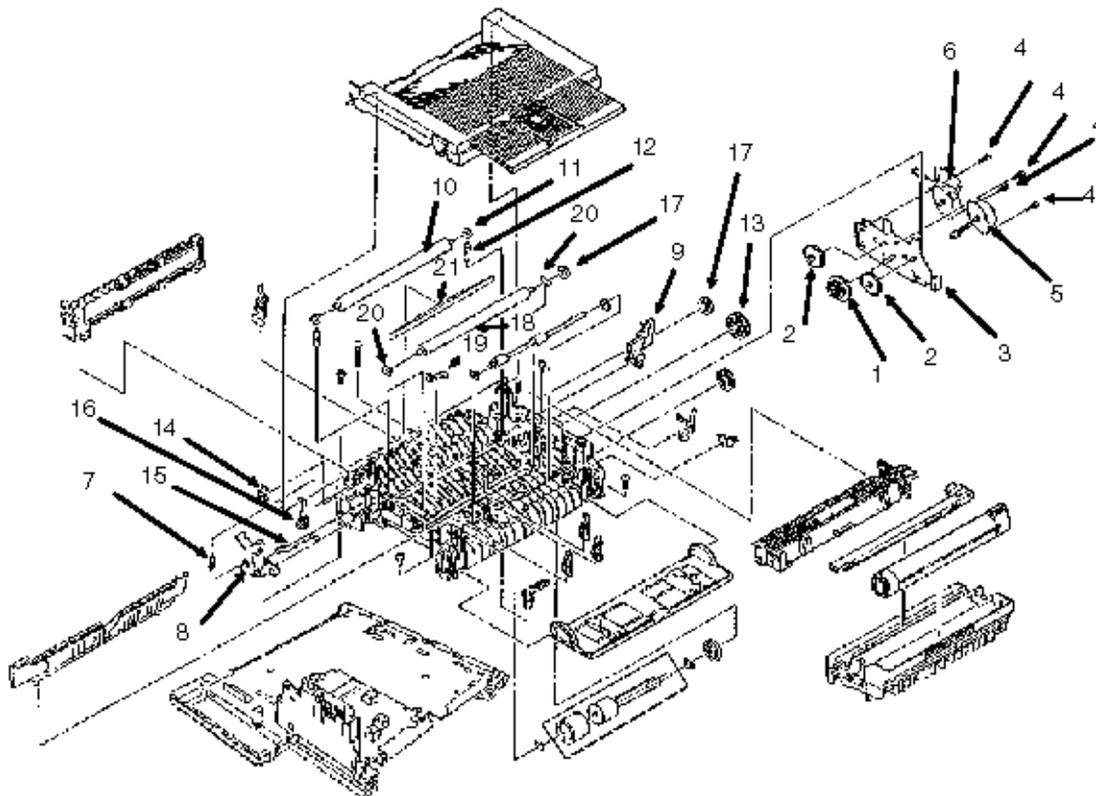


| Item | Okidata P/N<br>Oki-J P/N    | Description         | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly<br>Procedure |
|------|-----------------------------|---------------------|---|--------------------------|
| 1    | 56116901<br>4YA4083-6300G20 | Kit:Image Drum      | Consumable                                  | <a href="#">3.2.01</a>   |
| 2    | 52106701<br>4YA4083-6400G20 | Kit:Toner Cartridge | Consumable                                  | <a href="#">3.2.01</a>   |
| 3    | 56110801<br>4YA4116-1115G1  | LED Head            | RSPL  | <a href="#">3.2.02</a>   |

|    |                              |                                      |                 |  |
|----|------------------------------|--------------------------------------|-----------------|--|
| 4  | N/A<br>+P(SW)3-4-HHC         | Screw                                |                 | <a href="#">3.2.39</a>    |
| 5  | 56510702<br>4PB4083-6075P2   | Motor: Registration<br>Stepper       | RSPL            | <a href="#">3.2.39</a>    |
| 6  | 56510703<br>4PB4083-6075P3   | Motor: Main Stepper                  | RSPL            | <a href="#">3.2.39</a>    |
| 7  | 53342801<br>2PA4083-6120G1   | Roller: Eject<br>Assembly            | RSPL            | <a href="#">3.2.40</a>    |
| 8  | 51229201<br>4PP4083-6081P1   | Gear: Eject Roller<br>Idle           | RSPL            | <a href="#">3.2.40</a>    |
| 9  | 53069701<br>2PP3529-5025P1   | Cover: Inner                         |                 | <a href="#">3.2.41</a>    |
| 10 | 51011001<br>2PA4083-6130G1   | Guide: Manual Feed<br>Assembly       | RSPL            | <a href="#">3.2.41</a>    |
| 11 | 53069001<br>2PA4083-6160G1   | Assembly: Face Down<br>Stacker Cover | RSPL<br>Inc. 12 | <a href="#">3.2.42</a>    |
| 12 | 50104801 N/A                 | Tray: Stacker Cover                  |                 | <a href="#">3.2.42</a>    |
| 13 | 50217501<br>2YX4083-6100G1   | Unit: Fuser Assembly<br>(120V)       | RSPL            | <a href="#">3.2.43</a>    |
| 14 | 53070401<br>1PP4083-6011P1   | Frame: Lower Base<br>Assembly        | RSPL            | <a href="#">3.2.44</a>    |
| 15 | N/A<br>+T2P4-12-HHC          | Screw                                |                 | <a href="#">3.2.44</a>  |
| 16 | N/A<br>+P(SW+2W)3-25-H<br>HC | Screw                                |                 | <a href="#">3.2.44</a>  |
| 17 | N/A +D3-8-G                  | Screw                                |                 | <a href="#">3.2.44</a>  |
| 18 | 53344301<br>4PP4083-6033P1   | Plate: Ground (RE)                   |                 | <a href="#">3.2.44</a>  |
| 19 | 53344401<br>4PP4083-6056P1   | Plate: Ground (BU)                   |                 | <a href="#">3.2.44</a>  |

#### B.2.05 Printer Assembly (2 of 3)

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.

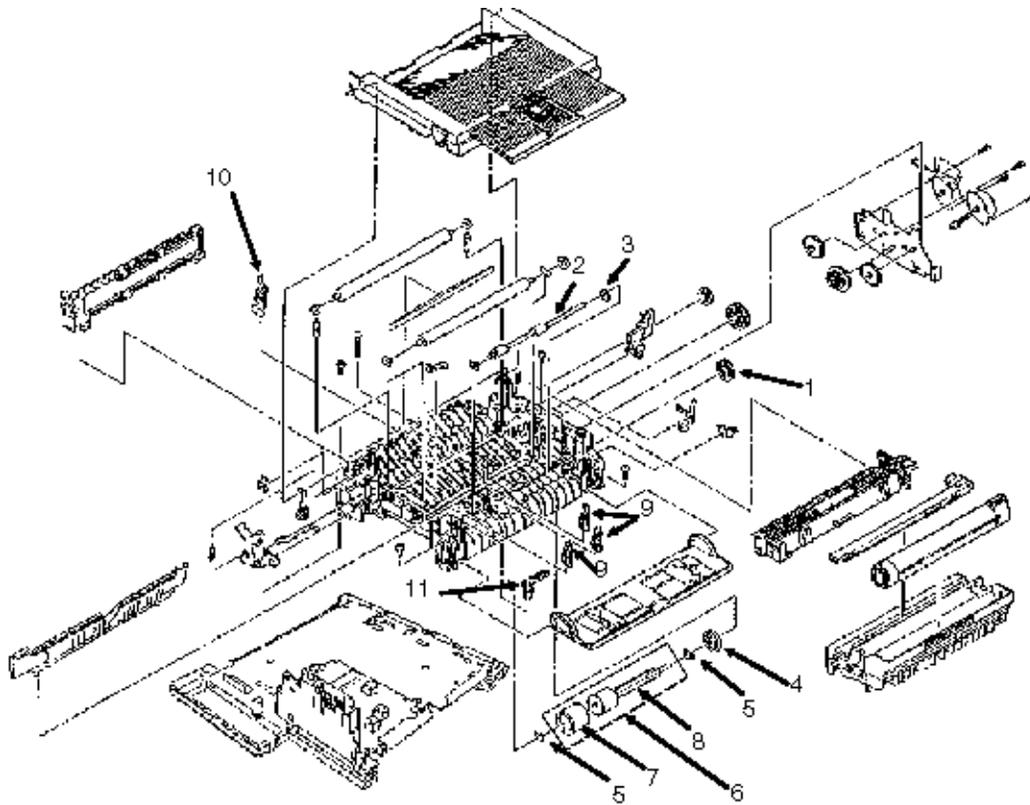


| Item | Okidata P/N<br>Oki-J P/N   | Description                 | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly<br>Procedure |
|------|----------------------------|-----------------------------|---|--------------------------|
| 1    | 51229301<br>3PP4083-6076P1 | Gear: Reduction             | RSPL  | <a href="#">3.2.45</a>   |
| 2    | 51225701<br>4PP4083-2593P1 | Gear: Stepper<br>Motor Idle | RSPL  | <a href="#">3.2.45</a>   |
| 3    | 51709901<br>3PP4083-6071G1 | Bracket: Motor              |   | <a href="#">3.2.45</a>   |
| 4    | N/A<br>+P(SW)3-4-HHC       | Screw                       |   | <a href="#">3.2.45</a>   |

