WorkCentre 5021/5019

Service Documentation

WC 5021/5019 Service Documentation

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Changes are periodically made to this document. Changes, technical inaccuracies, and typographic errors will be corrected in subsequent editions.

CAUTION

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

0 Introduction

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0.1 Getting to know this Service Manual

This manual is used as the standard service manual for WorkCentre 5021/ 5019.

0.2 How to use the Service Manual

This manual describes the standard procedures for the servicing this product. Refer to Chapter 1 Service Call Procedure for efficient and effective servicing during maintenance calls.

For more information on the options, refer to the options manual.

2.1 Contents of Manual

This manual is divided into 10 chapters as described below.

- Chapter 1 Service Call Procedure

  This chapter describes the general work and servicing procedures for the maintenance of this product.
- Chapter 2 Troubleshooting

  This chapter describes the troubleshooting procedures other than image quality troubleshooting for this product.
- Chapter 3 Image Quality Troubleshooting

  This chapter describes the image quality troubleshooting procedures for this product.
- Chapter 4 Disassembly/Assembly and Adjustment

  This chapter describes the disassembly, assembly, adjustment and replacement procedures for components of this product.
- Chapter 5 Parts List

  This chapter contains the spare parts information for this product.
- Chapter 6 General

  This chapter contains the following information.

  6.1 Specifications

  6.2 Tools/Service Consumables/Consumables

  6.3 Service Data

  6.4 Service Mode

  6.6 KO PROGRAM# LIST
- Chapter 7 Wiring Data

  This chapter contains the information about the Wiring Connector List/Locations, the Wiring Data, and the BSD for this machine.
- Chapter 8 Accessories (not yet issued)
- Chapter 9 Installation/Removal

  This chapter contains the installation and removal procedures for this product and the options that are specific to it.
- Chapter 10 Mechanism & Functions Overview (not yet issued)

2.2 Information on Updating

This manual will be sent to each Service Center as specified below. Revisions must be incorporated correctly to keep the manual up-to-date.

Updating Procedure:

- When the manual is updated, the issue number 'Ver. 1' will be changed to Ver. 1.1, Ver. 1.2, and so on.

0.3 Description for Terminology And Symbols

The terms and symbols used throughout this manual are explained here.

- The terms and symbols used at the beginning of a text are defined as follows:

DANGER

Indicates an imminently hazardous situation, such as death or serious injury if operators do not handle the machine correctly by disregarding the statement.

WARNING

Indicates a potentially hazardous situation, such as death or serious injury if operators do not handle the machine correctly by disregarding the statement.

CAUTION

Indicates a potentially hazardous situation, such as injury or property damage if operators do not handle the machine correctly by disregarding the statement.

Instruction: Used to alert you to a procedure which, if not strictly observed, could result in damage to the machine or equipment.

Table 1 Terminology

Terminology	Description
Assy	Means Assembly.
TEC Value	Abbreviation of Typical Electricity Consumption, which means the standard power consumption. Read as 'tec'.

Purpose

Used to describe the purposes of Adjustment and Troubleshooting.

REP: Indicates the disassembly/assembly procedure for reference.

ADJ: Indicates the adjustment procedure for reference.

PL: Indicates the parts list for reference.

Terminology

1 Service Call Procedures

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1.1 Before Starting the Servicing

1.1.1 Safety

To prevent any accident that may occur during a maintenance service, any warning or any caution regarding the servicing must be strictly observed. Do not perform any hazardous operation.

1. Power Supply

   To prevent electrical shocks, burns, or injury, etc., be sure to switch OFF the machine and disconnect the plug before starting the maintenance service. If the machine has to be switched ON, such as when measuring the voltage, take extra care not to get an electrical shock.

2. Drive Area

   Never inspect, clear or lubricate the drive area such as chain belts, chain wheel or gears during the machine operation.

3. Heavy Parts

   Position your hip lower when removing or installing heavy parts.

4. Safety Device

   See that safety devices for preventing mechanical accidents, such as fuses, circuit breakers, interlock switches, etc., and those for protecting customers from injury, such as panels and covers, function properly. Modifications that hinder the function of any safety devices are strictly prohibited.

5. Installing and Removing Parts

   The edge of parts and covers may be sharp, take care not to touch them. Be careful not to touch those parts, and wipe off any oil that may have adhered to your fingers or hands before servicing. When removing parts, cables, and etc. do not pull them out by force but remove them slowly.

6. Specified Tools

   Follow the instruction when a tool is specified.

7. Cleaning the Toner and Developer

   As the toner can be explosive, sweep or brush the spilled toner into a container for collecting the sweepings.

   Clean away the remaining toner with a damp cloth or use a standard vacuum cleaner that is toner-tolerant. Never use the customer's vacuum cleaner.'

   Do the same when cleaning the Developer because it also contains some toner.

8. Organic Solvents

   When using an organic solvent such as the Drum Cleaner or Machine Cleaner, pay attention to the following:

   - Ensure good ventilation in the room to prevent too much inhalation of solvent fumes.
   - Do not use heated solvent.
   - Keep it away from fire.
   - Wash your hands thoroughly after use.

9. Harmful Laser

   The customer or service personnel would not be exposed to any harmful laser during the usual copying or scanning of documents. However, if a customer finds that the lamp that is used for exposing documents is too bright when performing platen copy or scan, it is possible to block the light from the platen glass by covering the portion of the platen document area that is usually not used for copying or scanning documents.

1.1.2 Things to Take Note When Handling Customer Information

1. Handling of customer's electronic information - samples of copy/print (paper data), log files (Activity Report), and etc.

   Before you bring back any samples for the purpose of investigation/analysis, always obtain permission from the customer. Make sure to assure them that the data will not be used for any other purpose.

2. Handling of a PWB, etc. that contains customer information.

   Data such as Fax Address Numbers and URLs that are registered in the customer's machine are all important customer information. These types of information are stored in the PWB, etc. within the machine. Take extra care when handling them.

   (1) In case of replacements, transfer the data to the new PWB and make sure that all data in the old parts is thoroughly erased before disposing it. Make sure that no important customer information gets leaked. (For details, refer to the preface in Chapters 4 and 5)

   (2) If a component was replaced and it was not found to be the cause of the malfunction, return it to the machine it came from. (For components that were temporarily installed/removed for troubleshooting, etc. clear the data using the CE Mode, etc.)

1.1.3 Other Precautions

Pay attention to the following when performing maintenance service to avoid wrong or redundant servicing:

1. Reference Materials

   Before performing maintenance servicing, read all relevant technical materials to make a systematic approach.

2. Disassembling

   Make sure to check the assembled condition before removing parts or disassembling the machine.

3. Installation/Adjustment

   After the installation or adjustment is complete, check that no parts or tools are left inside or on the assemblies before using the machine.

4. Handling of replaced parts/consumables

   Make sure that the replaced parts or consumables as well as their packaging materials are collected back to the Service Center.

   For the separation and processing methods for the collected items, refer to the Common Technical Information No. 2-027 for all machines.

   - Drum Cleaner

     WARNING

     Never discard the Drum Cleaner into a fire. Always keep it away from open flames to prevent it from catching and causing a fire. Always dispose of the Drum Cleaner after it is completely used up. For recyclable parts, fill the necessary items in the [U-TAG] and perform collection.

5. General Precautions

   - Take care not to disturb the customer's daily work.
   - Place a drop cloth or paper on the floor of the service area to keep the site clean.
   - Throw any trash generated during the maintenance service into a trash bag and bring them back to the Service Center.
   - Record clearly the service details and the consumables and parts replaced at visit in the Machine Service Log.

1.2 Service Call Procedure

1.2.1 Initial Actions

1. Ask the operator(s) about the machine condition.
2. Record the billing meter readings.
3. Inspect any error copies, then check the machine.
4. Check the Service Log.

1.2.2 When UM is requested, perform the following:

1. Check the problem status by performing the Level 1 Troubleshooting in [Chapter 2 Troubleshooting].
2. Perform the applicable Level 2 Troubleshooting FIP in [Chapter 2 Troubleshooting].
3. If there are no applicable items, troubleshoot by referring to [Chapter 7 BSD].
4. Check the copy quality.

   Make several sheets of copies using the Test Chart (499T 00247), then check the quality of the copies for problems.
5. Output the following [Error History Report] and check the [System Fail History] and [Paper Jam History] in order to understand the machine status.
   (1) Enter the System Administrator Mode.
      i. Press the [Log In / Out] button and hold it down for 4 s or longer until the following screen is displayed.

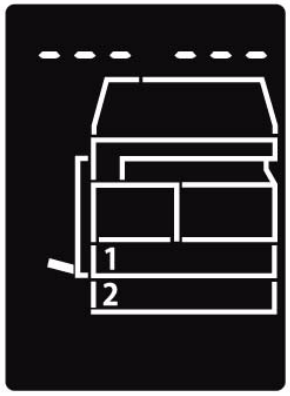

Figure 1 j0lj41896

      ii. Use the keypad to enter the Passcode [11111]*1 (5 '1' digits) and press the [Start] button.

      NOTE: **1: Default Value*

      iii. The Program Number input screen is displayed.

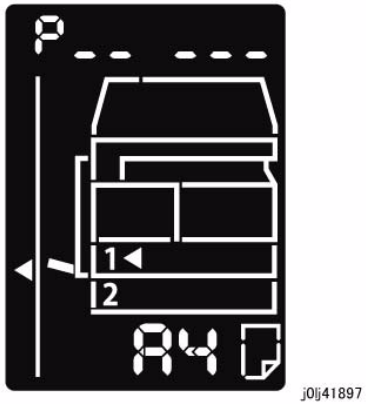

Figure 2 j0lj41897

   (2) Load any one of A4 SEF, A4 LEF, Letter SEF, or Letter LEF into the Tray.
   (3) Enter '202' at the Program Number and press the [Start] button.
   (4) Enter '4' for [Error History Report] and press the [Start] button.
   (5) Once printing has completed, press the [Log In / Out] button to exit from the System Administrator Mode.

   NOTE: *When replacing parts that will incur cost to the customer, obtain the customer's agreement before performing the replacement.*
6. Repair all the secondary problems.
7. Perform TRIM Service.

1.2.3 When SM is requested, perform the following:

1. Check the copy quality.

   Make several sheets of copies using the Test Chart (499T 00247), then check the quality of the copies for problems.
2. Output the [Error History Report] and check the [System Fail History] and [Paper Jam History] in order to understand the machine status.
   - For how to output the [Error History Report], refer to [1.2.2 When UM is requested, perform the following:].

   NOTE: *When replacing parts that will incur cost to the customer, obtain the customer's agreement before performing the replacement.*
3. Perform TRIM Service.

1.2.4 Final Actions

1. Check overall operation/features.
2. Check the machine exterior and consumables.
3. Train the operator as required.
4. Complete the Service Log and Service Report.

5. Keep the copy samples with the Service Log.

1.3 Detailed Contents of the Service Call

1.3.1 Initial Actions

1. Ask the operator(s) about the machine condition.
   - How often and where do paper jams have been occurring recently
   - How is the copy quality
2. Record the copy meter readings.
3. Inspect any error copies, then check the machine.
4. Check the print samples from previous service calls and the Service Log.

1.3.2 Checking Reproducibility of Problem

1. Check the problem status by performing the Level 1 Troubleshooting in [Chapter 2 Troubleshooting].
2. Perform the applicable Level 2 Troubleshooting FIP in [Chapter 2 Troubleshooting].
3. If there are no applicable items, troubleshoot by referring to [Chapter 7 BSD].

1.3.3 Checking Copy Quality

1. Make several sheets of copies using the Test Chart (499T 00247), then check the quality of the copies.

1.3.4 TRIM Servicing

Perform TRIM servicing during a service call to maintain the machine performance.

1. Follow the TRIM Check List to perform the required TRIM items.
2. Check for parts that require periodical cleaning/replacement (consumables, parts) by referring to the TRIM Chec List, the Periodic Replacement Parts/Consumables List, and the Maintenance Report, and clean them if necessary. After a replacement, make sure that you enter the CE Mode and use [HFSI Read / Clear] to clear the applicable counter(s).

1.4 TRIM Check List

C: Perform checking. Clean, replace, or feed if necessary.

O: Always perform cleaning and checking.

*: Always perform replacement service at the specified interval.

Table 1

No.	Servicing Items	Every time	Service Details
1.1	Pre-servicing Check (Check the machine operation sound)	C	• Activate the machine and check that abnormal noise is not heard.
1.2	Pre-servicing Check (Copy and print the Test Chart)	C	• Make several sheets of copies using the Test Chart (499T 00247), then check the quality of the copies.
2	Clean the interior of the machine (Clean the paper transport system)	C	• Clean any paper dust and toner residue in the paper path and on the jam sensor. • Especially, clean the operation section of the operator carefully.
3	Cleaning the IIT	C	• Clean the Platen Glass surface and the Platen Cushion with the optical cleaning cloth. • Clean the Reflector, back of the Platen Glass, mirrors and lens with the optical cleaning cloth.
4	Clean the DADF	C	• Clean the Feed Roll, Nudger Roll, and Retard Roll with a cloth that has been wrung dry. • Clean the DADF Platen Glass with the optical cleaning cloth.
5	Safety Check	O	• Make sure that the power plug is plugged in properly. • Make sure that the power cords are not cracked and no wires are exposed. • Make sure that no extension cord with insufficient length or power cord outside the specification, such as an off-the-shelf power strip, is being used. • Make sure that a single socket does not have multiple power plugs plugged into it.
6.1	Post-servicing check (Copy Quality Check)	C	• Make several sheets of copies using the Test Chart (499T 00247), then check if the quality satisfies the specification.
6.2	Post-servicing check (Check the machine operation)	C	• Check the paper feed and abnormal noise.
6.3	Post-servicing check (Check the meter)	C	• Create the Service Log and Service Report.

1.5 Periodic Replacement Parts/Consumables List

When servicing, check the number of copies and number of fed sheets for the consumables and parts that require periodical cleaning/replacement. Clean or replace them if necessary. The history can be checked by printing the Maintenance Report or by checking the approriate counter in [HFSI Read / Clear] in CE Mode (6.4.2.9 HFSI Read / Clear).

For the items that cannot be checked in CE Mode, clean or replace them according to the replacement intervals (standard PV).