|    |                            |                                      |      |  |
|----|----------------------------|--------------------------------------|------|--|
| 5  | 56510702<br>4PB4083-6075P2 | Motor:<br>Registration<br>Stepper    | RSPL | <a href="#">3.2.45</a>    |
| 6  | 56510703<br>4PB4083-6075P3 | Motor: Main<br>Stepper               | RSPL | <a href="#">3.2.45</a>    |
| 7  | 50924201<br>4PP4083-6057P1 | Spring: Stacker<br>Cover Reset       | RSPL | <a href="#">3.2.46</a>    |
| 8  | 50805801<br>3PP4083-6053P1 | Lever: Reset<br>(Left)               | RSPL | <a href="#">3.2.46</a>    |
| 9  | 50805901<br>3PP4083-6054P1 | Lever: Reset<br>(Right)              | RSPL | <a href="#">3.2.46</a>    |
| 10 | 53343701<br>3PB4083-6064P1 | Roller: Back-up<br>(Pressure)        | RSPL | <a href="#">3.2.46</a>    |
| 11 | 51607601<br>4PP4083-6052P1 | Bushing:<br>Pressure Roller          | RSPL | <a href="#">3.2.46</a>    |
| 12 | 50924101<br>4PP4083-6051P1 | Spring: Bias<br>(Pressure<br>Roller) |      | <a href="#">3.2.46</a>    |
| 13 | 51229101<br>4PP4083-6080P1 | Gear: Fuser<br>Roller Idle           | RSPL | <a href="#">3.2.46</a>    |
| 14 | 51229401<br>4PB4083-6197P1 | Gear: Stacker<br>Cover Damper        | RSPL | <a href="#">3.2.46</a>    |
| 15 | 53068901<br>3PP4083-6058P1 | Arm: Cover Open<br>Switch            | RSPL | <a href="#">3.2.46</a>  |
| 16 | 53069101<br>4PP4083-6191G1 | Arm: Stacker<br>Cover Damper         | RSPL | <a href="#">3.2.46</a>  |
| 17 | 51229001<br>4PP4083-6042P1 | Gear: Transfer<br>Roller             | RSPL | <a href="#">3.2.47</a>  |
| 18 | 53342601<br>4YB4083-6040P1 | Roller:<br>Transfer                  | RSPL | <a href="#">3.2.47</a>  |
| 19 | 53344501<br>4PP4083-6043P1 | Plate: Transfer<br>Contact           |      | <a href="#">3.2.47</a>  |
| 20 | 51607402<br>4PP4083-6022P2 | Bearing                              | RSPL | <a href="#">3.2.47</a>  |
| 21 | 51010903<br>4PB4083-3182P3 | Strip:<br>Anti-Static                |      | <a href="#">3.2.47</a>  |

#### B.2.06 Printer Assembly (3 of 3)

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N   | Description                     | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly Procedure  |
|------|----------------------------|---------------------------------|---|------------------------|
| 1    | 51228901<br>4PB4083-6024P1 | Gear: Hopping Roller Clutch     | RSPL  | <a href="#">3.2.48</a> |
| 2    | 53342501<br>3PB4083-6030P1 | Roller: Registration            | RSPL  | <a href="#">3.2.48</a> |
| 3    | 51607501<br>4PP4083-6031P1 | Bearing:<br>Registration Roller |   | <a href="#">3.2.48</a> |
| 4    | 51228901<br>4PB4083-6024P1 | Gear: Hopping Roller Clutch     | RSPL  | <a href="#">3.2.49</a> |

|    |                            |                             |                      |  |
|----|----------------------------|-----------------------------|----------------------|--|
| 5  | 51607402<br>4PP4083-6022P2 | Bearing                     | RSPL                 | <a href="#">3.2.49</a>  |
| 6  | 51112601<br>3PA4083-6019G1 | Roller: Hopping<br>Assembly | RSPL Inc.<br>7 and 8 | <a href="#">3.2.49</a>  |
| 7  | N/A<br>4PB4083-6021P1      | Rubber: Hopping<br>Roller   |                      | <a href="#">3.2.49</a>  |
| 8  | N/A<br>3PP4083-6020P1      | Shaft: Hopping<br>Roller    |                      | <a href="#">3.2.49</a>  |
| 9  | 51010701<br>4PP4083-6083P1 | Plate: Sensor (Inlet)       | RSPL                 | <a href="#">3.2.50</a>  |
| 10 | 51010801<br>4PP4083-6085P1 | Plate: Sensor<br>(Outlet)   | RSPL                 | <a href="#">3.2.51</a>  |
| 11 | 50405501<br>4PP4083-6086G1 | Sensor: Toner               | RSPL                 | <a href="#">3.2.52</a>  |

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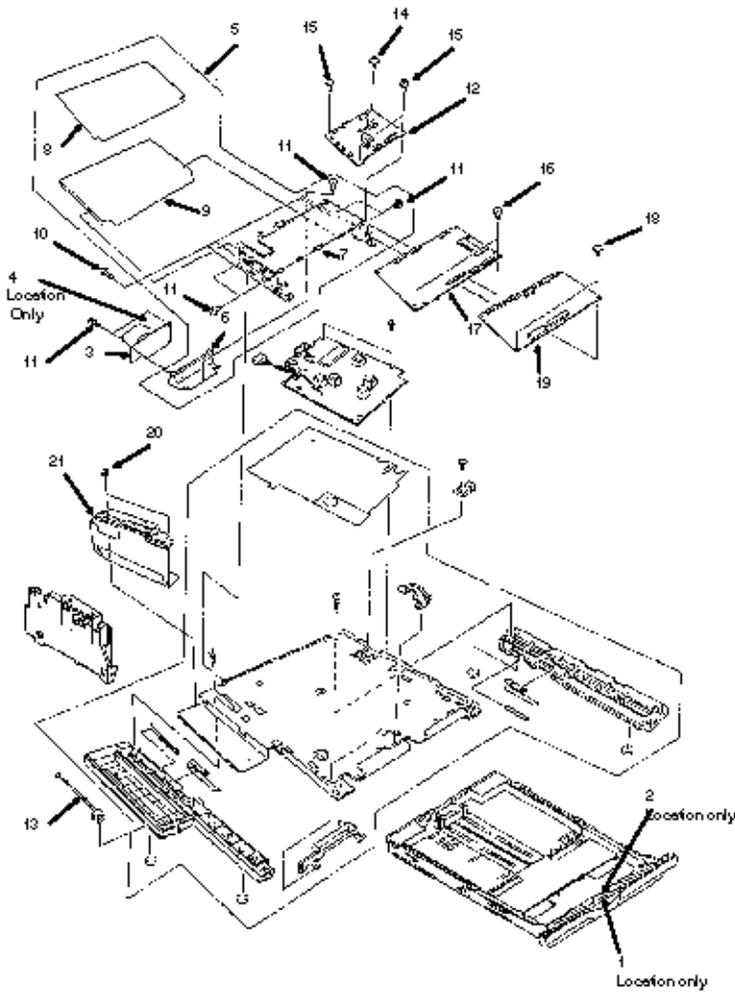
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**B.2.07 Base Assembly (1 of 2)**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N | Description                 | Comments<br><a href="#">Refer to B.1.02</a>  | Disassembly<br>Procedure   |
|------|--------------------------|-----------------------------|--|--|
| 1    | 53571901                 | Cassette Separator Assembly | RSPL   | <a href="#">3.2.01</a>  |
| 2    | 50925801                 | Spring: Cassette Separator  |  | <a href="#">3.2.01</a>  |

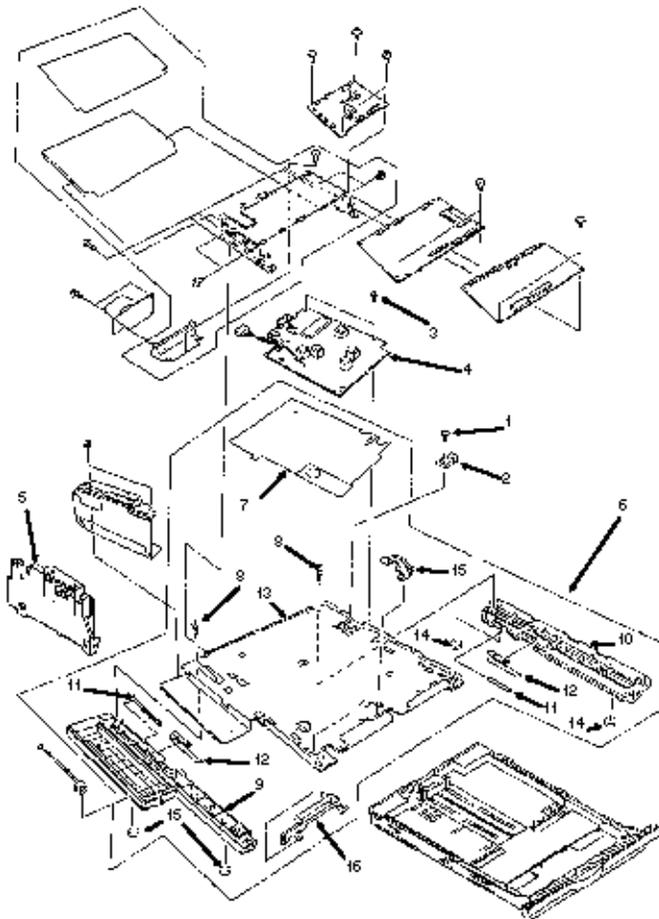
|    |                            |                              |             |  |
|----|----------------------------|------------------------------|-------------|--|
| 3  | 55073401<br>4YU3528-1008G2 | PCB: Line-JU                 | RSPL        | <a href="#">3.2.04</a>    |
| 4  | 53070901                   | Cover: Ring<br>Volume Switch | RSPL        | <a href="#">3.2.04</a>    |
| 5  | 51012801<br>3PA3529-5075G1 | Package Shelf<br>Assembly    | Inc. 6 - 11 | <a href="#">3.2.05</a>    |
| 6  | N/A<br>3PP3529-5086P1      | Bracket: Line                |             | <a href="#">3.2.05</a>    |
| 7  | N/A<br>1PP3529-5065P1      | Guide: Package               |             | <a href="#">3.2.05</a>    |
| 8  | N/A<br>3PP3529-5067P1      | Insulator (2)                |             | <a href="#">3.2.05</a>    |
| 9  | N/A<br>3PP3529-5021P1      | Plate: Shield (L)            |             | <a href="#">3.2.05</a>    |
| 10 | N/A                        | Screw                        |             | <a href="#">3.2.05</a>    |
| 11 | N/A                        | Screw                        |             | <a href="#">3.2.05</a>    |
| 12 | 55073501<br>4YU3528-1017G2 | PCB: NCU-U                   | RSPL        | <a href="#">3.2.06</a>    |
| 13 | 56628604<br>4YS3529-1041P4 | Cable: NCU-Hand<br>Set       |             | <a href="#">3.2.06</a>  |
| 14 | N/A                        | Screw                        |             | <a href="#">3.2.06</a>  |
| 15 | N/A                        | Screw                        |             | <a href="#">3.2.06</a>  |
| 16 | N/A                        | Screw                        |             | <a href="#">3.2.07</a>  |
| 17 | 55073701<br>4YU3529-1002G1 | PCB: MCNT-150                | RSPL        | <a href="#">3.2.07</a>  |
| 18 | N/A +D3-6-G                | Screw                        |             | <a href="#">3.2.08</a>  |
| 19 | 55073601<br>4YU3529-1003G1 | PCB: PCNT-150                | RSPL        | <a href="#">3.2.08</a>  |
| 20 | N/A                        | Screw                        |             | <a href="#">3.2.11</a>  |
| 21 | 56413101<br>4YB3529-1005P2 | Power Supply<br>(120V)       | RSPL        | <a href="#">3.2.11</a>  |

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#### B.2.08 Base Assembly (2 of 2)

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N   | Description             | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly Procedure  |
|------|----------------------------|-------------------------|---|------------------------|
| 1    | N/A +D3-6-G                | Screw                   |   | <a href="#">3.2.38</a> |
| 2    | 55073901<br>4YB3529-1037P1 | PCB: 2nd Tray Interface | RSPL  | <a href="#">3.2.38</a> |
| 3    | N/A +D3-6-G                | Screw                   |   | <a href="#">3.2.53</a> |

|    |                            |                                     |                     |  |
|----|----------------------------|-------------------------------------|---------------------|--|
| 4  | 55073801<br>4YB3529-1012P1 | PCB: PSUB-150<br>(Hi-Volt)          | RSPL                | <a href="#">3.2.53</a>    |
| 5  | 56730001<br>3PA4083-6090G1 | Assembly: Contact                   | RSPL                | <a href="#">3.2.53</a>    |
| 6  | 50217801<br>2PA3529-5071G1 | Base Assembly                       | RSPL Inc.<br>7 - 16 | <a href="#">3.2.54</a>    |
| 7  | 51710001<br>3PP3529-5066P1 | Insulator (1)                       |                     | <a href="#">3.2.54</a>    |
| 8  | N/A<br>4PB4083-2500P10     | Screw                               |                     | <a href="#">3.2.54</a>    |
| 9  | 51112901 N/A               | Guide: Cassette<br>Assembly (Left)  | RSPL                | <a href="#">3.2.54</a>    |
| 10 | 51112801 N/A               | Guide: Cassette<br>Assembly (Right) | RSPL                | <a href="#">3.2.54</a>    |
| 11 | 50924401<br>4PP4083-6152P1 | Spring: Cassette<br>Eject           | RSPL                | <a href="#">3.2.54</a>    |
| 12 | N/A<br>4PP4083-6153P1      | Spring: Support                     |                     | <a href="#">3.2.54</a>    |
| 13 | N/A<br>1PP3529-5006P1      | Plate: Base                         |                     | <a href="#">3.2.54</a>    |
| 14 | 50806104<br>4PB4016-1960P4 | Rubber Foot                         |                     | <a href="#">3.2.54</a>  |
| 15 | 51011401<br>4PP4083-6082P1 | Plate: Paper Supply<br>Sensor       | RSPL                | <a href="#">3.2.55</a>  |
| 16 | 51011501<br>3PP4083-6154P1 | Plate: Cassette<br>Sensor           | RSPL                | <a href="#">3.2.55</a>  |

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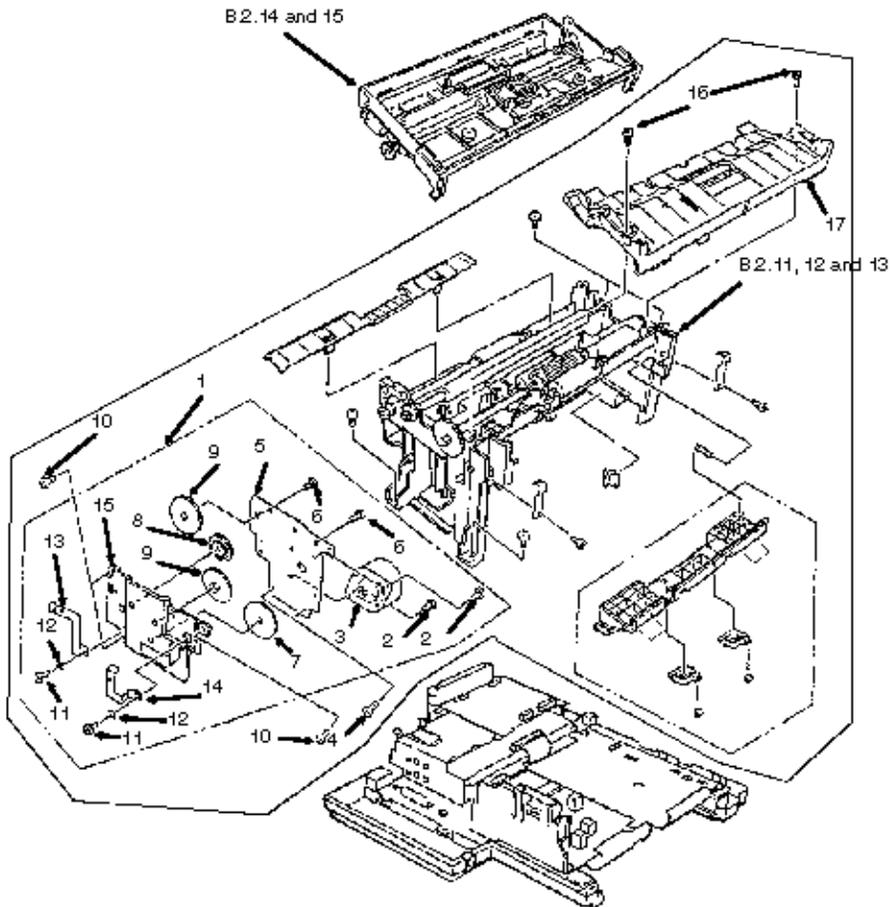
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**B.2.09 Scan Assembly (1 of 2)**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N Oki-J P/N      | Description          | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly Procedure  |
|------|----------------------------|----------------------|---|------------------------|
| 1    | 53343401<br>3PA3529-5083G1 | Frame: Gear Assembly | RSPL<br>Inc.2 - 15                          | <a href="#">3.2.12</a> |
| 2    | N/A<br>4PB3529-5116P1      | Screw                |   | <a href="#">3.2.14</a> |