CAUTION

Do not place the imaging materials, such as the Toner and the Drum, in the car for a long time.

***NOTE:** Clean the Platen Glass with a Platen Wax Cleaner 499D 00194 (194D) every 10K Feeds.*

Table 1

No	Parts/Consumables Name/PL No.	HFSI [Chain-Link]	Replacement Interval	Check the counter
1	Tray 1 Feed No. Tray 1 Feed Roll / Retard Pad (PL 9.2)	950-803	50,000PV	1 Feed = 1 Count Up. Replace both at the same time.
2	Tray 2 Feed No. Tray 2 Feed Roll/Nudger Roll/Retard Roll (PL 10.3)	950-804	300,000PV	1 Feed = 1 Count Up. Replace all 3 at the same time.
3	MSI Feed Count MSI Feed Roll/MSI Nudger Roll/MSI Retard Pad (PL 13.3)	950-802	50,000PV	1 Feed = 1 Count Up. Replace all 3 at the same time.
4	Fusing Unit (PL 7.1)	950-801	175,000PV	1 pass through the Fusing Unit Exit Sensor = 1 Count Up.
5	BTR Unit (PL 6.1)	950-800	100,000PV	1 pass through the Fusing Unit Exit Sensor = 1 Count Up.
6	Document Feed No. DADF Feed Roll/Nudger Roll (PL 56.5) DADF Retard Pad (PL 56.13)	955-806	200,000PV	Replace the Feed Roll, Nudger Roll, and Retard Pad at the same time. ***NOTE:** Clean the Platen Glass with a Platen Wax Cleaner 499D 00914 (194D) every 10K Feeds.*
7	Toner Cartridge (PL 8.1)	-	9,000PV	
8	Drum Cartridge *1 (PL 8.1)	950-807	343k cycle	<Reference>75KPV*1@18PPM / 80KPV*1@20PPM

*1: The maximum number of prints is a reference value under the condition of A4 LEF and simplex printing. Some specific conditions such as paper size, number of copies for a print job, etc. might cause a serious deterioration of image quality before the time to replace the drum cartridge comes.

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2.1.1 How to Troubleshoot

Level 1 Troubleshooting:

- Level 1 Troubleshooting (Level 1 FIP) is the first step to diagnose a problem. Level 1 FIP asks you whether any Fault Code and other problematic symptoms exist, guiding you to Level 2 Troubleshooting or BSD to resolve the problem.

Level 2 Troubleshooting:

- Level 2 Troubleshooting is a diagnostic procedure of separating a problem by Fault Code, document/paper jam and other problematic symptoms. Performing a FIP or an appropriate procedure in the Check Procedure enables you to discover causes of a problem in a short period of time.

How to proceed with troubleshooting and Cautions:

- First, perform Level 1 FIP to categorize a problem. Second, proceed to an appropriate Level 2 FIP or BSD to resolve the problem. To find the causes of the problem using FIP or Check Procedure etc., thoroughly read the instructions and follow the procedure properly. Sometimes, when two or more causes exist, they cannot be identified at once, so the same FIP should be repeated. In this case, pay attention to a different judgment made in the process of the same FIP.

- For source voltage related problems, such as being unable to power up the machine, refer to 'Other Failure FIP' to proceed with the troubleshooting.

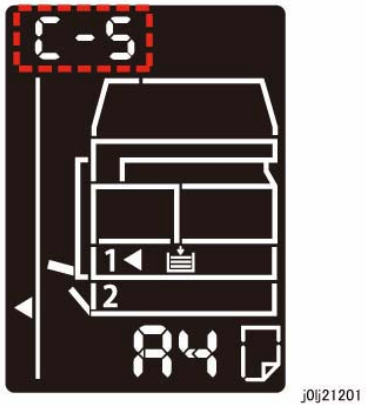
- The Check Procedure for general electrical parts (Motor, Solenoid/Clutch, Switch, Sensor etc.) may not be shown in each troubleshooting for some cases. In such cases, proceed to troubleshoot by referring to 'Generic FIP'.

2.1.2 How to Switch the Error Code Display

When a problem has occurred in the machine, an Error Code or a Fault Code (Chain-Link) will be displayed on the UI screen. When an Error Code is being displayed, you can perform the following operation to switch the display to the Chain-Link number that correspond to that Error Code. To repair, check the Chain-Link number and proceed with the appropriate FIP.

How to switch to the Chain-Link number

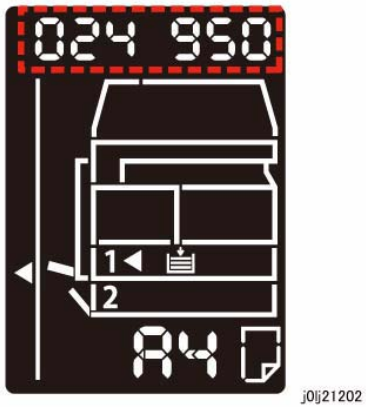
1. When a problem has occurred, the displayed Error Code will be flashing.



j0lj21201

Figure 1 j0lj21201

2. With the Error Code being displayed, press and hold down the [ID Card Copy] button on the Control Panel.
   - As long as the button is being pressed, the Chain-Link number will be displayed and flashing.



j0lj21202

Figure 2 j0lj21202

3. Releasing the [ID Card Copy] button returns the display to the Error Code.

2.1.3 Glossary

The following terminology are used throughout the troubleshooting section. The meaning of these terminology must be fully understood when performing problem analysis.

Common terms:

- Fault Code

  This 6-digit code appears when the machine has found problems.
- Actuate (Deactuate)

  To mechanically push (release) the Actuator of the switch or the connected mechanical linkage.
- Block

  To place a sheet of document or paper on the photo sensor surface for detection.
- Check

  To visually check for operation failure of parts such as relay or mechanical linkage, and the failure status of the parts.
- Enter the CE Mode

  To enter the CE Mode by following the procedure described in 'How to Enter/Exit the CE Mode' of Chapter 6.
- Check the connection for short circuit

  Turn the power OFF. Measure the resistance between the wire and the frame using the ohm range of a tester.
- Check the connection for open circuit

  Turn the power OFF. Measure the resistance between both ends of the wire using the ohm range of a tester.
- Input Check [xxx-xxx]/Output Check [xxx-xxx]

  To enter the Component Check by following the procedure described in 'How to Use the CE Mode' of Chapter 6.
- Analog Monitor [xxx-xxx]

  To enter the Analog Monitor by following the procedure described in 'How to Use the CE Mode' of Chapter 6.
- Check the voltage level

Table 1

Voltage	Level	Range
+3.3VDC	(H) (L)	+3.2 to +3.6VDC 0.0 to +1.0VDC
+5VDC	(H) (L)	+4.8 to +5.4VDC 0.0 to +1.0VDC
+24VDC	(H) (L)	+23.3 to +25.7VDC 0.0 to +3.0VDC

- PL 4.2

  Refer to PL 4.2 in Chapter 5 Parts List.
- CH 6.2 Zone J4

Refer to Chain 6.2 Zone J4 in Chapter 7 BSD.

- REP 4.1.3

  Refer to REP 4.1.3 in Chapter 4.

- ADJ 4.1.3

  Refer to ADJ 4.1.3 in Chapter 4.

- Replace the parts in sequence

  When it is impossible to analyze causes of a problem further, replace the parts in sequence. The part with a higher replacement frequency or higher possibility of causing a problem is listed first for replacement.

2.2.1.1 Level 1 FIP

Procedure

Ask the operator about the problem. **Did the operator operate the machine correctly?**

Y N

Explain the correct way to operate the machine to the operator.

Output all jobs that are stored in the memory. Turn the power OFF and ON. **Is the UI display normal?**

Y N

Refer to [BSD (CH2.1)] and [2.2.3 Other Failure FIP] to repair the malfunction in UI display.

Check the Shutdown History. Refer to [6.4.2.1 Shutdown History] to display the Fault Code on the UI. **Is the Fault Code displayed on the UI?**

Y N

Refer to [Troubleshooting] in the User guide and repair the following errors.

- Problems With Hardware
- Problems With Image Quality
- Problems With Copy
- Problems With Printer
- Problems With Scanner
- Problems With Network
- In Case of Paper Jam
- In Case of Document Jam

Proceed to Level 2 Troubleshooting and perform the applicable FIP.

003-500/795 N-Up NG Out Of Range/ AMS NG Out Of Range

BSD-ON:-

[N-Up NG Out Of Range]

During 2-Up or 4-Up, the reduce/enlarge ration was not within the range of 25 to 400%.

[AMS NG Out Of Range]

During AMS (Auto Magnification Selection), the reduce/enlarge ration was not within the range of 25 to 400%

Cause/Action

Press [Stop] on the UI Panel and change the settings.

003-754 IPS Overrun

BSD-ON:-

The IPS processing has overtook the Scan processing.

Cause/Action

This might be avoided by setting the R/E ratio to 99% or 101%. If this occurs frequently, obtain the document from the User and contact the Support Department for assistance.

003-942 Not-Supported Doc Size

BSD-ON:-

During DADF Scan of a Copy Job, an unsupported document size was detected.

Cause/Action

1. Press [Stop] on the UI Panel.
2. Check the setting of the document size group.
3. Check whether the document size is a supported size.
4. If the document size is a supported size, the DADF might have malfunctioned. Refer to following FIP to check the DADF.
   - 005-196 (Size Mismatch Jam on No Mix-size)
   - 005-948 (SS-Size Mismatch Jam on No Mix-size)

003-951 1Job Max Page Over

BSD-ON:-

During Copy Job, the number of pages that can be scanned has been exceeded.

Cause/Action

Press [Stop] on the UI Panel and reduce the number of document pages.

003-963 APS NG Out Of Range

BSD-ON:-

During Copy Job, when APS is selected, the image size obtained from document size x reduce/enlarge ratio was detected to be larger than the largest Standard Paper Size.

Cause/Action

Press [Stop] on the UI Panel and change the settings.

003-972 EPC Memory Full

BSD-ON:-

During Copy Job, the EPC memory is filled up.

Cause/Action

Print out all the images that had been successfully scanned by the DADF so far and then perform the copy again for the documents (images) that were unable to be scanned.

003-973 Auto Rotation NG Out Of Range

BSD-ON:-

During Copy Job, the following conditions were met.

- Rotation is required.
- The length of the image obtained by document x reduce/enlarge ratio is longer than 297 mm.

Cause/Action

Press [Stop] on the UI Panel and change the reduce/enlarge ratio.

004-345 HVPS Communication Error

BSD-ON:CH9.2

Communication failure between the ESS/MCU PWB and the HVPS was detected.

Cause/Action

1. Turn the power OFF and ON.
2. Turn OFF the power and check the connection between the HVPS J500 and the ESS/MCU PWB J402 for open circuit, short circuit, and poor contact.
3. If no problem is found, replace the following parts in sequence:
   - HVPS (PL 18.1)
   - ESS/MCU PWB (PL 18.1)

005-122 DADF Simplex/Side 1 Pre Regi Sensor On Jam

BSD-ON:CH5.4

- After Pre-Feed started for the first sheet (DADF Feed Motor On (CW)) in Simplex and Duplex, the DADF Pre Regi Sensor did not turn ON within the specified time.
- After Pre-Feed started for the second sheet onwards (DADF Feed Motor On (CW)) in Duplex, the DADF Pre Regi Sensor did not turn ON within the specified time.

Cause/Action

Check the following:

- Transportation failure due to foreign substance on the document path.
- The surface of the Feed Roll and Nudger Roll for foreign substances.
- The surface of the Feed Roll and Nudger Roll for wear.
- The DADF Pre Regi Sensor (Input Check [005-206]) for operation failure. (PL 56.14)
- The DADF Feed Clutch (Output Check [005-062]) for operation failure. (PL 56.7)
- The DADF Feed Motor (Output Check [005-008]) for operation failure. (PL 56.6)
- The Drive Gear for wear and damage.

If no problem is found, replace the DADF PWB. (PL 56.2)

005-123 DADF Simplex/Side 1 Regi Sensor On Jam

BSD-ON:CH5.5, CH5.4

The DADF Regi Sensor does not turn ON within the specified time after the DADF Pre Regi Sensor On.

Cause/Action

Check the following:

- Transportation failure due to foreign substance on the document path.
- The surface of the Takeaway Roll and Regi Roll for foreign substances.
- The surface of the Takeaway Roll and Regi Roll for wear.
- The DADF Regi Sensor (Input Check [005-110]) for operation failure. (PL 56.14)
- The DADF Pre Regi Sensor (Input Check [005-206]) for operation failure. (PL 56.14)
- The DADF T/A Clutch (Output Check [005-098]) for operation failure. (PL 56.7)
- The DADF Feed Motor (Output Check [005-008]) for operation failure. (PL 56.6)
- The Drive Gear for wear and damage.

If no problem is found, replace the DADF PWB. (PL 56.2)

005-125/145 DADF Regi Sensor Off Jam/ DADF Regi Sensor Off Jam on Inverting

BSD-ON:CH5.5, CH5.4

[DADF Regi Sensor Off Jam]

After the DADF Pre Regi Sensor turned OFF at Scan operation, the DADF Regi Sensor did not turn OFF within the specified time.

[DADF Regi Sensor Off Jam on Inverting]

After the DADF Pre Regi Sensor turned OFF at Invert operation, the DADF Regi Sensor did not turn OFF within the specified time.

Cause/Action

Check the following:

- Transportation failure due to foreign substance on the document path.
- The surface of the Regi Roll, Out Roll, and Exit Roll for foreign substances.
- The surface of the Regi Roll, Out Roll, and Exit Roll for wear.
- The DADF Regi Sensor (Input Check [005-110]) for operation failure. (PL 56.14)
- The DADF Pre Regi Sensor (Input Check [005-206]) for operation failure. (PL 56.14)
- The DADF Feed Motor (Output Check [005-008]) for operation failure. (PL 56.6)
- The Drive Gear for wear and damage.

If no problem is found, replace the DADF PWB. (PL 56.2)

005-131/132 DADF Invert Sensor On Jam on Inverting/ DADF Invert Sensor On Jam

BSD-ON:CH5.5, CH5.4

[DADF Invert Sensor On Jam on Inverting]

After the DADF Regi Sensor turned ON at Invert operation, the DADF Invert Sensor did not turn ON within the specified time.