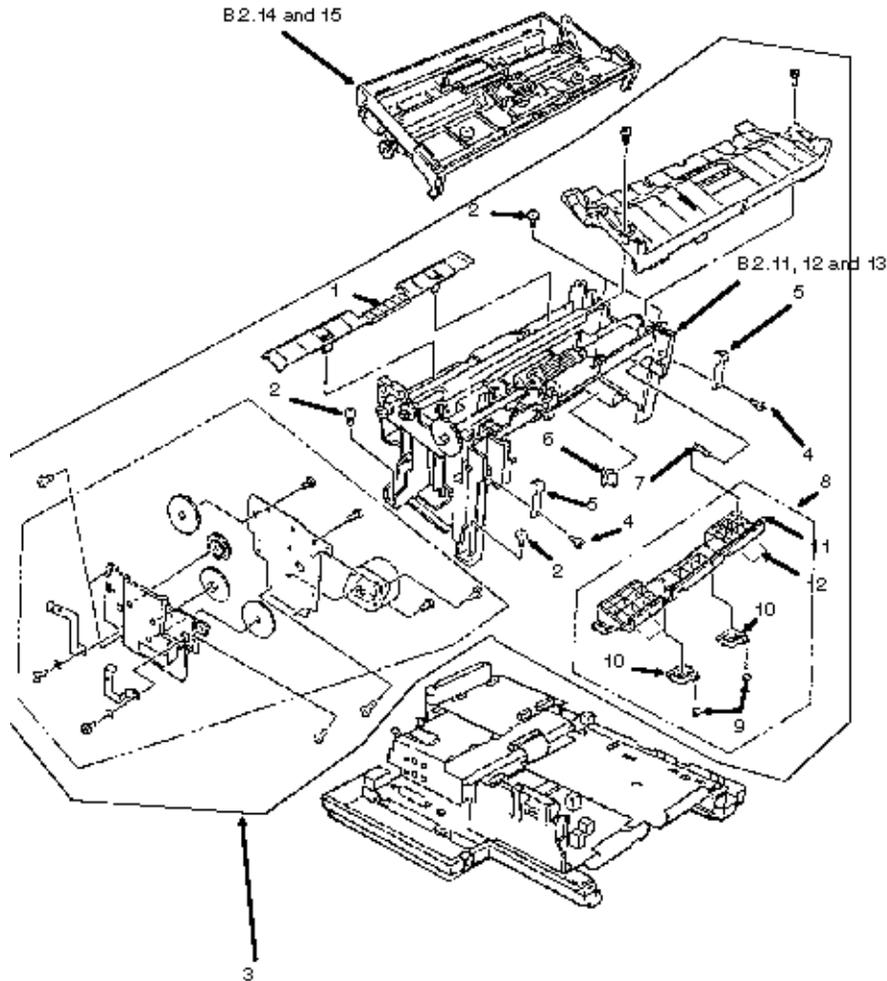
|    |                            |                            |      |  |
|----|----------------------------|----------------------------|------|--|
| 3  | 56511101<br>4YB3529-1007P1 | Motor: Transmit<br>Stepper | RSPL | <a href="#">3.2.13</a>    |
| 4  | N/A                        | Screw                      |      | <a href="#">3.2.12</a>    |
| 5  | N/A<br>3PP3529-5053P1      | Heat Sink                  |      | <a href="#">3.2.14</a>    |
| 6  | N/A<br>4PB3529-5116P1      | Screw                      |      | <a href="#">3.2.14</a>    |
| 7  | N/A<br>4PP3529-5039P1      | Gear: Z81/15               |      | <a href="#">3.2.14</a>    |
| 8  | N/A<br>4PP3529-5038P1      | Gear: Z31/19               |      | <a href="#">3.2.14</a>    |
| 9  | N/A<br>4PP3529-5036P1      | Gear: Z43                  |      | <a href="#">3.2.14</a>    |
| 15 | N/A<br>2PP3529-5030P1      | Frame: Gear                |      | <a href="#">3.2.14</a>    |
| 14 | N/A<br>4PP3529-5059P1      | Plate: Earth (ADF)         |      | <a href="#">3.2.14</a>    |
| 13 | N/A<br>4PP3529-5060P1      | Plate: Earth (F2)          |      | <a href="#">3.2.14</a>    |
| 12 | N/A SW3-HHC                | Spring Washer              |      | <a href="#">3.2.14</a>   |
| 10 | N/A<br>4PB3529-5116P2      | Screw                      |      | <a href="#">3.2.14</a>  |
| 11 | N/A<br>4PB3529-5116P1      | Screw                      |      | <a href="#">3.2.14</a>  |
| 16 | N/A<br>4PB3529-5116P2      | Screw                      |      | <a href="#">3.2.25</a>  |
| 17 | 51012501<br>1PP3529-5027P1 | Guide: Paper Table         | RSPL | <a href="#">3.2.25</a>  |

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**B.2.10 Scan Assembly (2 of 2)**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N   | Description | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly Procedure  |
|------|----------------------------|-------------|---|------------------------|
| 1    | 51012401<br>2PP3529-5028P1 | Guide: Exit | RSPL  | <a href="#">3.2.32</a> |

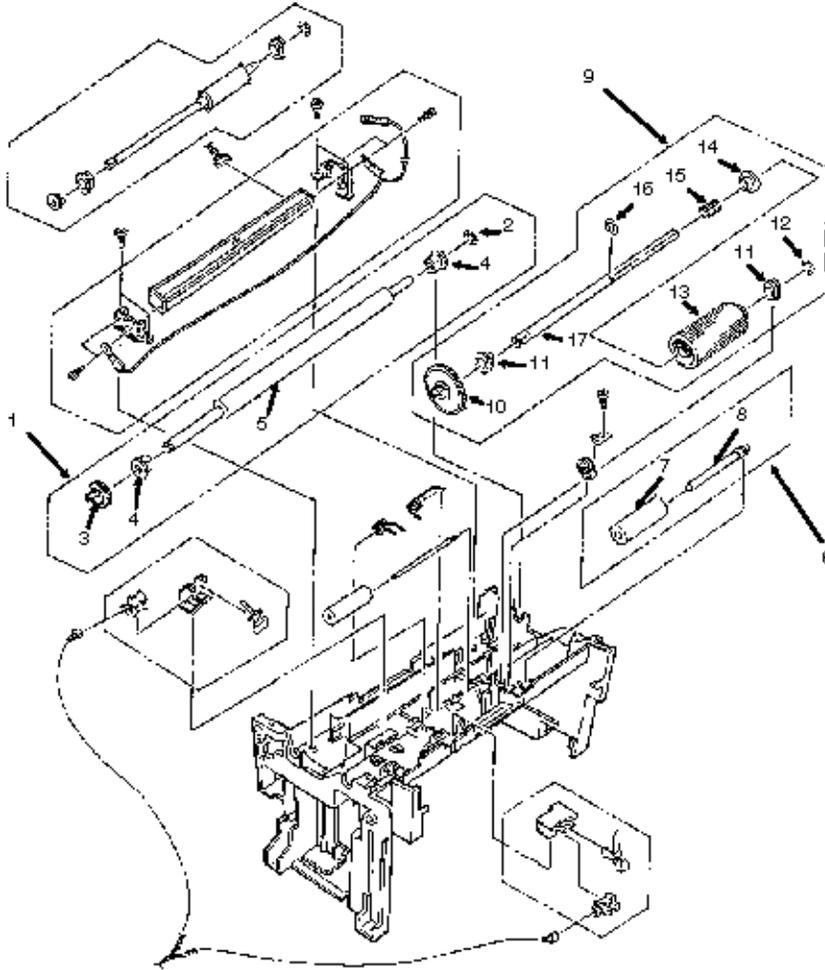
|    |                            |                                   |                     |  |
|----|----------------------------|-----------------------------------|---------------------|--|
| 2  | N/A                        | Screw                             |                     | <a href="#">3.2.36</a>    |
| 3  | 53343501<br>2PA3529-5073G1 | Frame: Scanner<br>Assembly        | RSPL                | <a href="#">3.2.36</a>    |
| 4  | N/A<br>4PB3529-5116P1      | Screw                             |                     | <a href="#">3.2.36</a>    |
| 5  | 50925601<br>4PP3529-5054P1 | Spring: Top Cover<br>Release      |                     | <a href="#">3.2.36</a>    |
| 6  | N/A<br>123A1120P0004       | Clamper                           |                     | <a href="#">3.2.36</a>    |
| 7  | 50925401<br>4PP3529-5055P1 | Spring: Release<br>Guide          | RSPL                | <a href="#">3.2.37</a>    |
| 8  | 51012801<br>3PA3529-5076G1 | Guide: Release<br>Assembly        | RSPL Inc.<br>9 - 12 | <a href="#">3.2.37</a>    |
| 9  | N/A<br>4PP4083-2024P1      | Roller: Eject                     |                     | <a href="#">3.2.37</a>    |
| 10 | N/A<br>4PP4083-6180P1      | Bias: Spring                      |                     | <a href="#">3.2.37</a>  |
| 11 | N/A<br>1PP3529-5029P1      | Guide: Release                    |                     | <a href="#">3.2.37</a>  |
| 12 | 52202801<br>4PB4122-1288P1 | Mylar: Exit Strip<br>(2 required) | RSPL                | <a href="#">3.2.37</a>  |

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**B.2.11 Scan Unit (1 of 3)**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.

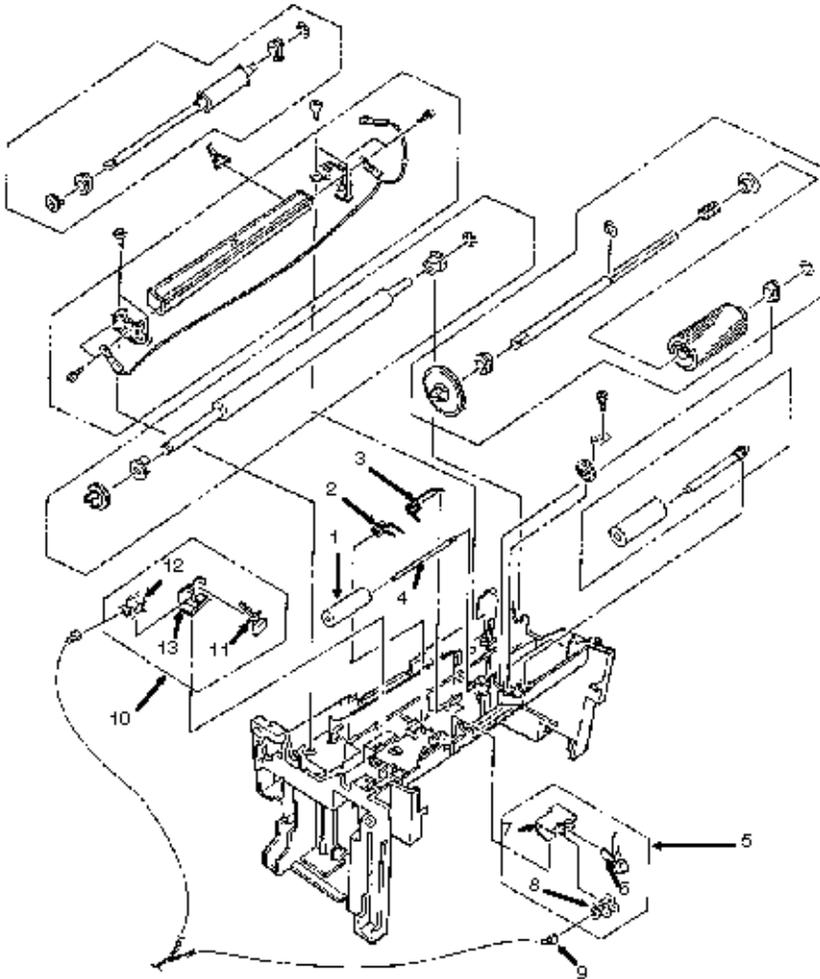


| Item | Okidata P/N<br>Oki-J P/N   | Description             | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly Procedure  |
|------|----------------------------|-------------------------|---|------------------------|
| 1    | 50405701<br>3PA3529-5078G1 | Roller: Sensor Assembly | RSPL<br>Inc. 2 - 5                          | <a href="#">3.2.26</a> |