[DADF Invert Sensor On Jam]

After the DADF Regi Sensor turned ON in the Scan operation, the DADF Invert Sensor did not turn ON within the specified time.

Cause/Action

Check the following:

- Transportation failure due to foreign substance on the document path.

- The surface of the Out Roll for foreign substances.
- The surface of the Out Roll for wear.
- The DADF Invert Sensor (Input Check [005-211]) for operation failure. (PL 56.10)
- The DADF Regi Sensor (Input Check [005-110]) for operation failure. (PL 56.14)
- The DADF Feed Motor (Output Check [005-008]) for operation failure. (PL 56.6)
- The Drive Gear for wear and damage.

If no problem is found, replace the DADF PWB. (PL 56.2)

005-134/139 DADF Invert Sensor Off Jam on Inverting/ DADF Invert Sensor Off Jam

BSD-ON:CH5.5, CH5.4

[DADF Invert Sensor Off Jam on Inverting]

During the Invert operation where there is a next document, after the DADF Regi Sensor turned OFF, the DADF Invert Sensor did not turn OFF within the specified time.

[DADF Invert Sensor Off Jam]

During the Simplex and Duplex Scan operation, after the DADF Regi Sensor turned OFF, the DADF Invert Sensor did not turn OFF within the specified time.

Cause/Action

Check the following:

- Transportation failure due to foreign substance on the document path.
- The surface of the Out Roll and Exit Roll for foreign substances.
- The surface of the Out Roll and Exit Roll for wear.
- The DADF Invert Sensor (Input Check [005-211]) for operation failure. (PL 56.10)
- The DADF Regi Sensor (Input Check [005-110]) for operation failure. (PL 56.14)
- The DADF Feed Motor (Output Check [005-008]) for operation failure. (PL 56.6)
- The Exit Pinch Roll for operation failure (including for the operation failure of the Exit Nip Release Solenoid (Output Check [005-072])). (PL 56.7)
- The Drive Gear for wear and damage.

If no problem is found, replace the DADF PWB. (PL 56.2)

005-135 DADF Side 2 Pre Regi Sensor On Jam

BSD-ON:CH5.4, CH5.5

After the DADF Feed Motor started the reverse rotation at Invert operation, the DADF Pre Regi Sensor did not turn ON within the specified time.

Cause/Action

Check the following:

- Transportation failure due to foreign substance on the document path.
- The surface of the Exit Roll for foreign substances.
- The surface of the Exit Roll for wear
- The DADF Pre Regi Sensor (Input Check [005-206]) for operation failure. (PL 56.14)
- The DADF Feed Motor (Output Check [005-048]) for operation failure. (PL 56.6)
- The Exit Pinch Roll for operation failure (including for the operation failure of the Exit Nip Release Solenoid (Output Check [005-072])). (PL 56.7)
- The Drive Gear for wear and damage.

If no problem is found, replace the DADF PWB. (PL 56.2)

005-136 DADF Side 2 Regi Sensor On Jam

BSD-ON:CH5.5, CH5.4

After the DADF Pre Regi Sensor turned ON at Invert operation, the DADF Regi Sensor did not turn ON within the specified time.

Cause/Action

Check the following:

- Transportation failure due to foreign substance on the document path.
- The surface of the Exit Roll, Takeaway Roll, and Regi Roll for foreign substances.
- The surface of the Exit Roll, Takeaway Roll, and Regi Roll for wear.
- The DADF Regi Sensor (Input Check [005-110]) for operation failure. (PL 56.14)
- The DADF Pre Regi Sensor (Input Check [005-206]) for operation failure. (PL 56.14)
- The DADF Feed Motor (Output Check [005-008]) for operation failure. (PL 56.6)
- The DADF T/A Clutch (Output Check [005-098]) for operation failure. (PL 56.7)
- The Exit Pinch Roll for operation failure (including for the operation failure of the Exit Nip Release Solenoid (Output Check [005-072])). (PL 56.7)
- The Drive Gear for wear and damage.

If no problem is found, replace the DADF PWB. (PL 56.2)

005-147 DADF Pre Regi Sensor Off Jam on Inverting

BSD-ON:CH5.4, CH5.5

After the DADF Feed Motor started the reverse rotation at Invert operation, the DADF Pre Regi Sensor did not turn OFF within the specified time.

Cause/Action

Check the following:

- Transportation failure due to foreign substance on the document path.
- The surface of the Exit Roll, Takeaway Roll, Regi Roll, and Out Roll for foreign substances.
- The surface of the Exit Roll, Takeaway Roll, Regi Roll, and Out Roll for wear.
- The DADF Pre Regi Sensor (Input Check [005-206]) for operation failure. (PL 56.14)
- The DADF Feed Motor (Output Check [005-048/008] (CCW/CW)) for operation failure. (PL 56.6)
- The Exit Pinch Roll for operation failure (including for the operation failure of the Exit Nip Release Solenoid (Output Check [005-072])). (PL 56.7)
- The Drive Gear for wear and damage.

If no problem is found, replace the DADF PWB. (PL 56.2)

005-196 Size Mismatch Jam on No Mix-Size

BSD-ON:CH5.4, CH5.2

The 2nd sheet or later of the document was detected to be of a different size conpared to the 1st sheet (the length of the document's 2nd sheet or later in SS direction is longer).

Cause/Action

1. Check the size of the document that was fed by the User.
2. If the error is not cleared, check the following:
   - The DADF Pre Regi Sensor (Input Check [005-206]) for operation failure. (PL 56.14)
   - The Document Tray Size Sensor 1/2 (Input Check [005-221/222]) for operation failure.
     (PL 56.11)
3. If no problem is found, replace the DADF PWB. (PL 56.2)

005-197 Prohibit Combine Size Jam

BSD-ON:CH5.4

A Mixed Size document was detected.

Cause/Action

Explain to the User that Mixed Size is not supported.

005-198/199 Too Short Size Jam/ Too Long Size Jam

BSD-ON:CH5.4, CH5.2

[Too Short Size Jam]

It was detected that the document length in Slow Scan direction is shorter than the specifications (Simpex: 85 mm, Duplex: 110 mm).

[Too Long Size Jam]

It was detected that the document length in Slow Scan direction is at the specifications (Simpex: 1275 mm, Duplex: 480.1 mm) or longer.

Cause/Action

Check the size of the document that was fed by the user. If it is within the permitted length for DADF transport, check the following:

- The DADF Pre Regi Sensor (Input Check [005-206]) for operation failure. (PL 56.14)
- The Document Tray Size Sensor 1/2 (Input Check [005-221/222]) for operation failure. (PL 56.11)

If no problem is found, replace the DADF PWB. (PL 56.2)

005-210 DADF Download Fail

BSD-ON:CH3.1

When the IISS starts up (including at Power ON/Sleep recovery), it was detected that the DADF is in Download Mode.

Cause/Action

Perform the DADF software download.

005-275/280 DADF RAM Fail/ DADF EEPROM Fail

BSD-ON:CH3.1

[DADF RAM Fail]

The DADF PWB RAM failed during the Read/Write operation. (At Power ON)

[DADF EEPROM Fail]

Write failure to DADF EEPROM or communication failure with EEPROM was detected.

Cause/Action

1. Turn the power OFF and ON.
2. If the problem persists, replace the DADF PWB. (PL 56.2)

005-305 DADF Feeder Cover Interlock Open

BSD-ON:CH5.1

The DADF Feeder Cover Interlock Switch was opened during DADF operation.

Cause/Action

1. Check the DADF Feeder Cover for mismatch.
2. Check the DADF Feeder Cover Interlock Switch (Input Check [005-212]) for operation failure.
   (PL 56.6)
3. If no problem is found, replace the DADF PWB. (PL 56.2)

005-500 DADF Download Flash Write Error

BSD-ON:CH3.1

Failed to write into the Flash ROM during DAFD Download.

Cause/Action

1. Turn the power OFF and ON.
2. If the problem persists, replace the following parts in sequence:
   - DADF PWB (PL 56.2)
   - ESS/MCU PWB (PL 18.1)

005-907/908/913 DADF Pre Regi Sensor/DADF Regi Sensor/DADF Invert Sensor Static Jam

BSD-ON:CH5.4, CH5.5

Paper was detected by the applicable sensor at Power ON, Feeder Cover Interlock Close, or DADF Open Sensor Close.

Cause/Action

1. Check the applicable sensor for remaining paper, the Actuator for return failure, contamination on sensor, and etc.
2. Check the applicable sensor for operation failure.
   - DADF Pre Regi Sensor (Input Check[005-206]) (PL 56.14)
   - DADF Regi Sensor (Input Check[005-110]) (PL 56.14)
   - DADF Invert Sensor (Input Check[005-211]) (PL 56.10)
3. If no problem is found, replace the DADF PWB. (PL 56.2)

005-940 DADF No Original Fail

BSD-ON:CH5.1

It was detected that the document was pulled out during document feed.

Cause/Action

Reload the document.

005-948 SS-Size Mismatch Jam on No Mix-size

BSD-ON:CH5.4, CH5.2

In No Mix mode, it was detected that a document with a shorter size in Slow Scan (SS) direction was transported from the DADF.

Cause/Action

1. Check the size of the document that was fed by the User.
2. If the error is not cleared, check the following:
   - The DADF Pre Regi Sensor (Input Check [005-206]) for operation failure. (PL 56.14)
   - The Document Tray Size Sensor 1/2 (Input Check [005-221/222]) for operation failure.
     (PL 56.11)
3. If no problem is found, replace the DADF PWB. (PL 56.2)

010-311 Fusing Unit Center Thermistor Defect

BSD-ON:CH10.2

An open circuit abnormality (the AD value of the STS is equivalent to the open circuit value) of the Heat Roll Center Thermistor was detected.

Procedure

Turn OFF the power and disconnect the Heat Roll Center Thermistor connector P/J600. Measure the resistance between the Heat Roll Center Thermistor J600 pin-1 and J600 pin-2. **Is the resistance infinite?**

Y **N**

Reconnect the connector P/J600 and measure the resistance between the ESS/MCU PWB J403 pin-1 and J403 pin-2. **Is the resistance infinite?**

Y **N**

Replace the ESS/MCU PWB. (PL 18.1)

Check the following connections for open circuits and poor contacts.

- Between ESS/MCU PWB J403-1 and Heat Roll Center Thermistor P600-4
- Between ESS/MCU PWB J403-2 and Heat Roll Center Thermistor P600-3

Replace the Fusing Unit. (PL 7.1)

010-312 Fusing Unit Rear Thermistor Defect

BSD-ON:CH10.2

An open circuit abnormality (the AD value of the STS is equivalent to the open circuit value) of the Heat Roll Rear Thermistor was detected.

Procedure

Turn OFF the power and disconnect the Heat Roll Rear Thermistor connector P/J600. Measure the resistance between the Heat Roll Rear Thermistor J600 pin-3 and J600 pin-4. **Is the resistance infinite?**

Y **N**

Reconnect the connector P/J600 and measure the resistance between the ESS/MCU PWB J403 pin-3 and J403 pin-4. **Is the resistance infinite?**

Y **N**

Replace the ESS/MCU PWB. (PL 18.1)

Check the following connections for open circuits and poor contacts.

- Between ESS/MCU PWB J403-3 and Heat Roll Rear Thermistor P600-2
- Between ESS/MCU PWB J403-4 and Heat Roll Rear Thermistor P600-1

Replace the Fusing Unit. (PL 7.1)

010-320 Over Heat Temperature Fail

BSD-ON:CH10.2, CH10.1

A high temperature error was detected at the Center Thermistor (245 degrees C or higher) or the Rear Thermistor (270 degrees C or higher).

NOTE: *To clear this Fail, first remove the cause, next clear the value of NVM [744-040] (Over Heat Temp Fail) to '0', and then turn the power OFF then ON. The relationship between the displayed value and the Thermistor that detected the high temperature error is as follows:*

- *0: Normal*
- *1: High Temperature Error of Heat Roll Center Thermistor*
- *2: High Temperature Error of Heat Roll Rear Thermistor*

Cause/Action

Check the following:

- The Center Thermistor or the Rear Thermistor for dropped parts, sensor contamination, and foreign substances blocking the sensor.
- The Heat Roll for wound up, stuck paper.
- The Heat Roll Center Thermistor (Analog Monitor [010-050]) for operation failure.
- The Heat Roll Rear Thermistor (Analog Monitor [010-051]) for operation failure.
- The Heater Rod for operation failure.

If no problem is found, replace the following parts in sequence:

- Fusing Unit (PL 7.1)
- LVPS (PL 18.1)
- ESS/MCU PWB (PL 18.1)

010-327 Fusing Unit On Time Fail

BSD-ON:CH10.2, CH10.1

Any of the following was detected:

- The Heater Rod did not turn OFF within the specified time after the Heater Rod On.
- After power ON, the temperature of the Fusing Unit does not reach the specified value within the specified time.

Cause/Action

Check the following:

- The Heater Rod for operation failure.
- The connection between the LVPS J511 and the Fusing Unit P10 for open circuit and poor contact
- The Center Thermistor for dropped parts, sensor contamination, and foreign substances blocking the sensor.
- The Heat Roll for wound up, stuck paper.

If no problem is found, replace the following parts in sequence:

- Fusing Unit (PL 7.1)
- LVPS (PL 18.1)
- ESS/MCU PWB (PL 18.1)

010-379 Fusing Unit Hot Not Ready Return Time Fail

BSD-ON:CH10.2, CH10.1

The time taken to recover from High Temperature Not Ready state has exceeded the specified time.

Cause/Action

1. Turn the power OFF and ON.
2. Turn OFF the power and check the following:
   - The Fusing Unit for improper installation.
   - The connection between the Fusing Unit P10 and the LVPS J511 for open circuit, short circuit, and poor contact.
   - The connection between the Fusing Unit P600 and the ESS/MCU PWB J403 for open circuit, short circuit, and poor contact.
   - The connection between the ESS/MCU PWB J401 and the LVPS J513 for open circuit, short circuit, and poor contact.
   - The Heat Roll for wound up, stuck paper.
3. If the problem persists, replace the following parts in sequence:
   - Fusing Unit (PL 7.1)
   - LVPS (PL 18.1)
   - ESS/MCU PWB (PL 18.1)

010-392 NOHAD Fan Defect

BSD-ON:CH10.3

NOHAD Fan failure was detected. When the NOHAD Fan Fail signal indicating an abnormality of the Fan was monitored at the specified time interval, it was found to have failed the specified number of times or higher in a row.