|    |                            |                         |                         |  |
|----|----------------------------|-------------------------|-------------------------|--|
| 2  | 50516401<br>4PB4013-3501P3 | Washer:<br>Compression  |                         | <a href="#">3.2.26</a>    |
| 3  | N/A<br>4PP3529-5034P1      | Gear: Z22               |                         | <a href="#">3.2.26</a>    |
| 4  | N/A<br>4PP3527-5355P1      | Bearing                 |                         | <a href="#">3.2.26</a>    |
| 5  | N/A<br>3PP3529-5040P1      | Roller: Sensor          |                         | <a href="#">3.2.26</a>    |
| 6  | 50406101<br>4PA3529-5082G1 | Roller: Sub<br>Assembly | RSPL<br>Inc. 7<br>and 8 | <a href="#">3.2.27</a>    |
| 7  | N/A<br>4PP3529-5044P1      | Sub Roller              |                         | <a href="#">3.2.27</a>    |
| 8  | N/A<br>3PP3529-5049P1      | Shaft: Sub Roller       |                         | <a href="#">3.2.27</a>    |
| 9  | 50405801<br>3PA3529-5079G1 | Roller: ADF<br>Assembly | RSPL<br>Inc. 10<br>- 17 | <a href="#">3.2.28</a>    |
| 10 | N/A<br>4PP3529-5037P1      | Gear: Z49               |                         | <a href="#">3.2.28</a>    |
| 11 | N/A<br>4PP3522-3568P1      | Bearing: ADF            |                         | <a href="#">3.2.28</a>    |
| 12 | 50516401<br>4PB4013-3501P3 | Washer:<br>Compression  |                         | <a href="#">3.2.28</a>  |
| 13 | N/A<br>4PP3529-5063P1      | Roller: ADF Feed        |                         | <a href="#">3.2.28</a>  |
| 14 | N/A<br>4PP3529-5047P1      | Collar: ADF (B)         |                         | <a href="#">3.2.28</a>  |
| 15 | N/A<br>4PP3522-3568P1      | Spring: ADF Roller      |                         | <a href="#">3.2.28</a>  |
| 16 | N/A<br>RE6-SUS             | E-Ring                  |                         | <a href="#">3.2.28</a>  |
| 17 | N/A<br>3PP3529-5048P1      | Shaft: ADF              |                         | <a href="#">3.2.28</a>  |

**B.2.12 Scan Unit (2 of 3)**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N Oki-J P/N      | Description              | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly Procedure  |
|------|----------------------------|--------------------------|---|------------------------|
| 1    | 50406201<br>4PP3529-5045P1 | Roller: Pinch            | RPSL  | <a href="#">3.2.29</a> |
| 2    | 50925201<br>4PP3529-5056P1 | Spring: ADF Pinch (Left) |   | <a href="#">3.2.29</a> |

|    |                            |  |                      |  |
|----|----------------------------|--|----------------------|--|
| 3  | 50925202<br>4PP3529-5056P2 | Spring: ADF Pinch<br>(Right)               |                      | <a href="#">3.2.29</a>    |
| 4  | 51112501<br>4PP3529-5050P1 | Roller: Pinch<br>Shaft                     |                      | <a href="#">3.2.29</a>    |
| 5  | 50218101<br>4PA3529-5084G1 | Assembly: Document<br>Detect (PC 1)        | RSPL Inc.<br>6 - 9   | <a href="#">3.2.30</a>    |
| 6  | N/A<br>4PP3529-5051P1      | Lever: PC1                                 |                      | <a href="#">3.2.30</a>    |
| 7  | N/A<br>3PP3529-5052P1      | Bracket: PC1                               |                      | <a href="#">3.2.30</a>    |
| 8  | N/A<br>4YB3512-1987P1      | Photo Sensor                               |                      | <a href="#">3.2.30</a>    |
| 9  | 56628603<br>4YS3529-1041P3 | Cable: PC 1+2-PCNT                         |                      | <a href="#">3.2.30</a> <br><a href="#">3.2.31</a>  |
| 10 | 50218202<br>4PA3512-4663G2 | Assembly: Read<br>Station Sensor (PC<br>2) | RSPL Inc.<br>11 - 13 | <a href="#">3.2.31</a>    |
| 11 | N/A<br>4PP3512-4534P1      | Lever: PC2                                 |                      | <a href="#">3.2.31</a>    |
| 12 | N/A<br>4YB3512-1987P1      | Photo Sensor                               |                      | <a href="#">3.2.31</a>    |
| 13 | N/A<br>3PP3512-4538P1      | Holder: Sensor                             |                      | <a href="#">3.2.31</a>    |

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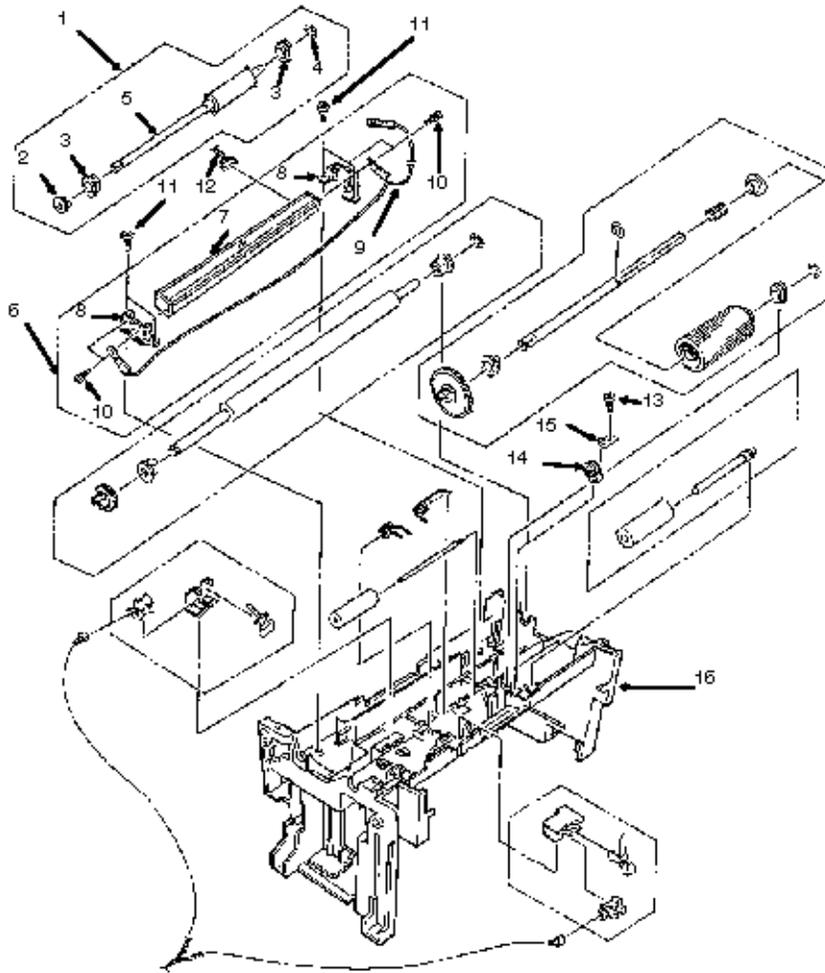
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**B.2.13 Scan Unit (3 of 3)**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N   | Description                 | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly Procedure  |
|------|----------------------------|-----------------------------|---|------------------------|
| 1    | 50406001<br>3PA3529-5081G1 | Roller: Lower Feed Assembly | RSPL Inc.<br>2 - 5                          | <a href="#">3.2.33</a> |

|    |                              |                               |                     |  |
|----|------------------------------|-------------------------------|---------------------|--|
| 2  | N/A<br>4PP3529-5032P1        | Gear: Z17                     |                     | <a href="#">3.2.33</a>    |
| 3  | N/A<br>4PP3522-3568P1        | Bearing: ADF                  |                     | <a href="#">3.2.33</a>    |
| 4  | 50516101<br>4PB4013-3501P3   | Washer: Compression           |                     | <a href="#">3.2.33</a>    |
| 5  | N/A<br>3PP3529-5042P1        | Roller: Feed (2)              |                     | <a href="#">3.2.33</a>    |
| 6  | 50405901<br>3PA3529-5077G1   | Sensor: Image<br>Assembly     | RSPL Inc.<br>7 - 11 | <a href="#">3.2.34</a>    |
| 7  | N/A<br>4YB3529-1006P1        | Sensor                        |                     | <a href="#">3.2.34</a>    |
| 8  | N/A<br>3PP3527-5224P1        | Holder: Sensor                |                     | <a href="#">3.2.34</a>    |
| 9  | N/A<br>4PP3529-5069P2        | Cable: Earth                  |                     | <a href="#">3.2.34</a>    |
| 10 | N/A<br>+P(SW+W)2.6-8-H<br>HC | Screw                         |                     | <a href="#">3.2.34</a>    |
| 11 | N/A<br>4PB3529-5116P2        | Screw                         |                     | <a href="#">3.2.34</a>    |
| 12 | 56628302<br>4YS3529-1039P2   | Cable: PCNT - Image<br>Sensor |                     | <a href="#">3.2.34</a>    |
| 13 | N/A<br>4PB3529-5116P2        | Screw                         |                     | <a href="#">3.2.35</a>  |
| 14 | 51229501<br>4PP3529-5033P1   | Gear: ADF Idle                | RSPL                | <a href="#">3.2.35</a>  |
| 15 | 53343601<br>4PP3529-5099P1   | ADF Gear Holder               |                     | <a href="#">3.2.35</a>  |
| 16 | 50104401<br>1PP3529-5026P1   | Frame: Scanner                |                     | <a href="#">3.2.36</a>  |

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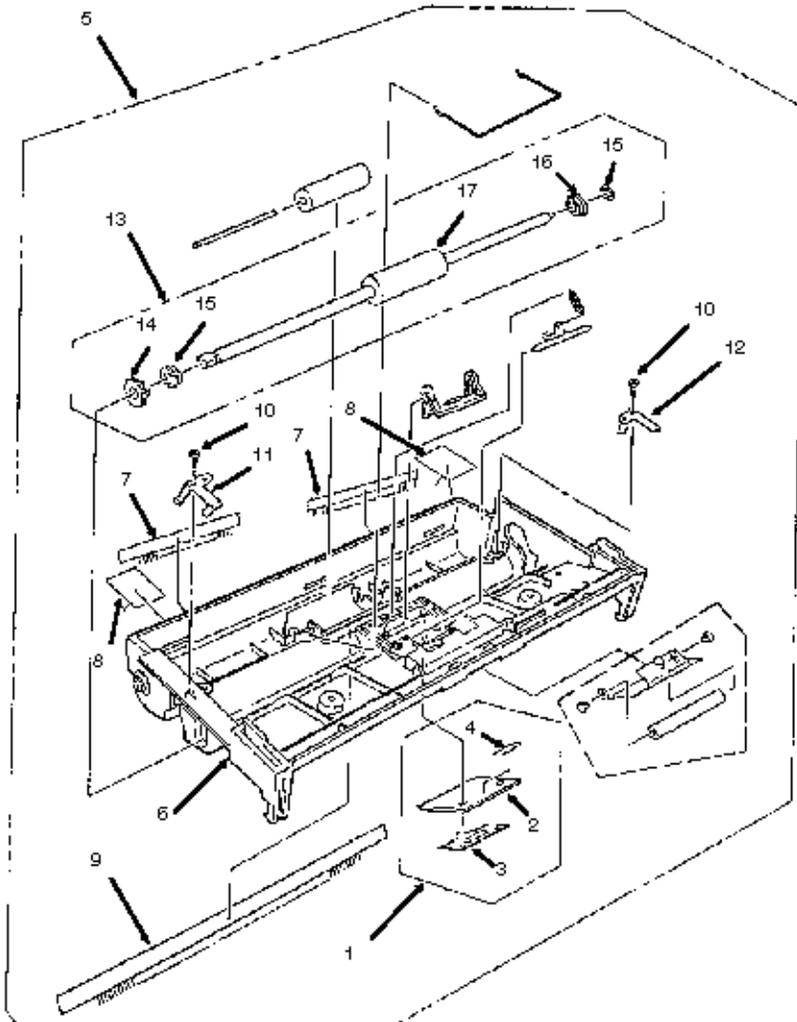
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**B.2.14 Upper Paper Guide Assembly (1 of 2)**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N   | Description                 | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly Procedure  |
|------|----------------------------|-----------------------------|---|------------------------|
| 1    | 53344901<br>4PA3529-5087G1 | Assembly: Separation Rubber | RSPL Inc.<br>2 - 4                          | <a href="#">3.2.19</a> |

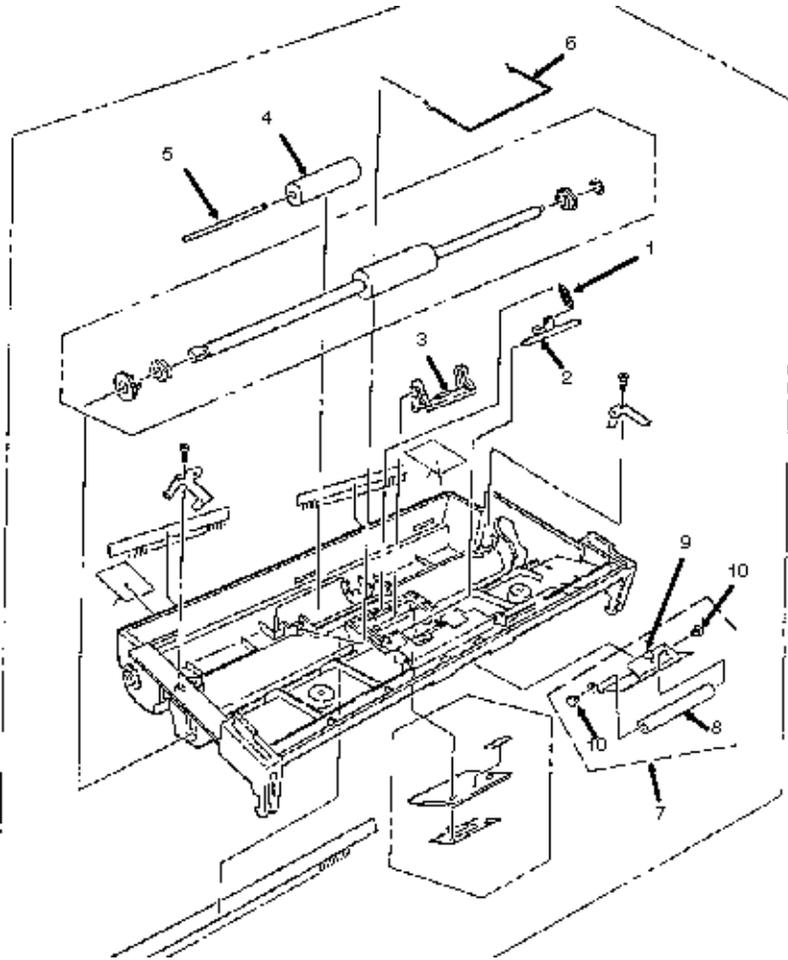
|    |                            |                                      |                      |  |
|----|----------------------------|--------------------------------------|----------------------|--|
| 2  | N/A<br>4PP3529-5088P1      | Rubber: Separation                   |                      | <a href="#">3.2.19</a>    |
| 3  | N/A<br>4PP3529-5089P1      | Mylar: Separation                    |                      | <a href="#">3.2.19</a>    |
| 4  | N/A<br>4YC3529-1062P1      | Tape (10 x 40 mm)                    |                      | <a href="#">3.2.19</a>    |
| 5  | 51012301<br>1PA3529-5072G1 | Guide: Upper Paper<br>Guide Assembly | RSPL Inc.<br>6 - 12  | <a href="#">3.2.21</a>    |
| 6  | N/A<br>1PP3529-5031P1      | Guide: Paper<br>(Upper)              |                      | <a href="#">3.2.21</a>    |
| 7  | 51013101<br>4PP3539-5109P1 | Brush: ADF Ground                    |                      | <a href="#">3.2.21</a>    |
| 8  | 51013201<br>4PP3529-5110P1 | Sheet: ADF Ground                    |                      | <a href="#">3.2.21</a>    |
| 9  | 51013301<br>4PP3529-5068P1 | Brush: ADF<br>Anti-Static            |                      | <a href="#">3.2.21</a>    |
| 10 | N/A<br>4PB3529-5116P1      | Screw                                |                      | <a href="#">3.2.22</a>    |
| 11 | 53344601<br>4PP3529-5061P1 | Plate: ADF Ground<br>(Left)          |                      | <a href="#">3.2.22</a>    |
| 12 | 53344602<br>4PP3529-5061P2 | Plate: ADF Ground<br>(Right)         |                      | <a href="#">3.2.22</a>   |
| 13 | 50406301<br>3PA3529-5080G1 | Roller: Upper Feed<br>Assembly       | RSPL Inc.<br>14 - 17 | <a href="#">3.2.22</a>  |
| 14 | N/A<br>4PP3529-5035P1      | Gear: Z28                            |                      | <a href="#">3.2.22</a>  |
| 15 | 50516401<br>4PB4013-3501P3 | Washer: Compression                  |                      | <a href="#">3.2.22</a>  |
| 16 | N/A<br>4PP3522-3568P1      | Bearing: ADF                         |                      | <a href="#">3.2.22</a>  |
| 17 | N/A<br>3PP3529-5041P1      | Roller: Feed (1)                     |                      | <a href="#">3.2.22</a>  |

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#### B.2.15 Upper Paper Guide Assembly (2 of 2)