Cause/Action

1. Check the NOHAD Fan (Output Check [042-002]) for operation failure. (PL 4.1)
2. Check the NOHAD Fan for foreign substances.
3. If no problem is found, replace the ESS/MCU PWB. (PL 18.1)

010-602 Over Temp Cooling Mode

BSD-ON:CH10.2

Unable to print because the temperature in the machine has risen above the specification value.

Cause/Action

Wait until the temperature in the machine has dropped.

016-500 Controller Download Flash Write Error

BSD-ON:-

Unable to write the Download File of Controller Main into the Flash ROM.

Cause/Action

1. Turn the power OFF and ON.
   (If the contents of the Flash ROM is corrupted, the machine will boot up in Emergency Boot Download mode after Power ON.)
2. If the problem persists, replace the ESS/MCU PWB. (PL 18.1)

016-501 Controller Boot Flash Write Error

BSD-ON:-

Unable to write the Download File of Controller Boot into the Flash ROM.

Cause/Action

1. Turn the power OFF and ON.
2. If the problem persists, replace the ESS/MCU PWB. (PL 18.1)

016-502 UI Panel Download Flash Write Error

BSD-ON:CH2.1

Unable to write the Download File of UI Panel into the Flash ROM.

Cause/Action

1. Turn the power OFF and ON.
2. If the problem persists, replace the following parts in sequence:
   - ESS/MCU PWB (PL 18.1)
   - UI PWB (PL 1.6)

016-570 No Response from USB-Host for Scan Job

BSD-ON:CH3.2

When any of the following has occurred as Scan to PC (USB) is in progress.

- The command from the PC was disrupted for 5 seconds.
- The machine has detected a communication error with the USB Device.
- The sending of commands to the PC remained unsuccessful even when 500 ms has passed.
  (The timeout time is the time calculated from the size of the data being sent only when sending image data.)

Cause/Action

1. Press [Stop] on the UI Panel.
2. Check the connection of the USB Cable between this machine and the PC.
3. Check the status (is it powered OFF, frozen, etc.) of the PC.

016-571 No Response from USB-Host for Print Job

BSD-ON:CH3.2

When any of the following has occurred as USB Print or Download data interpretation is in progress.

- The command from the PC was disrupted for 2 minutes.
- The machine has detected a communication error with the USB Device.
- The sending of commands to the PC remained unsuccessful even when 500 ms has passed.

NOTE: *This Fault will clear automatically. (It will not be displayed on the UI Panel)*

Cause/Action

1. Check the connection of the USB Cable between this machine and the PC.
2. Check the status (is it powered OFF, frozen, etc.) of the PC.

016-742/744 Download File Error/ Download File Check Sum Error

BSD-ON:-

[Download File Error]

It was detected that there is an error with either the file format of the Download File, the Device Identifier, the Device Serial Number, or the Target Device Character String.

[Download File Check Sum Error]

The Download File checksum error was detected.

Cause/Action

1. Turn the power OFF and ON.
2. Install a firmware with the correct version.

016-749/799 HBPL or XPJL Syntax Error/ Print Instruction Fail

BSD-ON:-

[HBPL or XPJL Syntax Error]

When the Print Job data interpretation is in progress, an illegal command that cannot be ignored was received from the Client driver.

[Print Instruction Fail]

During the Print Job, the Job cannot be executed with the specified combination of print parameters (Stored File Size, Paper Size, Paper Tray, Duplex Settings, Output Tray, and etc.).

NOTE: *During Continuous Print, this error will not occur until the paper that immediately precedes the paper where the applicable image is supposed to be printed on has been output successfully.*

Cause/Action

1. Press [Stop] on the UI Panel.
2. Check whether the Printer Driver that is being used is the correct one.
3. Check whether the specified print parameters are correct.

016-759 Copy Counter Full

BSD-ON:-

During Multi Account Mode, any of the following has occurred:

- The general user that is logged in has reached the alotted maximum print count.
- A general user that has reached the alotted maximum print count has logged in.

Cause/Action

1. Press [Stop] on the UI Panel.
2. Clear the count for the user.

016-776 Marker Code Detection Fail

BSD-ON:-

During Copy Job or Print Job, when expanding only up to the size that was specified at the expansion, the End Code cannot be found in the compressed data.

NOTE: *Before the occurrence of this fail, there are cases where [045-310 Image Ready Error] would occur first.*

NOTE: *During Continuous Print, this error will not occur until the paper that immediately precedes the paper where the applicable image is supposed to be printed on has been output successfully.*

Cause/Action

1. Turn the power OFF and ON.
2. If the problem reoccurs, determine whether it is caused by the Copy document or the Print data and contact the Support Department for assistance.

023-600 Held Down key Error (UI Panel)

BSD-ON:CH2.1

Any key on the UI Panel has been pressed and held down for 1 minute or longer.

Cause/Action

Check whether any key on the UI Panel is pressed and held down.

024-910/911/915 Tray 1/Tray 2/MSI Paper Length Mismatch

BSD-ON:CH8.3, CH8.1

The Paper Size for the applicable Tray is longer by 10.1 mm or more, or shorter by 13.1 mm or more than the setting.

Cause/Action

Check the following:

- Transportation failure due to foreign substance on the document path.
- The surface of the Feed Roll, T/A Roll 2 (Tray 2), Regi. Roll, and Idler Roll of the applicable Tray for foreign substances.
- The surface of the Feed Roll, T/A Roll 2 (Tray 2), Regi. Roll, and Idler Roll of the applicable Tray for wear.
- The Regi Sensor (Input Check [071-105]) for operation failure. (PL 15.1)
- The Regi Clutch (Output Check [071-001]) for operation failure. (PL 15.1)
- The MSI Feed Clutch (Output Check [072-006]) for operation failure. (MSI) (PL 13.3)
- The BTR for contamination, wear, and transportation failure due to deterioration.
- The Drive Gear for wear and damage.
- Usage of out of spec paper.

If no problems are found, replace the ESS/MCU PWB. (PL 18.1)

024-950/951/954 Tray 1/Tray 2/MSI No Paper

BSD-ON:CH7.2, CH7.3, CH7.4

Any of the following was detected:

- The paper in the applicable Tray has ran out.
  (When the APS function of Tray 1 and Tray 2 is disabled)
- Although the paper in the applicable Tray was detected to have ran out, paper is not supplied from another Tray. (When the APS function of Tray 1 and Tray 2 is enabled)

Cause/Action

1. Load paper into the applicable Tray. (If this had occurred during APS of Tray 1 or Tray 2, load paper with the same settings as for the aplicable Tray into other than MSI.)
2. If the problem persists, check the following:
   - The paper supply mechanism of the applicable Tray for damage and foreign substances.
   - The No Paper Sensor of the applicable Tray (Input Check [072-100/101/102]) for operation failure. (PL 9.1, PL 10.3, PL 13.3)
   - The No Paper Sensor of the applicable Tray for contamination, improper installation, and Actuator operation failure.
3. If no problem is found, replace the following parts:
   - ESS/MCU PWB (Tray 1/MSI) (PL 18.1)
   - STM PWB (Tray 2) (PL 10.6)

024-958/959/960 MSI/Tray 1/Tray 2 Paper Size Mismatch

BSD-ON:-

During Print Job, the paper size settings of the selected Tray is different from the paper size specified for the Job.

Cause/Action

Change the paper settings of the selected Tray to the appropriate one.

024-965 APS NG Unselected

BSD-ON:-

During Copy Job, Print Job, and Report Job with APS settings, the Paper Size and paper orientation (SEF/LEF) settings specified by the Job are different from the settings at Tray 1 and Tray 2.

Cause/Action

Change the paper settings of the Tray to the appropriate one.

041-210/211 STM NVM Out-Of-Order/ STM NVM R/W Error

BSD-ON:CH3.2

[STM NVM Out-Of-Order]

The NVM of the STM is malfunctioning.

[STM NVM R/W Error]

Unable to perform NVM Read / Write for the STM.

Cause/Action

1. Turn the power OFF and ON.
2. If the problem persists, replace the STM PWB. (PL 10.6)

042-325/614 Main Motor Rotation Error/ Main Motor Rotation Warning

BSD-ON:CH4.1

[Main Motor Rotation Error]

The Main Drive Motor revolution failure was detected. When the Lock Up (Main Drive Motor Fail) signal of the Motor Drive output was monitored at the specified time interval after a certain time has passed since the Main Drive Motor operation had started, it was found to have failed 5 times in a row.

[Main Motor Rotation Warning]

The Main Drive Motor revolution failure was detected. When the Lock Up (Main Drive Motor Fail) signal of the Motor Drive output was monitored at the specified time interval after a certain time has passed since the Main Drive Motor operation had started, it was found to have failed 2 times in a row.

Procedure

Enter the CE Mode and turn ON the Output Check [042-001] (Main Drive Motor). **Does the Main Drive Motor rotate?**

Y N

Check the power supply line (+24VDC, +5VDC) of the Main Drive Motor. **Is the power supply of the Main Drive Motor normal?**

Y N

Check the power supply circuit to the Main Drive Motor.

Turn OFF the power and check the following:

- The connection between the Main Drive Motor J202 and the ESS/MCU PWB J403 for open circuit, short circuit, and poor contact.
- The Drive Gear for wear, damage, and bearing blockage.
- The Main Drive Motor for loading.

If no problem is found, replace the following parts in sequence:

- Main Drive Motor (PL 3.1)
- ESS/MCU PWB (PL 18.1)

Press [Stop] and turn OFF the power. Check the connection between the Main Drive Motor J202-8 and the ESS/MCU PWB J403-5 for open circuit, short circuit, and poor contact.

If no problem is found, replace the following parts in sequence:

- ESS/MCU PWB (PL 18.1)
- Main Drive Motor (PL 3.1)

045-310 Image Ready Error

BSD-ON:CH3.2

Unable to send the Image-valid signal cannot within the specified time.

NOTE: *When the attempt to expand the image has failed, [016-776 Marker Code Detection Fail] occurs after the recover operation.*

Cause/Action

1. Check the USB Cable (Local) for poor connection.
2. If no problem is found, replace the ESS/MCU PWB. (PL 18.1)

045-313 IOT Logic Fail

BSD-ON:-

The IOT Software error was detected.

Cause/Action

1. Turn the power OFF and ON.
2. Install the correct version of the IOT firmware.
3. If the problem persists, replace the ESS/MCU PWB. (PL 18.1)

061-321 ROS Motor Fail

BSD-ON:CH6.4

The number of rotation of the ROS Motor did not come within the standard range within the specified time (5 s) after the ROS Motor On.

Cause/Action

1. Turn the power OFF and ON.
2. Check whether the Drum Cartridge is installed.
3. Check the ROS Motor (Output Check [061-001]) for operation failure.
4. Check the LD +5VDC power supply of the LD PWB J140 pin-8.
5. If no problem is found, replace the following parts in sequence:
   - ROS Assembly (PL 2.1)
   - ESS/MCU PWB (PL 18.1)

061-325 No SOS Fail

BSD-ON:CH6.4

After the detection of ROS Motor Ready (steady rotation), the SOS interval was detected to be longer than the reference value 5 times in a row.

Cause/Action

1. Turn the power OFF and ON.
2. Check whether the Drum Cartridge is installed.
3. Turn OFF the power and check the connections between the ESS/MCU PWB J410, J411 and the LD PWB J140, J160 for open circuits, short circuits, and poor contacts.
4. If no problem is found, replace the following parts in sequence:
   - ROS Assembly (PL 2.1)
   - ESS/MCU PWB (PL 18.1)

062-277 DADF Communication Fail

BSD-ON:CH3.1

Transmission cannot be established between the ESS/MCU PWB and the DADF PWB.

Cause/Action

1. Turn the power OFF and ON.
2. Turn OFF the power and check the connections between the ESS/MCU PWB J421 and the DADF PWB J751, J752 for open circuits, short circuits, and poor contacts.
3. If no problem is found, replace the following parts in sequence:
   - DADF PWB (PL 56.2)
   - ESS/MCU PWB (PL 18.1)

062-311 IIT Software Logic Fail

BSD-ON:-

A software error was detected at the ESS/MCU PWB.

Cause/Action

1. Turn the power OFF and ON.
2. Update the software version to the latest one.
3. If no problem is found, replace the ESS/MCU PWB. (PL 18.1)

062-360 Carriage Position Fail

BSD-ON:CH6.2

Any of the following was detected:

- An error with the count value of the Carriage Position Control.
- There is no Regi Sensor input during Carriage initialization.
- An error with the Regi Sensor detection position.

Cause/Action

Check the following:

- The Pre Regi Sensor (Input Check [062-212]) for operation failure. (PL 1.3)
- The Carriage Motor (Output Check [062-005/006] (Scan/Return)) for operation failure. (PL 1.4)
- The Drive Belt and Drive Wire for slack and wear.
- The Carriage operation for mechanical loading.

If no problems are found, replace the ESS/MCU PWB. (PL 18.1)

062-371/380 Lamp Illumination Fail/ AGC Fail

BSD-ON:CH6.3, CH6.1

[Lamp Illumination Fail]

Insufficient light from Lamp detected in CCD. (During white gradation correction/AGC before Scan starts)

[AGC Fail]

Insufficient lamp brightness was detected when performing AGC.

Initial Actions

Check whether there is something blocking the light and check the Lamp, Lens, Mirror, and White Color Correction Plate for deterioration or contamination.

Procedure

1. Turn ON the power and enter the Diag mode. Change the value for NVM [715-030] to '1' and then perform [NVM Write].
2. A 3 or 4-digit number is displayed in the current value column.
3. Check the upper 1 or 2 digits, or the lower 2 digits using the following table and replace the appropriate parts.

   Sample Display

   - 110 (3-digit display):

     LED Lamp failure and LED Lamp Flexible Flat Cable is damaged or has poor contact.

     (The first digit '1' in '110' is the upper digit, which indicates the LED Lamp ('0' in '01' is not displayed). The lower 2 digits '10' indicates the LED Lamp Flexible Flat Cable.)
   - 1000 (4-digit display):

     The LED Lamp Flexible Flat Cable is damaged or has poor contact.