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N   | Description      | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly<br>Procedure |
|------|----------------------------|------------------|---|--------------------------|
| 1    | 50925501<br>4PP3529-5090P1 | Spring: ADF      | RSPL  | <a href="#">3.2.23</a>   |
| 2    | 53061201<br>4PP3527-5221P1 | Arm: ADF Tension | RSPL  | <a href="#">3.2.23</a>   |

|    |                            |                                     |                     |  |
|----|----------------------------|-------------------------------------|---------------------|--|
| 3  | 53339801<br>4PP3527-5153P1 | Plate: ADF Back-Up                  | RSPL                | <a href="#">3.2.23</a>  |
| 4  | 50406201<br>4PP3529-5045P1 | Roller: Pinch                       | RSPL                | <a href="#">3.2.23</a>  |
| 5  | 51112501<br>4PP3529-5050P1 | Roller: Pinch<br>Shaft              |                     | <a href="#">3.2.23</a>  |
| 6  | 50925701<br>4PP3529-5057P1 | Spring: Pinch<br>Roller (Upper)     |                     | <a href="#">3.2.23</a>  |
| 7  | 51013001<br>4PA3829-5125G1 | Guide: Sub Pinch<br>Roller Assembly | RSPL Inc.<br>8 - 10 | <a href="#">3.2.24</a>  |
| 8  | N/A<br>4PP3527-5217P1      | Roller: Sub Pinch                   |                     | <a href="#">3.2.24</a>  |
| 9  | N/A<br>4PP3529-5058P1      | Guide: Sub Pinch<br>Roller          |                     | <a href="#">3.2.24</a>  |
| 10 | N/A<br>4PB4016-3043P4      | Rivet                               |                     | <a href="#">3.2.24</a>  |

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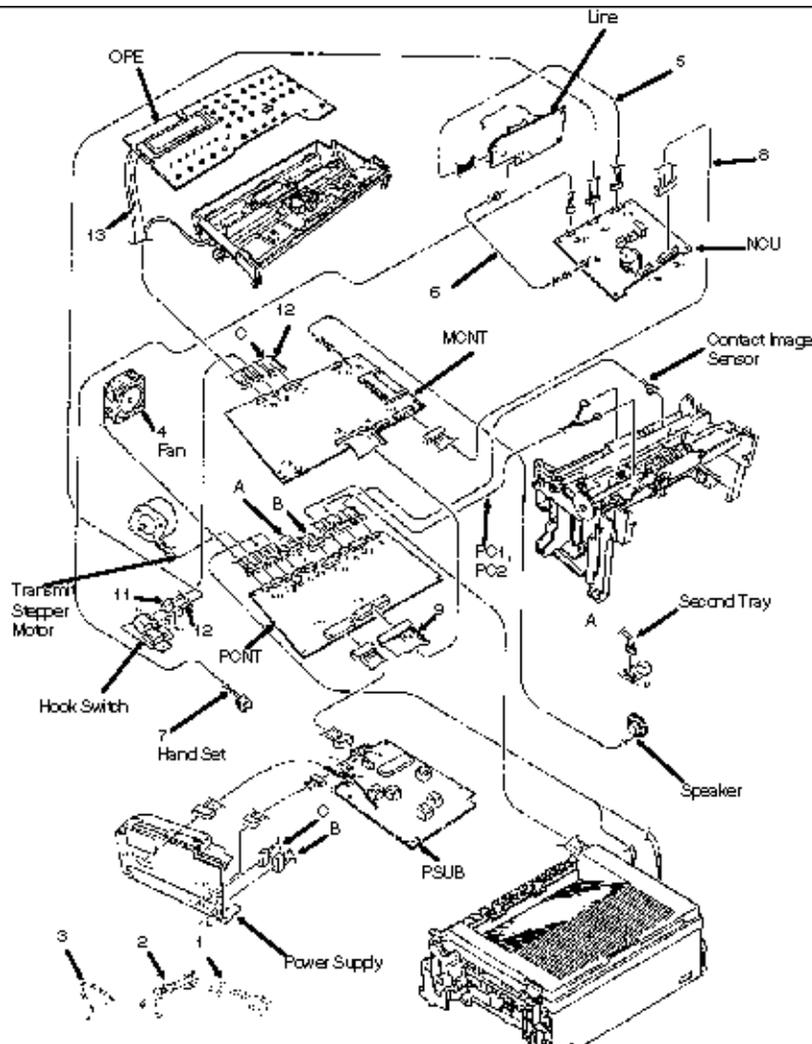
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**B.2.16 Cables (1 of 2)**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N   | Description    | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly<br>Procedure<br><a href="#">3.2.01</a> |
|------|----------------------------|----------------|---|--|
| 1    | 56618901<br>4YS3512-1485P1 | Cord: AC Power | RSPL  |  |

|    |                              |                               |      |  |
|----|------------------------------|-------------------------------|------|--|
| 2  | 56621001<br>236A3161P0002    | Cord: Modular Telephone       | RSPL | <a href="#">3.2.01</a>    |
| 3  | 56628101<br>4YS3522-1252G2   | Cord: Handset                 | RSPL | <a href="#">3.2.01</a>    |
| 4  | 56510902<br>3PB4128-1085P001 | Fan (3 Pin)                   | RSPL | <a href="#">3.2.03</a> <br><a href="#">3.2.08</a>    |
| 5  | 56628510<br>4YS3529-1038P10  | Cable: NCU-Line (8 Pin)       |      | <a href="#">3.2.04</a> <br><a href="#">3.2.06</a>    |
| 6  | 56628901<br>4YS3529-1039P1   | Cable: NCU-Line (2 Pin)       |      | <a href="#">3.2.04</a> <br><a href="#">3.2.06</a>    |
| 7  | 56628604<br>4YS3529-1041P4   | Cable: NCU-Hand Set (4 Pin)   |      | <a href="#">3.2.06</a>    |
| 8  | 56628501<br>4YS3529-1038P1   | Cable: MCNT-NCU (15 Pin)      |      | <a href="#">3.2.06</a> <br><a href="#">3.2.07</a>    |
| 9  | 56628801<br>4YB3529-1052P1   | Cable: MCNT-PCNT (Flat Cable) |      | <a href="#">3.2.06</a> <br><a href="#">3.2.07</a> <br><a href="#">3.2.08</a>  |
| 10 | 56629209<br>4YS3529-1038P9   | Cable: NCU-Hook (4 Pin)       |      | <a href="#">3.2.06</a> <br><a href="#">3.2.10</a>   |
| 11 | 56628505<br>4YS3529-1038P5   | Cable: MCNT-Hook (2 Pin)      |      | <a href="#">3.2.07</a> <br><a href="#">3.2.10</a>    |
| 12 | 56628508<br>4YS3529-1038P8   | Cable: MCNT-PWU (12 Pin)      |      | <a href="#">3.2.07</a> <br><a href="#">3.2.11</a>    |
| 13 | 56628701<br>4YS3529-1055G1   | Cable: OPE-MCNT (9 Pin)       |      | <a href="#">3.2.07</a> <br><a href="#">3.2.20</a>    |

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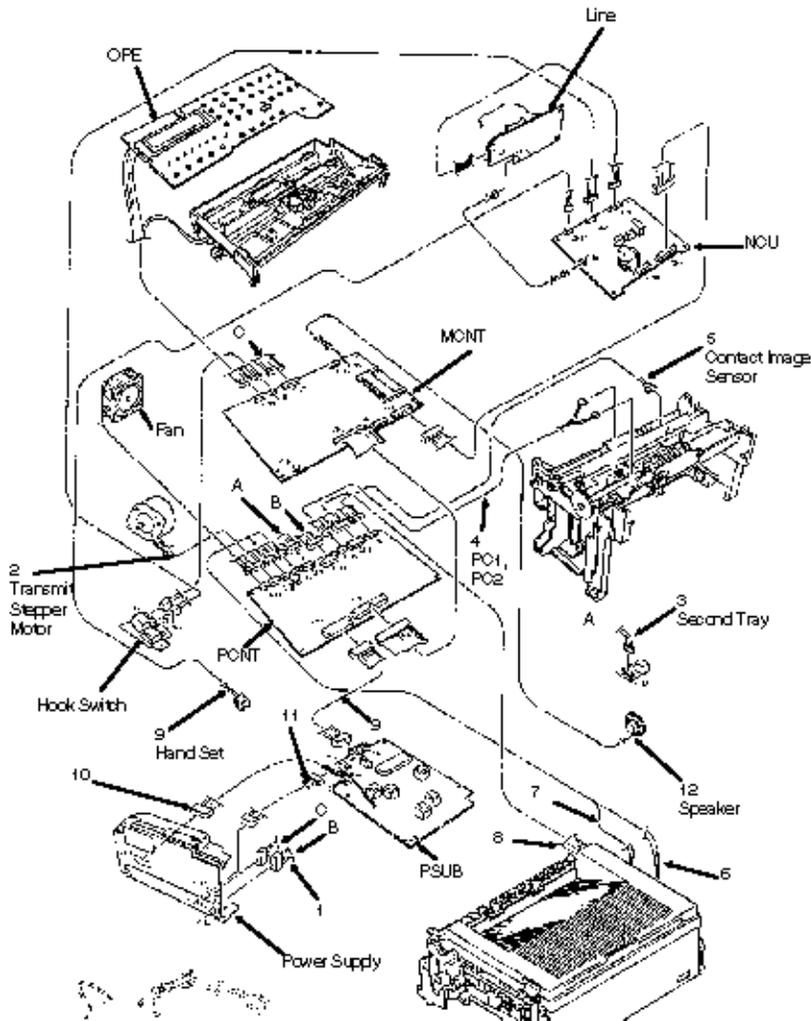
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**B.2.17 Cables (2 of 2)**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N   | Description                 | Comments<br><a href="#">Refer to B.1.02</a><br> | Disassembly<br>Procedure   |
|------|----------------------------|-----------------------------|--|--|
| 1    | 56628605<br>4YS3529-1041P5 | Cable: PCNT-PWU<br>(14 Pin) |  | <a href="#">3.2.08</a> <br><a href="#">3.2.11</a>  |

|    |                             |  |      |  |
|----|-----------------------------|--|------|--|
| 2  | 57001301<br>4YS3529-1040P1  | Cable: PCNT-S<br>Motor<br>(6 Pin)        |      | <a href="#">3.2.08</a> <br><a href="#">3.2.13</a>    |
| 3  | 56628507<br>4YS3529-1038P7  | Cable: PCNT-2nd<br>Tray PCB<br>(9 Pin)   |      | <a href="#">3.2.08</a> <br><a href="#">3.2.16</a> <br><a href="#">3.2.38</a>  |
| 4  | 56628603<br>4YS3529-1041P3  | Cable: PC<br>1+2-PCNT<br>(6 Pin)         |      | <a href="#">3.2.08</a> <br><a href="#">3.2.30</a> <br><a href="#">3.2.31</a>  |
| 5  | 56628302<br>4YS3529-1039P2  | Cable: PCNT-Image<br>Sensor(10 Pin)      | RSPL | <a href="#">3.2.08</a> <br><a href="#">3.2.34</a>    |
| 6  | 56510702<br>4PB4083-6075P2  | Motor:<br>Registration<br>Stepper(4 pin) | RSPL | <a href="#">3.2.08</a> <br><a href="#">3.2.39</a> <br><a href="#">3.2.45</a>  |
| 7  | 56510703<br>4PB4083-6075P3  | Motor: Main<br>Stepper(5 pin)            | RSPL | <a href="#">3.2.08</a> <br><a href="#">3.2.39</a> <br><a href="#">3.2.45</a>  |
| 8  | 56629101<br>N/A             | Cable:<br>LED-PCNT(Flat<br>Cable)        | RSPL | <a href="#">3.2.08</a> <br><a href="#">3.2.42</a>    |
| 9  | N/A<br>N/A                  | Cable: PCNT-PSUB<br>(7 Pin)              |      | <a href="#">3.2.08</a> <br><a href="#">3.2.53</a>    |
| 10 | N/A<br>N/A                  | Cable: PWU-PSUB<br>(Soldered to<br>PSUB) |      | <a href="#">3.2.11</a>    |
| 11 | 56628512<br>4YS3529-1038P12 | Cable: PSUB-PWU<br>(7 Pin)               |      | <a href="#">3.2.11</a> <br><a href="#">3.2.53</a>    |
| 12 | 57001302<br>4YS3529-1040P2  | Speaker<br>(2 pin)                       |      | <a href="#">3.2.18</a>    |

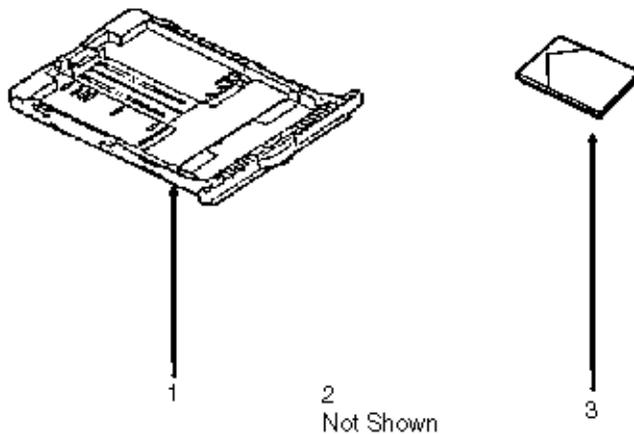


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#### B.2.18 Options

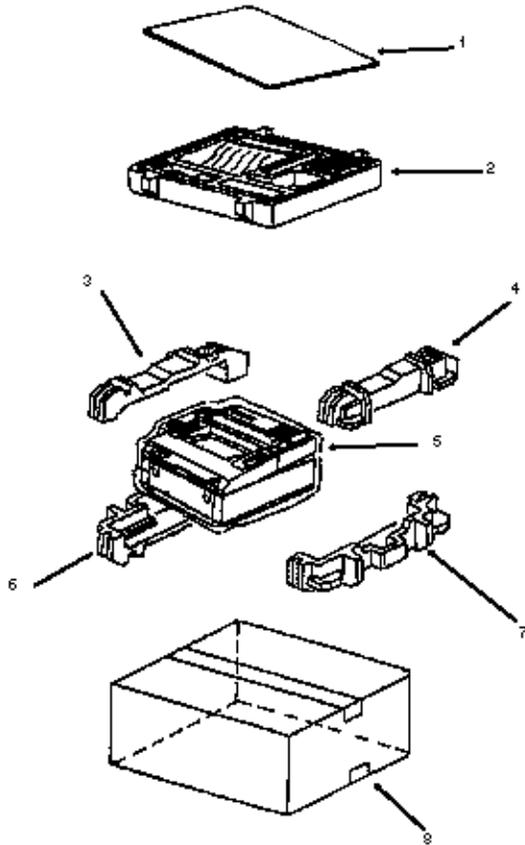
Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N | Description   | Comments<br><a href="#">Refer to<br/>B.1.02</a> | Disassembl<br>y<br>Procedure |
|------|--------------------------|---|---|------------------------------|
| 1    | 70026101 N/A             | Tray:<br>Legal/Universal<br>Paper (100 Sheet<br>Capacity) | Option  | <a href="#">3.2.01</a>       |
| 2    | 70025401 N/A             | UST-250 Second Tray                                       | Option  | N/A                          |
| 3    | 70025301 N/A             | 1 MB Memory<br>Expansion Kit                              | Option  | <a href="#">3.2.15</a>       |

#### B.2.19 Packaging

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N    | Description             | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly<br>Procedure |
|------|-----------------------------|-------------------------|---|--------------------------|
| 1    | 53557199<br>4PP4025-3117P19 | Sheet: Top<br>Cardboard | RSPL  | N/A                      |
| 2    | 53567401<br>3PP35295105P1   | Tray: Accessory         | RSPL  | N/A                      |

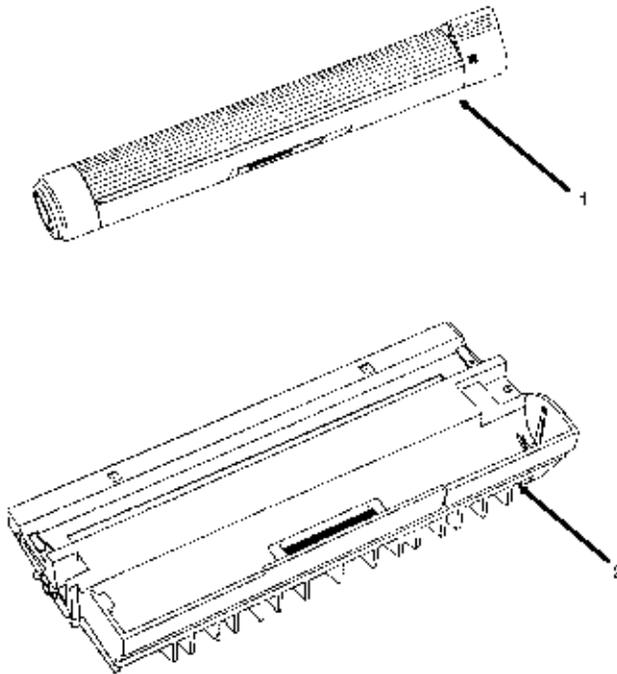
|   |                                  |                                   |      |     |
|---|----------------------------------|-----------------------------------|------|-----|
| 3 | 53566701<br>3PP3529-5103P1       | Foam: Packaging Top<br>(Left)     | RSPL | N/A |
| 4 | 53566702<br>3PP3529-5103P2       | Foam: Packaging Top<br>(Right)    | RSPL | N/A |
| 5 | N/A<br>4PP4043-4049P00<br>4      | Poly-Film                         |      | N/A |
| 6 | 53566704<br>3PP3529-5103P4       | Foam: Packaging<br>Bottom (Left)  | RSPL | N/A |
| 7 | 53566703<br>3PP3529-5103P3       | Foam: Packaging<br>Bottom (Right) | RSPL | N/A |
| 8 | 53566601<br>4PP3529-5104P00<br>2 | Box: Graphic                      | RSPL | N/A |

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**B.2.20 Consumables**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.



| Item | Okidata P/N<br>Oki-J P/N | Description          | Comments<br><a href="#">Refer to B.1.02</a> | Disassembly<br>Procedure |
|------|--------------------------|----------------------|---|--------------------------|
| 1    | 52106701                 | Kit: Toner Cartridge | Consumable                                  | <a href="#">3.2.01</a>   |
| 2    | 56116901                 | Kit: Image Drum      | Consumable                                  | <a href="#">3.2.01</a>   |

**B.2.21 Documentation**

Part numbers are subject to change. Refer to Okilink II for current part numbers and pricing information.

| Item     | Okidata P/N Oki-J<br>P/N | Description  | Comments<br><a href="#">Refer to<br/>B.1.02</a>  | Disassembl<br>Y<br>Procedure |
|----------|--------------------------|--|---|------------------------------|
| 1        | 58232602 N/A             | Okifax 1000 Service<br>Training Kit                          | Document  | N/A                          |
| 2        | 58094101                 | Read Me First<br>(Unpacking and Quick<br>Setup Instructions) | Document  | N/A                          |
| 3        | 59260301                 | Operator's Guide   | Document  | N/A                          |
| 4 *      | N/A<br>N/A               | Okifax 1000<br>Marketing Literature                          | Document  | N/A                          |
| 5 *<br>* | N/A<br>N/A               | Okidata Marketing<br>Literature Order<br>Form                | Document  | N/A                          |

\* To order Okifax 1000 Marketing Literature, complete an Okidata Marketing Literature Order Form. Fax the completed form to Okidata Marketing Communications.

\*\* An Okidata Marketing Literature Order Form can be obtained by faxing your request to Okidata Marketing Communications. Refer to the Service Center Reference Guide for information on contacting Okidata.