     (The first 2 digits '10' in '1000' are the upper digits, which indicates the LED Lamp Flexible Flat Cable. The lower 2 digits '00' indicates that nothing is applicable (no failures).)

   NOTE: *Perform IIT diagnostic and then call NVM [715-030] again (press the Change Settings button) to check the value (diagnostic result).*

Table 1

Current value	Component Name	PL No.
00	Not applicable (No errors)	-
01	LED Lamp (LED Lamp PWB)	PL 1.5
02	IIT Carriage	PL 1.3
03	CCD Flexible Flat Cable	PL 1.3
04	This value is not displayed	-
05	This value is not displayed	-

Table 1

Current value	Component Name	PL No.
06	This value is not displayed	-
07	This value is not displayed	-
08	This value is not displayed	-
09	This value is not displayed	-
10	LED Lamp Flexible Flat Cable	PL 1.5

4. After replacing the appropriate parts, again change the value for NVM [715-030] to '1' and then perform 'NVM Write'.
5. Check that the current value column becomes '0'.
6. If the problem persists after performing the above procedure, check the following:
   - Check for burnt out LED Lamp (DC330 [062-002]). (PL 1.5)
   - Check the Flat Cable between the LED Lamp PWB J7002 and the IIT Carriage J7001 for open circuits, short circuits, and poor contacts (especially, check whether the Flat Cable was inserted in a skewed manner).
   - Check the Flat Cable between the IIT Carriage J700 and the ESS/MCU PWB J420 for open circuits, short circuits, and poor contacts (especially, check whether the Flat Cable was inserted in a skewed manner).
7. If no problem is found, replace the ESS/MCU PWB. (PL 18.1)

062-386 AOC Fail

BSD-ON:CH6.3

A CCD output error was detected when performing AOC.

Cause/Action

1. Turn ON the power and enter the Diag mode. Change the value for NVM [715-030] to '1' and then perform [NVM Write].
2. A 3 or 4-digit number is displayed in the current value column.
3. Check the upper 1 or 2 digits, or the lower 2 digits and replace the appropriate parts.

   (For more information on display example and part selection, refer to Procedure 3 in 062-371 FIP.)

   NOTE: *Perform IIT diagnostic and then call NVM [715-030] again (press the Change Settings button) to check the value (diagnostic result).*
4. After replacing the appropriate parts, again change the value for NVM [715-030] to '1' and then perform 'NVM Write'.
5. Check that the current value column becomes '0'.
6. If the problem persists after performing the above procedure, check the Flat Cable between the IIT Carriage J700 and the ESS/MCU PWB J420 for open circuits, short circuits, and poor contacts (especially, check whether the Flat Cable was inserted in a skewed manner).
7. If no problem is found, replace the ESS/MCU PWB. (PL 18.1)

062-389 Carriage Over Run Fail (Scan End Side)

BSD-ON:CH6.2

The Carriage has overrun at the Scan End.

Cause/Action

Check the following:

- The Drive Belt and Drive Wire for slack and wear.
- The Carriage operation for mechanical loading.
- The Carriage Motor (Output Check [062-005/006] (Scan/Return)) for operation failure. (PL 1.4)
- The IIT Regi. Sensor (Input Check [062-212]) for operation failure. (PL 1.3)

If no problems are found, replace the ESS/MCU PWB. (PL 18.1)

062-396 CCD Cable Connection Fail

BSD-ON:CH3.1

A CCD Flat Cable connection error was detected.

Cause/Action

1. Turn the power OFF and ON.
2. Turn OFF the power and check the Flat Cable between the IIT Carriage J700 and the ESS/MCU PWB J420 for open circuits, short circuits, and poor contacts (especially, check whether the Flat Cable was inserted in a skewed manner).
3. If no problem is found, replace the following parts in sequence:
   - CCD Flexible Flat Cable (PL 1.3)
   - ESS/MCU PWB (PL 18.1)

071-105 Regi Sensor On Jam (Tray 1)

BSD-ON:CH8.3, CH4.1, CH8.1

During paper feed from Tray 1, the Regi Sensor did not turn ON within the specified time after the Tray 1 Feed Clutch On.

Cause/Action

Check the following:

- The Regi Sensor (Input Check [071-105]) for operation failure. (PL 15.1)
- The Main Drive Motor (Output Check [042-001]) for operation failure. (PL 3.1)
- The Tray 1 Feed Clutch (Output Check [072-001]) for operation failure. (PL 9.1)
- The Feed Roll for contamination, wear, and transportation failure due to deterioration.
- The Drive Gear for wear and damage.
- A paper transportation failure due to foreign substances on the paper path.
- Usage of out of spec paper.

If no problems are found, replace the ESS/MCU PWB. (PL 18.1)

072-102 Feed Out Sensor 2 On Jam

BSD-ON:CH8.2, CH7.3

During paper feed from Tray 2, the Feed Out Sensor 2 did not turn ON within the specified time after the Tray 2 Feed Motor On.

Cause/Action

Check the following:

- The Feed Out Sensor 2 (Input Check [072-104]) for operation failure. (PL 10.5)
- The STM Take Away Motor (Output Check [072-004]) for operation failure. (PL 10.6)
- The STM Take Away Roll Clutch (Output Check [072-003]) for operation failure. (PL 10.6)
- The Tray 2 Feed/Lift Up Motor (Output Check [072-002] (Feed)) for operation failure. (PL 10.3)
- The T/A Roll 2, Feed Roll, Nudger Roll, and Pinch Roll for transportation failure due to contamination, wear, and deterioration.
- The LH Cover for improper latching.
- The Drive Gear for wear and damage.
- A paper transportation failure due to foreign substances on the paper path.
- Usage of out of spec paper.

If no problem is found, replace the STM PWB. (PL 10.6)

072-105 Regi Sensor On Jam (Tray 2)

BSD-ON:CH8.3, CH8.2

During paper feed from Tray 2, the Regi Sensor did not turn ON within the specified time after the Feed Out Sensor 2 On.

Cause/Action

Check the following:

- The Regi Sensor (Input Check [071-105]) for operation failure. (PL 15.1)
- The STM Take Away Motor (Output Check [072-004]) for operation failure. (PL 10.6)
- The STM Take Away Roll Clutch (Output Check [072-003]) for operation failure. (PL 10.6)
- The T/A Roll 2, Feed Roll, and Pinch Roll for transportation failure due to contamination, wear, and deterioration.
- The Drive Gear for wear and damage.
- A paper transportation failure due to foreign substances on the paper path.
- Usage of out of spec paper.

If no problem is found, replace the following parts in sequence:

- ESS/MCU PWB (PL 18.1)
- STM PWB (PL 10.6)

072-210 Tray 2 Lift Up Fail

BSD-ON:CH7.3

Any of the following was detected:

- A Tray 2 Lifter error.
- A Tray 2 Paper Size detector component malfunction.

Cause/Action

Check the following:

- The Tray 2 Nudger Level Sensor (Input Check [072-103]) for operation failure. (PL 10.3)
- The Tray 2 Feed/Lift Motor (Output Check [072-005] (Lift Up)) for operation failure. (PL 10.3)
- The drive system between the Bottom Plate and the Tray 2 Feed/Lift Motor for operation failure.
- The Tray for Paper misload
- The Tray for existence of objects other than Paper.

If no problem is found, replace the STM PWB. (PL 10.6)

072-212 Tray 2 Size Sensor Broken

BSD-ON:CH7.1

Abnormal output AD value from Tray 2 Paper Size Switch was detected.

Cause/Action

Check the following:

- Broken link and damage at the bottom of the Tray
- The Actuator at the rear of the Tray for operation failure
- The Tray 2 Paper Size Switch (Analog Monitor [072-050], Output Check [072-105]) for operation failure. (PL 10.1)
- The Tray for Paper misload
- The Tray for existence of objects other than Paper.

If no problem is found, replace the STM PWB. (PL 10.6)

072-215 MCU-STM Communication Fail

Communication failure between the ESS/MCU PWB and the STM PWB was detected.

Cause/Action

1. Turn the power OFF and ON.
2. Turn OFF the power and check the connection between the ESS/MCU PWB J413 and the STM PWB J541C for open circuit, short circuit, and poor contact.
3. If no problem is found, replace the following parts in sequence:
   - STM PWB (PL 10.6)
   - ESS/MCU PWB (PL 18.1)

075-135 Regi Sensor On Jam (MSI)

BSD-ON:CH8.3, CH4.1, CH8.1

During paper feed from the MSI, the Regi Sensor did not turn ON within the specified time after the MSI Feed Clutch On.

Cause/Action

Check the following:

- The Regi Sensor (Input Check [071-105]) for operation failure. (PL 15.1)
- The Main Drive Motor (Output Check [042-001]) for operation failure. (PL 3.1)
- The MSI Feed Clutch (Output Check [072-006]) for operation failure. (PL 13.3)
- The MSI Feed Roll and the MSI Nudger Roll for contamination, wear, and transportation failure due to deterioration.
- The Drive Gear for wear and damage.
- A paper transportation failure due to foreign substances on the paper path.
- Usage of out of spec paper.

If no problems are found, replace the ESS/MCU PWB. (PL 18.1)

077-101 Regi Sensor Off Jam

BSD-ON:CH8.3, CH4.1

The Regi Sensor did not turn OFF within the specified time after the Regi Clutch On.

Cause/Action

Check the following:

- The Regi Sensor (Input Check [071-105]) for operation failure. (PL 15.1)
- The Main Drive Motor (Output Check [042-001]) for operation failure. (PL 3.1)
- The Regi Clutch (Output Check [071-001]) for operation failure. (PL 15.1)
- The Regi Roll and Pinch Roll for transportation failure due to contamination, wear, and deterioration.
- The Transfer Unit for a decrease in the transportation force.
- The Drive Gear for wear and damage.
- A paper transportation failure due to foreign substances on the paper path.
- Usage of out of spec paper.

If no problems are found, replace the ESS/MCU PWB. (PL 18.1)

077-103 Fusing Unit Exit Sensor Off Jam (Long)

BSD-ON:CH10.3, CH4.1, CH10.4

After the Regi Sensor Off, the Fusing Unit Exit Sensor did not turn OFF within the specified time.

Cause/Action

Check the following:

- The Fusing Unit Exit Sensor (Input Check [071-106]) for operation failure. (PL 7.1)
- The Main Drive Motor (Output Check [042-001]) for operation failure. (PL 3.1)
- The Invert Motor (Output Check [071-003] (Exit)) for operation failure. (When Duplex is installed) (PL 17.1)
- The Exit Roll and Pinch Roll for transportation failure due to contamination, wear, and deterioration.
- The Transfer Unit for a decrease in the transportation force.
- The Heat Roll for wound up, stuck paper.
- The Drive Gear for wear and damage.
- Usage of out of spec paper.

If no problems are found, replace the ESS/MCU PWB. (PL 18.1)

077-104 Fusing Unit Exit Sensor Off Jam (Short)

BSD-ON:CH10.3, CH8.3, CH4.1, CH10.4

The time taken for the Fusing Unit Exit Sensor to turn from ON to OFF is shorter than the specified time.

Cause/Action

Check the following:

- The Fusing Unit Exit Sensor (Input Check [071-106]) for operation failure. (PL 7.1)
- The Regi Sensor (Input Check [071-105]) for operation failure. (PL 15.1)
- The Main Drive Motor (Output Check [042-001]) for operation failure. (PL 3.1)
- The Invert Motor (Output Check [071-003] (Exit)) for operation failure. (When Duplex is installed) (PL 17.1)
- The Heat Roll for wound up, stuck paper.
- Usage of out of spec paper.

If no problems are found, replace the ESS/MCU PWB. (PL 18.1)

077-106 Fusing Unit Exit Sensor On Jam

BSD-ON:CH10.3, CH8.3, CH4.1

The Fusing Unit Exit Sensor did not turn ON within the specified time after the Regi Clutch On.

Cause/Action

Check the following:

- The Fusing Unit Exit Sensor (Input Check [071-106]) for operation failure. (PL 7.1)
- The Main Drive Motor (Output Check [042-001]) for operation failure. (PL 3.1)
- The Regi Clutch (Output Check [071-001]) for operation failure. (PL 15.1)
- The Fusing Unit Exit Chute for improper installation and deformation.
- The Transfer Unit for a decrease in the transportation force.
- The Drive Gear for wear and damage.
- The Heat Roll for wound up, stuck paper.
- A paper transportation failure due to foreign substances on the paper path.
- Usage of out of spec paper.

If no problems are found, replace the ESS/MCU PWB. (PL 18.1)

077-129 Regi Sensor On Jam (Duplex Wait)

BSD-ON:CH8.3, CH4.1, CH10.4

During the paper stop at the invert wait position at Duplex print, the Regi Sensor did not turn ON within the specified time after the Duplex Clutch On.

Cause/Action

Check the following:

- The Regi Sensor (Input Check [071-105]) for operation failure. (PL 15.1)
- The Main Drive Motor (Output Check [042-001]) for operation failure. (PL 3.1)
- The Invert Motor (Output Check [071-005] (Dup)) for operation failure. (PL 17.1)
- The Dupex Clutch (Output Check [071-002]) for operation failure. (PL 14.4)
- The Exit Roll, Duplex Roll 1, 2, and Pinch Roll for transportation failure due to contamination, wear, and deterioration.
- The Drive Gear and Belt for wear and damage.
- A paper transportation failure due to foreign substances on the paper path.
- Usage of out of spec paper.

If no problems are found, replace the ESS/MCU PWB. (PL 18.1)

077-212 Tray Module Reset Fail

BSD-ON:CH3.2

The Tray Module was detected to be reset.

Cause/Action

1. Turn the power OFF and ON.
2. Check voltages of the following pins:
   - STM PWB J541C-5 (+5VDC)
   - STM PWB J541C-8 (+24VDC)
3. Turn OFF the power and check the connection between the ESS/MCU PWB J413 and the STM PWB J541C for open circuit, short circuit, and poor contact.
4. If no problem is found, replace the following parts in sequence:
   - STM PWB (PL 10.6)
   - ESS/MCU PWB (PL 18.1)

077-300/301/305 Front Cover/Left Hand Cover/STM Cover Open

BSD-ON:CH1.5, CH1.6

The applicable Cover Switch was detected to be open.

Cause/Action

1. Check the applicable Cover Switch for operation failure.
   - Front Cover Switch (Input Check[071-301]) (PL 19.1)
   - Front Cover Interlock Switch and L/H Cover Interlock Switch (Input Check[071-300]) (PL 19.1, PL 14.1)
   - STM Left Cover Switch (Input Check[072-300]) (PL 10.4)
2. Check the applicable Cover Switch for damage and mismatch.
3. If no problem is found, replace the following parts:
   - ESS/MCU PWB (Front Cover Open, L/H Cover Open) (PL 18.1)
   - STM PWB (STM Left Cover Open) (PL 10.6)

077-900/901/904 Regi Sensor/Fusing Unit Exit Sensor/ Feed Out Sensor 2 Static Jam

BSD-ON:CH8.3, CH10.3, CH8.2

Paper was detected by the applicable sensor at Power ON, M/C Stop, or Interlock Close.

Cause/Action

1. Check the applicable sensor for remaining paper, the Actuator for return failure, contamination on sensor, and etc.
2. Check the applicable sensor for operation failure.
   - Regi Sensor (Input Check[071-105]) (PL 15.1)
   - Fusing Unit Exit Sensor (Input Check[071-106]) (PL 7.1)
   - Feed Out Sensor 2 (Input Check[072-104]) (PL 10.5)
3. If no problem is found, replace the following parts:
   - ESS/MCU PWB (Regi Sensor, Fusing Unit Exit Sensor) (PL 18.1)
   - STM PWB (Feed Out Sensor 2) (PL 10.6)

091-313 CRUM ASIC Communication Fail

BSD-ON:CH9.1

Communication failure between the CRUM ASIC and the CPU was detected.

The CRUM ASIC has malfunctioned.

Cause/Action

1. Turn the power OFF and ON.

   NOTE: *If this resolves the problem, it is highly probable that the ESS/MCU PWB had mis-detected due to external noise abnormal or noise caused by electrical discharge in the machine. Check for any noise source around the machine and check for any abnormal electrical discharge, etc.*

2. Turn OFF the power and check the following:
   - The Drum CRUM PWB and Drum Cartridge CRUM connection terminals in the Drum Cartridge for poor contact.
   - The connection between the Drum Cartridge J615 and the Drum CRUM PWB JA for open circuit, short circuit, and poor contact.
   - The connection between the ESS/MCU PWB J426 and the Drum Cartridge P615 for open circuit, short circuit, and poor contact.
3. If no problem is found, replace the following parts in sequence:
   - Drum Cartridge (PL 8.1)
   - ESS/MCU PWB (PL 18.1)

091-401/402 Drum Cartridge Quality Life Over/ Drum Cartridge Life Over

BSD-ON:CH9.1

[Drum Cartridge Quality Life Over]

The image quality guarantee period for the Drum Cartridge has ended.

(When Drum Hard Stop-less is enabled)

[Drum Cartridge Life Over]

When in Life Extension Mode, the Drum Cartridge was detected to be near the end of its lifespan.

Cause/Action

Replace the Drum Cartridge. (PL 8.1)

091-406/424 Drum Cartridge Normal Life Over/ Drum Cartridge Abnormal Life Over

BSD-ON:CH9.1

[Drum Cartridge Normal Life Over]

The operation guarantee period for the Drum Cartridge has ended.

(When Drum Hard Stop-less is enabled)

[Drum Cartridge Abnormal Life Over]

The Drum Cartridge is out of warranty and this could result in a malfunction of the machine.

(When Drum Hard Stop-less is enabled)

Cause/Action

Replace the Drum Cartridge. (PL 8.1)

091-430 Drum Cartridge Life End

BSD-ON:CH9.1

The Drum Cartridge must be replaced.

Cause/Action

Replace the Drum Cartridge. (PL 8.1)

091-440 Drum Cartridge Pre Near End

BSD-ON:CH9.1

Preparation for replacing the Drum Cartridge is required.

Cause/Action

The Drum Cartridge needs to be replaced soon. Prepare a new Drum Cartridge.

Replace the Drum Cartridge as required. (PL 8.1)

091-441 Drum Cartridge Near End

BSD-ON:CH9.1

The Drum Cartridge needs to be replaced soon.

Cause/Action

The Drum Cartridge needs to be replaced soon. Replace the Drum Cartridge as required. (PL 8.1)

091-914 Drum CRUM Communication Fail

BSD-ON:CH9.1

Communication failure with Drum CRUM was detected.

The CRUM ASIC has malfunctioned.

Cause/Action

1. Turn the power OFF and ON.
2. Turn OFF the power. Disconnect and reconnect the Drum Cartridge.

   NOTE: *If turning the power OFF and ON or removing and reinstalling the Drum Cartridge resolves the problem, it is highly probable that the ESS/MCU PWB had misdetected due to external noise abnormal or noise caused by electrical discharge in the machine. Check for any noise source around the machine and check for any abnormal electrical discharge, etc.*

3. Turn OFF the power and check the following:
   - The Drum CRUM PWB and Drum Cartridge CRUM connection terminals in the Drum Cartridge for poor contact.
   - The connection between the Drum Cartridge J615 and the Drum CRUM PWB JA for open circuit, short circuit, and poor contact.
   - The connection between the ESS/MCU PWB J426 and the Drum Cartridge P615 for open circuit, short circuit, and poor contact.
4. If no problem is found, replace the following parts in sequence:
   - Drum Cartridge (PL 8.1)
   - ESS/MCU PWB (PL 18.1)

091-915/916 Drum CRUM ID Error/ Drum CRUM Market Identity Mismatch

BSD-ON:CH9.1

[Drum CRUM ID Error]

The Drum CRUM ID error was detected.

[Drum CRUM Market Identity Mismatch]

The Drum CRUM region mismatch was detected.

Cause/Action

Replace it with the correct Drum Cartridge. (PL 8.1)

092-660/668 ATC Amplitude Fail/ ATC Average Fail

BSD-ON:CH9.3

[ATC Amplitude Fail]

The output amplitude of the ATC Sensor in the ATC (Automatic Toner Control) measurement is small.

[ATC Average Fail]

The average output value is not within the specified range in the ATC (Automatic Toner Control) measurement.

Cause/Action

1. Install a Toner Cartridge that contains Toner. Copy a Test Chart (499T 00247), etc. and check whether the density has recovered.
2. Check the Toner Dispense Motor (Output Check [092-001]) for operation failure. (PL 8.2)
3. Check the Toner transport path for Toner blockage.
4. Check the connection between the ATC Sensor (Drum Cartridge) P615 and the ESS/MCU PWB J409 for open circuit, short circuit, and poor contact.
5. If no problem is found, replace the following parts in sequence:
   - Drum Cartridge (PL 8.1)
   - ESS/MCU PWB (PL 18.1)

092-661 Temperature Sensor Fail

BSD-ON:CH9.4

The output value of the Temperature Sensor is not within the specification range.

Cause/Action

1. Turn the power OFF and ON.
2. Check the connection between the HVPS J500-1 and the ESS/MCU PWB J402-14 for open circuit, short circuit, and poor contact.
3. If no problem is found, replace the following parts in sequence:
   - HVPS (PL 18.1)
   - ESS/MCU PWB (PL 18.1)

092-910 ATC Sensor Fail

BSD-ON:CH9.3

The frequency at which the ATC Average Fail or the ATC Amplitude Fail has been occurring is at the threshold value or higher.

NOTE: *To clear this Fail, clear the value of NVM [752-059] (ATC Fail) or NVM [752-060] (ATC Fail Continuous Count) to '0'. If the machine is not repaired back to normal status, this Fail will occur again during the operation.*

NOTE: *Setting the NVM [752-005] (Dispense Mode) to '0' (Timer Disp) or '2' (ICDC Disp) will prevent ATC related fail from occurring and enable you to use the M/C. However, this means that the Toner density will not be controlled.*

Cause/Action

1. Install a Toner Cartridge that contains Toner. Copy a Test Chart (499T 00247), etc. and check whether the density has recovered.
2. Check the Toner Dispense Motor (Output Check [092-001]) for operation failure. (PL 8.2)
3. Check the Toner transport path for Toner blockage.
4. Check the connection between the ATC Sensor (Drum Cartridge) P615 and the ESS/MCU PWB J409 for open circuit, short circuit, and poor contact.
5. Check for toner blockage within the Developer Unit.
6. If no problem is found, replace the following parts in sequence:
   - Drum Cartridge (PL 8.1)
   - ESS/MCU PWB (PL 18.1)

093-312 Toner Dispense Motor Rotation Fail

BSD-ON:CH9.3

Regardless of low usage of toner from Toner Cartridge, it was detected to be empty.

Cause/Action

Check the following:

- The Toner Cartridge for improper installation
- The Toner Dispense Motor (Output Check [092-001]) for operation failure. (PL 8.2)
- The Toner transport path for Toner blockage.
- The Drive Gear for wear and damage.

If no problem is found, replace the following parts in sequence:

- Toner Cartridge (PL 8.1)
- ESS/MCU PWB (PL 18.1)

093-400 Toner Near Empty

BSD-ON:CH9.3

The Toner Cartridge needs to be replaced soon.

Cause/Action

The Toner Cartridge needs to be replaced soon. Replace the Toner Cartridge as required. (PL 8.1)

093-406 Toner Pre Near Empty

BSD-ON:CH9.3

Preparation for replacing the Toner Cartridge is required.

Cause/Action

The Toner Cartridge needs to be replaced soon. Prepare a new Toner Cartridge.

Replace the Toner Cartridge as required. (PL 8.1)

093-912 Toner Empty

BSD-ON:CH9.3

The toner must to be replaced as it has ran out.

Cause/Action

Replace the Toner Cartridge. (PL 8.1)

093-956 Drum New CRU Installation Fail

BSD-ON:CH9.3

During the developing powder installation mode after installing the Drum Cartridge, the ATC Measured Value is found to be abnormal. (Seal not removed)

Cause/Action

1. Remove the developing powder seal from the Drum Cartridge.
2. If the problem persists after removing the seal, replace the Drum Cartridge. (PL 8.1)

093-959 Drum New CRU Installation Fail Exceeds Thresholding Times

BSD-ON:-

The number of developing powder installation mode executions has exceeded the upper limit.

Cause/Action

Replace it with the correct Drum Cartridge. (PL 8.1)

095-910 No Drum Cartridge

BSD-ON:CH9.1

The Drum Cartridge cannot be detected.

Cause/Action

1. Turn the power OFF and ON.
2. Turn OFF the power and check the following:
   - The Drum CRUM PWB and Drum Cartridge CRUM connection terminals in the Drum Cartridge for poor contact.
   - The connection between the Drum Cartridge J615 and the Drum CRUM PWB JA for open circuit, short circuit, and poor contact.
   - The connection between the ESS/MCU PWB J426 and the Drum Cartridge P615 for open circuit, short circuit, and poor contact.
3. If no problem is found, replace the following parts in sequence:
   - Drum Cartridge (PL 8.1)
   - ESS/MCU PWB (PL 18.1)

116-321 Controller Logic Fail

BSD-ON:-

- A software defect that cannot be ignored was found in the Controller software.
- The CPU has rebooted due to the occurrence of an exception.

Cause/Action

1. Turn the power OFF and ON.
2. Install a Controller Firmware with the correct version.

116-323 Controller NVM Data Defect

BSD-ON:-

Any of the following was detected:

- The On Board NVM data of the Controller is corrupted.
- The On Board NVM of the Controller is not installed.
- Any one of the Print Counter has reached its maximum value.
- The number of times the NVM can be changed has reached its limit.

NOTE: *If this Fault reoccurrs after performing Data Backup/Restore, perform Data Restore again.*

(Perform NVM Matching (NVM[621-400]) in the CE Mode.)

Cause/Action

1. Turn the power OFF and ON.
2. Perform NVM Initialize in the CE Mode. (Refer to [6.4.2.5 NVM Initialize].)

116-334 NVM Data Mismatch

BSD-ON:-

The verification result between the On Board NVM and the Backup NVM of the Controller is mismatched.

(This includes cases where one of the NVM is Blank)

Cause/Action

1. Turn the power OFF and ON.
2. Perform NVM Matching (NVM[621-400]) in the CE Mode.

116-377 IIT Interrupt Time out

BSD-ON:CH6.3

The DMA start trigger when scanning documents cannot be detected for a specified time.

Cause/Action

1. Turn the power OFF and ON.
2. Turn OFF the power and check the Flat Cable between the IIT Carriage J700 and the ESS/MCU PWB J420 for open circuits, short circuits, and poor contacts (especially, check whether the Flat Cable was inserted in a skewed manner).
3. Check the ESS/MCU PWB for improper installation (loose screw).
4. If no problem is found, replace the ESS/MCU PWB. (PL 18.1)

116-747 Invalid Page Margin

BSD-ON:-

During Copy Job, subtracting the amount of edge erase from the section that should have been scanned resulted in a negative value.

Cause/Action

Change the value for NVM [790-301] (Document Edge Erase Amount) or NVM [790-302] (Document Edge Erase Amount (for ID Card Copy)).

117-326 Controller Backup NVM Data Defect

BSD-ON:-

Any of the following was detected:

- The Backup NVM data of the Controller is corrupted.
- The Backup NVM of the Controller is not installed.
- Any one of the Print Counter has reached its maximum value.
- The number of times the NVM can be changed has reached its limit.

Cause/Action

1. Turn the power OFF and ON.
2. Check the EEPROM (Master) on the ESS/MCU PWB for poor contact with the socket.
3. Perform NVM Initialize in the CE Mode. (Refer to [6.4.2.5 NVM Initialize].)
4. If the problem persists, replace the ESS/MCU PWB. (PL 18.1)

123-314 UI Panel Communication Fail

BSD-ON:CH2.1

Communication failure between the ESS/MCU PWB and the UI Panel was detected.

Cause/Action

1. Turn the power OFF and ON.
2. Turn OFF the power and check the Flat Cable between the UI PWB J740 and the ESS/MCU PWB J422 for open circuits, short circuits, and poor contacts.
3. If no problem is found, replace the following parts in sequence:
   - UI PWB (PL 1.6)
   - ESS/MCU PWB (PL 18.1)

2.2.3.1 AC Power FIP

BSD-ON:CH1.1

Procedure

Turn OFF the Main Power Switch. **Is the voltage between the Main Power Switch J3 and J4 120VAC/220 to 240VAC?**

Y N

Is the voltage between the AC Inlet J1 and J2 120VAC/220 to 240VAC?

Y N

Unplug the Power Cord from the outlet. **Is 120VAC/220 to 240VAC measured at the outlet?**

Y N

Check the customer's Breaker, etc.

Check the Power Cord for open circuit and poor contact. If no problems are found, replace the AC Inlet. (PL 18.1)

Check the connections between the AC Inlet J1, J2 and the Main Power Switch J3, J4 for open circuits and poor contacts.

Turn ON the Main Power Switch. **Is the voltage between the LVPS J510-1 and J510-3 120VAC/220 to 240VAC?**

Y N

Turn OFF the power and unplug the Power Cord from the outlet.

- LVPS [120VAC] -

Check the connections between the Main Power Switch J5, J6 and the LVPS J510 pin-1 and pin-2 for open circuits and poor contacts.

- LVPS [220VAC] -

Check the connections between the Main Power Switch J5, J6 and the LVPS J510 pin-1 and pin-3 for open circuits and poor contacts.

If no problems are found, replace the Main Power Switch. (PL 18.1)

Check the AC circuit to each component by referring to Chapter 7 Wiring Data.

2.2.3.2 +5VDC Power FIP

BSD-ON:CH1.2, CH1.1

Procedure

Turn ON the power. **Is the voltage between the LVPS J512-1 (+) and the GND (-) +5VDC?**

Y N

- LVPS [120VAC] -

Is the voltage between the LVPS J510-1 and J510-2 120VAC?

- LVPS [220VAC] - **Is the voltage between the LVPS J510-1 and J510-3 220 to 240VAC?**

Y N

Go to '2.2.3.1 AC Power FIP'.

Turn OFF the power and disconnect the LVPS J512. After 15 s or longer has passed, turn ON the machine. **Is the voltage between the LVPS P512-1 (+) and the GND (-) +5VDC?**

Y N

Replace the LVPS. (PL 18.1)

Check the +5VDC circuit for a short circuit in the frame by referring to Chapter 7 Wiring Data.

Check the wire to the applicable component for an open circuit or poor contact by referring to Chapter 7 Wiring Data.

2.2.3.3 +24VDC Power FIP

BSD-ON:CH1.3, CH1.2, CH1.1

Procedure

Turn ON the power. **Is the voltage between the LVPS J512-1 (+) and the GND (-) +5VDC?**

Y N

Go to 2.2.3.2 +5VDC Power FIP.

Are the voltages between the LVPS J512-3/6 (+) and the GND (-) +24VDC?

Y N

Is the voltage between the LVPS J513-4 (+) and the GND (-) +3.3VDC?

Y N

Check the circuit to the LVPS J513 pin-4.

Turn OFF the power and disconnect the LVPS J512.After 15 s or longer has passed, turn ON the machine. **Are the voltages between the LVPS P512-3/6 (+) and the GND (-) +24VDC?**

Y N

Replace the LVPS. (PL 18.1)

Check the +24VDC circuit for a short circuit in the frame by referring to Chapter 7 Wiring Data.

Check the wire to the applicable component for an open circuit or poor contact by referring to Chapter 7 Wiring Data.

2.2.4.1 Reflective Sensor Failure FIP

Procedure

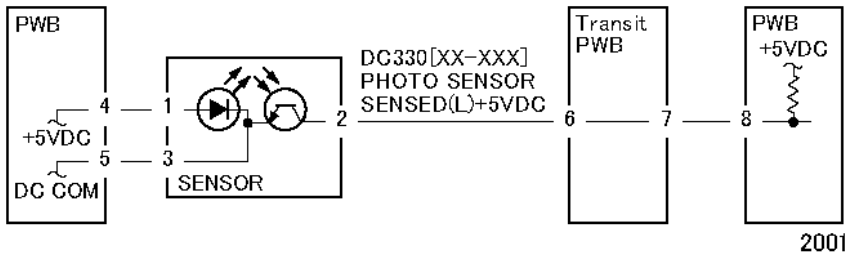


Figure 1 2001

Enter DC330[XXXX-XXX]. Block the sensor with a sheet of blank paper. Is [LOW] displayed?

Y N

Is +5VDC measured between the sensor pin-2 (+) and the GND (-)?

Y N

Check the connection between the sensor pin-2 and the PWB pin-8 for an open circuit and poor contact.
If no problem is found, replace the PWB.

Is +5VDC measured between the sensor pin-1 (+) and pin-3 (-)?

Y N

Is +5VDC measured between the PWB pin-4 (+) and pin-5 (-)?

Y N

Replace the PWB.

Check the connection between the PWB pin-4 and the sensor pin-1, as well as between the PWB pin-5 and the sensor pin-3 for open circuits and poor contacts.

Check the sensor for contamination and improper installation.
If no problems are found, replace the sensor.

Remove the sheet of paper blocking the sensor. Is [HIGH] displayed?

Y N

Disconnect the sensor connector. **Does the display change to [HIGH]?**

Y N

Check the connection between the sensor pin-2 and the PWB pin-8 for a short circuit.
If no problem is found, replace the PWB.

Check the sensor for improper installation and incident light diffraction. If no problems are found, replace the sensor.

Check the installation of the sensor. If no problems are found, replace the sensor.

2.2.4.2 Permeable Sensor Failure FIP

Procedure

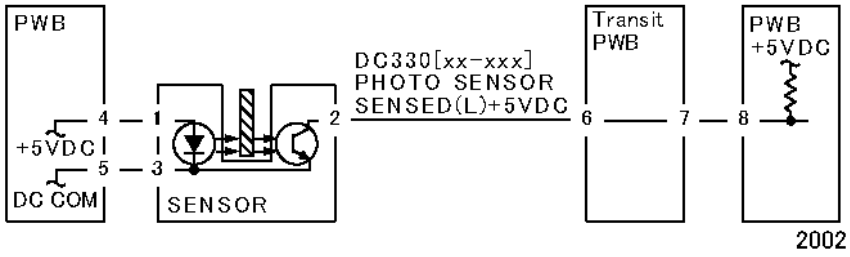


Figure 1 2002

Enter DC330[XXX-XXX]. Block the sensor. **Is [HIGH] displayed?**

Y N

Disconnect the sensor connector. **Does the display change to [HIGH]?**

Y N

Check the connection between the sensor pin-2 and the PWB pin-8 for a short circuit. If no problem is found, replace the PWB.

Replace the sensor.

Remove any obstruction on the sensor light path. **Does the display change to [LOW]?**

Y N

Is +5VDC measured between the sensor pin-2 (+) and the GND (-)?

Y N

Check the connection between the sensor pin-2 and the PWB pin-8 for an open circuit and poor contact.
If no problem is found, replace the PWB.

Is +5VDC measured between the sensor pin-1 (+) and pin-3 (-)?

Y N

Check the connection between the PWB pin-4 and the sensor pin-1, as well as between the PWB pin-5 and the sensor pin-3 for open circuits and poor contacts.
If no problem is found, replace the PWB.

Check the sensor for contamination.
If no problems are found, replace the sensor.

Check the sensor for improper installation and the Actuator for bending or failure.
If no problems are found, replace the sensor.

2.2.4.3 Switch (Normal/Open) Failure FIP

Procedure

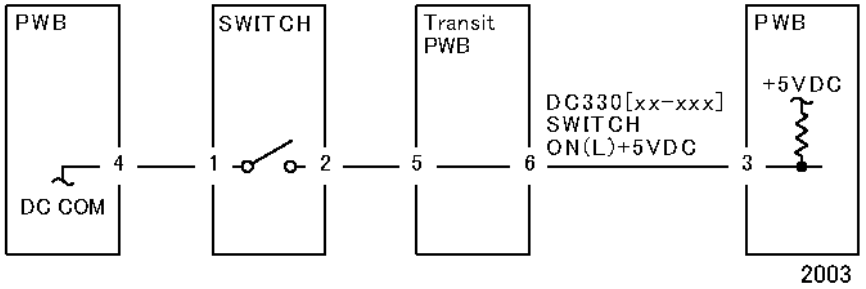


Figure 1 2003

Enter DC330[XXX-XXX]. Turn the switch ON. Is [LOW] displayed?

Y **N**

Is +5VDC measured between the switch pin-2 (+) and the GND (-) **?**

Y **N**

Check the connection between the switch pin-2 and the PWB pin-3 for an open circuit and poor contact.
If no problem is found, replace the PWB.

Is +5VDC measured between the switch pin-1 (+) and the GND (-) **?**

Y **N**

Replace the switch.

Check the connection between the switch pin-1 and the PWB pin-4 for an open circuit and poor contact.
If no problem is found, replace the PWB.

Turn the switch OFF. Is [HIGH] displayed?

Y **N**

Disconnect the switch connector. Is [HIGH] displayed?

Y **N**

Check the connection between the switch pin-2 and the PWB pin-3 for a short circuit.
If no problem is found, replace the PWB.

Replace the switch.

Check the installation of the switch.
If no problems are found, replace the switch.

2.2.4.4 Solenoid/Clutch Not Energized Failure FIP

Procedure

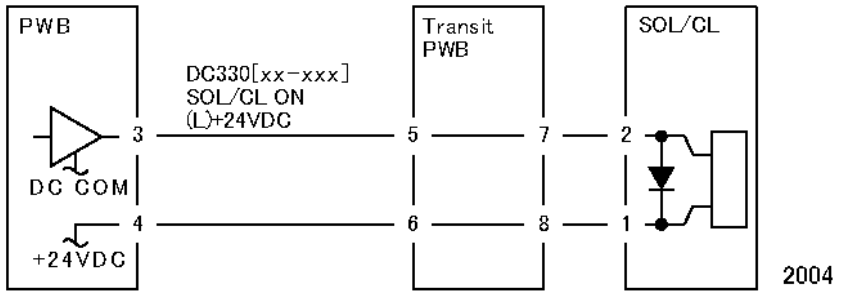


Figure 1 2004

NOTE: *Before performing this FIP, ensure that there is no (mechanical) operation failure with the solenoid and the clutch.*

Enter DC330[XXX-XXX] and turn it ON. **Is +24VDC measured between the PWB pin-3 (+) and the GND (-)?**

Y **N**

Is +24VDC measured between the solenoid/clutch pin-2 (+) and the GND (-) **?**

Y **N**

Is +24VDC measured between the solenoid/clutch pin-1 (+) and the GND (-) **?**

Y **N**

Check the connection between the PWB pin-4 and the solenoid/clutch pin-1 for an open circuit and poor contact.
If no problem is found, replace the PWB.

Replace the solenoid/clutch.

Check the connection between the PWB pin-3 and the solenoid/clutch pin-2 for an open circuit and poor contact.

Replace the PWB.

2.2.4.5 Solenoid/Clutch Left Energized Failure FIP

Procedure

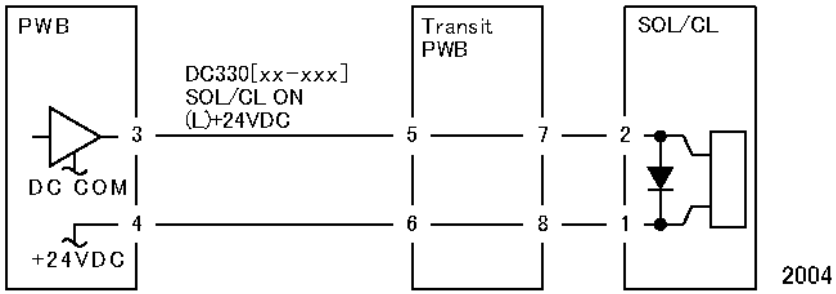


Figure 1 2004

Turn OFF the power.
Disconnect the PWB connector. **Is the resistance between the connector pin-3 and the frame 10Ohm or less?**

Y **N**

Replace the PWB.

Check the connection between the connector pin-3 and the solenoid/clutch pin-2 for a short circuit.
If no problems are found, replace the solenoid/clutch.

2.2.4.6 Motor Does Not Rotate Failure FIP

Procedure

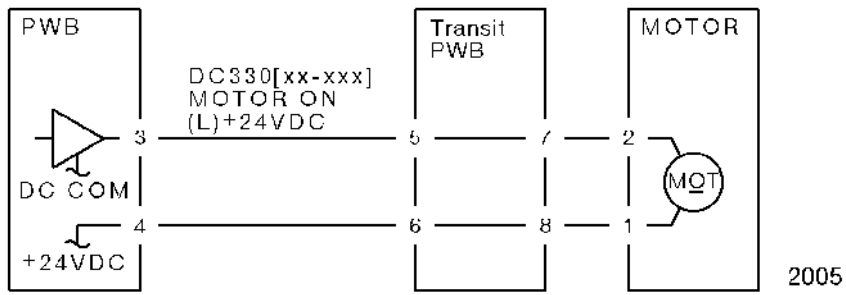


Figure 1 2005

NOTE: *Before performing this FIP, ensure that the motor is not locked or loaded.*

Enter DC330[XXX-XXX] and turn it ON.
Is +24VDC measured between the PWB pin-3 (+) and the GND (-) **?**

Y **N**

Is +24VDC measured between the motor pin-2 (+) and the GND (-) **?**

Y **N**

Is +24VDC measured between the motor pin-1 (+) and the GND (-) **?**

Y **N**

Is +24VDC measured between the PWB pin-4 (+) and the GND (-) **?**

Y **N**

Replace the PWB.

Check the connection between the PWB pin-4 and the motor pin-1 for an open circuit and poor contact.

Replace the motor.

Check the connection between the PWB pin-3 and the motor pin-2 for an open circuit and poor contact.

Replace the PWB.

2.2.4.7 Motor Left Running Failure FIP

Procedure

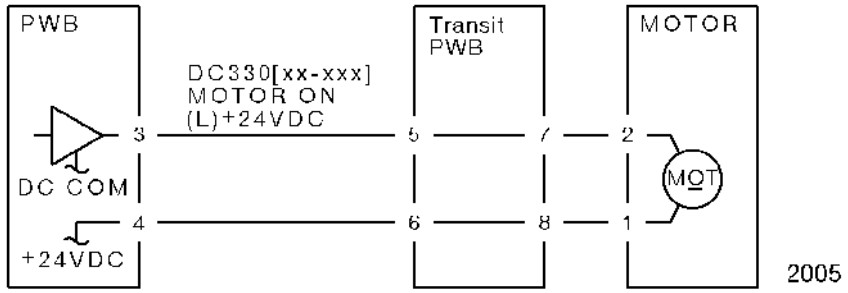


Figure 1 2005

Turn OFF the power. Disconnect the PWB connector. Is the resistance between the connector pin-3 and the frame 10Ohm or less?

Y N

Replace the PWB.

Check the connection between the connector pin-3 and the motor pin-2 for a short circuit. If no problems are found, replace the motor.

2.2.4.8 NIP/RELEASE SOLENOID Not Energized Failure FIP

Procedure

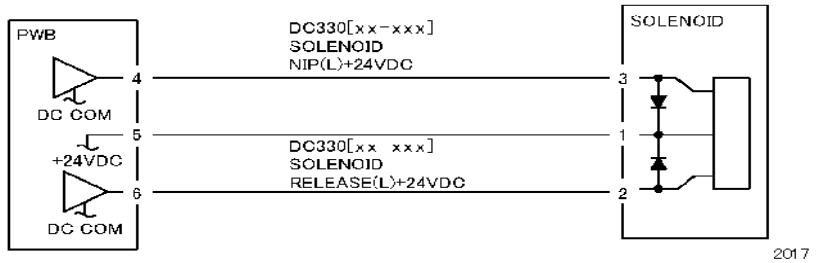


Figure 1 2017

NOTE: *Before performing this FIP, ensure that there is no (mechanical) operation failure with the solenoid.*

Is +24VDC measured between the NIP/RELEASE SOLENOID pin-1 (+) and the GND (-)?

Y N

Is +24VDC measured between the PWB pin-5 (+) and the GND (-)?

Y N

Check the +24VDC inputs of the PWB. If no problem is found, replace the PWB.

Check the connection between the PWB pin-5 and the NIP/RELEASE SOLENOID pin-1 for an open circuit and poor contact.

Use the following FIP when there is a problem with the NIP.

Enter DC330[XXX-XXX] and turn the SOL NIP ON. **Is +24VDC measured between the PWB pin-4 (+) and the GND (-)?**

Y N

Enter DC330[XXX-XXX] and turn the SOL NIP ON. **Is +24VDC measured between the NIP/RELEASE SOLENOID pin-3 (+) and the GND (-)?**

Y N

Replace the NIP/RELEASE SOLENOID.

Check the connection between the PWB pin-4 and the NIP/RELEASE SOLENOID pin-3 for an open circuit and poor contact.

Use the following FIP when there is a problem with the RELEASE.

Enter DC330[XXX-XXX] and turn the SOL RELEASE ON. **Is +24VDC measured between the PWB pin-6 (+) and the GND (-)?**

Y N

Enter DC330[XXX-XXX] and turn the SOL RELEASE ON. Is +24VDC measured between the NIP/RELEASE SOLENOID pin-2 (+) and the GND (-)?

Y N

Replace the NIP/RELEASE SOLENOID.

Check the connection between the PWB pin-6 and the NIP/RELEASE SOLENOID pin-2 for an open circuit and poor contact.

Replace the PWB.

2.3.1 No output is available, no data is printed

1. Check whether or not the Controller Firmware and Printer Driver are the latest version.
   If it is not the latest, always upgrade the software. (See ADJ 18.2.2 Firmware Version Upgrade.)

   After checking the above items, check whether the Indicator is blinking and take the corrective actions accordingly.

2. When the Indicator (Panel Send/Receive Lamp) is blinking
   It is highly possible that print data cannot be decomposed in the Printer main processor.
   Collect the following information:
   - System Settings Report
   - Check the panel message (error message, etc).
   - Error History Report
   - Service Settings Report
   - Job History Report
   - Maintenance Report (CE)
   - Check the Printer Driver name and version.
   - Check the Printer Driver settings in details.
   - Create Print files on the PC and collect them on CD-R.

   [How to Create Print file]
   Method 1)
   (1) Select [Print] from File menu in the target document.
   (2) In [Print] screen, select the [Output to File] check box and click [OK].
   If there is no [Output to File] check box displayed in the [Print] screen, create the file in Method 2.
   (3) Enter a descriptive file name in 'File Name' using a customer name and date, and click [OK] to create a Print file in the specified destination.

   Method 2)
   (1) Open the Printer Driver Properties and select the [Ports] tab.
   (2) In [Ports], select [FILE:] in the list and click [OK] to close the Properties screen.
   Take note of the port setting before it was changed in [FILE:] in order to restore the port to original setting after creating a Print file.
   (3) Select [Print] from File menu in the target document.
   (4) The [Output to File] screen appears. Specify a storage destination and file name, and click [OK] to create a Print file in the specified destination.
   (5) Restore the port to the original setting in the procedures a and b shown above.

3. When the Indicator (Panel Send/Receive Lamp) is not blinking
   It is highly possible that USB connection is not established and hence print data has not reached the Printer main processor.

2.3.2 Printing can be performed but abnormally

1. Check whether the Controller Firmware and Printer Driver are the latest version.
   If it is not the latest, always upgrade the software. (See ADJ 18.2.2 Firmware Version Upgrade.)

2. Ask a customer about the status of unavailable printing and collect information based on it.
   - System Settings List
   - Service Settings Report
   - Job History Report
   - Maintenance Report (CE)
   - Check the Printer Driver name and version.
   - Check the Printer Driver settings in details.
   - Print sample that has been printed improperly.
   - Print sample that has been printed properly (including the samples from other machines).
   - Create Print files on the PC and collect them on CD-R.

3 Image Quality

3.1 Introduction

3.1.1 Composition of Chapter 3 Image Quality Troubleshooting 3-3
3.1.2 Test Pattern 3-3
3.1.3 Image Quality Troubleshooting 3-4

3.2 Image Quality RAPs

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3.1.1 Composition of Chapter 3 Image Quality Troubleshooting

1. Chapter 3 Image Quality Troubleshooting is mainly composed of two sections:
   Test Pattern and Image Quality Troubleshooting.

2. The Test Pattern section contains the method to output the Built-in Test Patterns for the copy quality check.

3. The Image Quality Specifications section also contains [6.1.24 Alignment Specifications].

4. The Image Quality Troubleshooting section describes the causes of image quality failures and the troubleshooting procedure for them.

3.1.2 Test Pattern

The following are the test patterns that are used.

1. The copy quality check mainly uses the Test Pattern (Mono A3) (499T 00247).

2. For copy quality check, Standard paper is used.

3. The Built-in Test Patterns are stored in the following locations.
   (1) IOT ESS/MCU PWB

4. For the Test Patterns, refer to the following.
   - 6.4.2.14 Test Pattern Print

3.1.3 Image Quality Troubleshooting

Check the Defect Sample that is obtained during visit or the one that is provided by the customer and proceed with the appropriate IQ-FIP.

IQ1 IOT Image Quality Entry RAP

Initial Actions

Determine whether the image quality problem occurs in Copy Mode or Printer Mode. If the problem occurs in Copy Mode, go to [IQ2 IIT Image Quality Entry RAP].

Procedure

Determine the image quality problem and go to the relevant RAP.

Table 1

Image Quality Problem	Symptoms	RAP
Low Image Density	Overall low density of images.	IQ3 RAP
Wrinkled Image	The printed paper is creased, folded or torn.	IQ4 RAP
Residual Image (Ghosting)	Ghost images appear on the paper. Parts of the previous page or current page appear as ghost images on the paper.	IQ5 RAP
Background	The whole page or part of the page is contaminated by toner. The contamination appears as very light grayish color.	IQ6 RAP
Deletion	Part of the image is missing.	IQ7 RAP
Skew/Misregistration	Printed images are not parallel to the edges of the paper.	IQ8 RAP
Process Direction Bands, Streaks, and Smears	Black lines or blank areas running along the paper in vertical direction.	IQ9 RAP
Unfused Copy/Toner Offset	Printed images are not properly fused onto the paper. When rubbed, the image comes off easily.	IQ10 RAP
Repeating Bands, Streaks, Spots, and Smear	Black lines or blank areas running along the paper in h.orizontal direction.	IQ11 RAP
Mottle	Uneven printed image density.	IQ12 RAP
Spots	Toner spots and blank areas are spread irregularly over the whole page.	IQ13 RAP
Black Prints	Paper is printed completely black.	IQ14 RAP
Blank Image	Paper is printed completely white.	IQ15 RAP

IQ2 IIT Image Quality Entry RAP

Initial Actions

Clean the Platen Glass.

Clean the mirrors and lens with lint-free cloth.

Procedure

Determine the image quality problem and go to the relevant RAP.

Table 1

Image Quality Problem	Symptoms	RAP
Low Image Density	Overall low density of images.	IQ3 RAP
Background	The whole page or part of the page is contaminated by toner. The contamination appears as very light grayish color.	IQ6 RAP
Process Direction Bands, Streaks, and Smears	Black lines or blank areas running along the paper in vertical direction.	IQ9 RAP
Repeating Bands, Streaks, Spots, and Smear	Black lines or blank areas running along the paper in h.orizontal direction.	IQ11 RAP
Spots	Toner spots and blank areas are spread irregularly over the whole page.	IQ13 RAP
Black Prints	Paper is printed completely black.	IQ14 RAP

IQ3 Low Image Density RAP

Overall low density of images.

Procedure

Check for contamination on the Platen Glass. **The Platen Glass is clean.**

Y N

Clean any contamination on the Platen. If it is very dirty, replace the Top Cover (PL 1.2) (REP 1.2.1).

Check the drum ground contact point for contamination and distortion. **The drum ground contact point is clean and there is no distortion.**

Y N

Clean the drum ground contact point. Correct the distortion.

Remove the Drum Cartridge (PL 8.1) (REP 8.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Enter the Diag Mode and set '30' into Chain-Link 752-350. Then, set '10' into Chain-Link 752-230. Exit from the Diag Mode and make a printout.
If the problem reoccurs, enter the Diag Mode again, set '20' into Chain-Link 752-230, and make another printout. (The maximum value that can be set for 752-230 is '30').
Install the new Drum Cartridge (PL 8.1) (REP 8.1.1) securely. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Print a page that is entirely black. During the print cycle, turn OFF the power after the feeding sound is heard. (i.e. forcing to stop the transfer in mid-progress). Check the surface of the Drum. **There is a considerable amount of toner left on the surface of the drum.**

Y N

Replace the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

Replace the BTR Roll (PL 6.1) (REP 4.1.1), followed by the HVPS (PL 18.1) (REP 18.1.2) and the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

IQ4 Wrinkled Image RAP

The printed paper is creased, folded or torn.

Procedure

Check the paper type. **Paper used is within specifications.**

Y N

Use paper within specifications.

Use paper from a freshly opened packet. **The problem reoccurs.**

Y N

End

Remove the Fusing Unit (PL 7.1) (REP 7.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Check for foreign substances and distortion in the paper transport path. **No distortion or foreign substances are found in the paper transport path.**

Y N

Remove the foreign substances. Correct the distortion.

Replace the Fusing Unit (PL 7.1) (REP 7.1.1).

IQ5 Residual Image (Ghosting) RAP

Ghost images appear on the paper. Parts of the previous page or current page appear as ghost images on the paper.

Procedure

Remove the Drum Cartridge (PL 8.1) (REP 8.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Install the new Drum Cartridge (PL 8.1) (REP 8.1.1) securely. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Remove the Fusing Unit (PL 7.1) (REP 7.1.1) and check the surface of the Heat Roll for contamination. **The surface of the Heat Roll is clean.**

Y N

Clean away the contamination. If there is difficulty in removing the contamination, replace the Fusing Unit (PL 7.1) (REP 7.1.1).

Replace the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

IQ6 Background RAP

The whole page or part of the page is contaminated by toner. The contamination appears as very light grayish color.

Procedure

Check for contamination on the Platen Glass. **The Platen Glass is clean.**

Y N

Clean any contamination on the Platen. If it is very dirty, replace the Top Cover (PL 1.2) (REP 1.2.1).

Remove the Drum Cartridge (PL 8.1) (REP 8.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Install the new Drum Cartridge (PL 8.1) (REP 8.1.1) securely. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Check the surface of the BTR for contamination and distortion. **The surface of the BTR is clean and there is no distortion.**

Y N

Clean the BTR. If there is distortion, replace the BTR Roll (PL 6.1) (REP 4.1.1).

Remove the HVPS and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Replace the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

IQ7 Deletion RAP

Part of the image is missing.

Procedure

Check the paper type. **Paper used is within specifications.**

Y N

Use paper within specifications.

Use paper from a freshly opened packet. **The problem reoccurs.**

Y N

End

Remove the Drum Cartridge (PL 8.1) (REP 8.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Install the new Drum Cartridge (PL 8.1) (REP 8.1.1) securely. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Check the surface of the BTR for distortion. **There is no distortion on the surface of the BTR.**

Y N

Replace the BTR Roll (PL 6.1) (REP 4.1.1).

Replace the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

IQ8 Skew/Misregistration RAP

Printed images are not parallel to the edges of the paper.

Procedure

Check the location where the machine is installed. **The machine is installed on a stable level surface.**

Y N

Install the machine on a stable level surface.

Remove the Drum Cartridge (PL 8.1) (REP 8.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Check the installation of the Paper Cassette. **The Paper Cassette is installed correctly.**

Y N

Install the mirror properly.

Check for distortion in the paper transport path. **There is no distortion in the paper transport path.**

Y N

Correct the distortion or replace the distorted part.

Replace the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

IQ9 Process Direction Bands,Streaks,and Smears RAP

Black lines or blank areas running along the paper in vertical direction.

Procedure

Check the IIT Carriage Mirrors for scratches and contamination. **There are no scratches or contamination on the mirrors.**

Y N

Clean the mirrors. If it is very dirty or scratched, replace the IIT Carriage (PL 1.3) (REP 1.3.2).

Remove the Drum Cartridge (PL 8.1) (REP 8.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Install the new Drum Cartridge (PL 8.1) (REP 8.1.1) securely. Turn the power OFF then ON and print. **The problem reoccurs.**

Y N

End

Check the surface of the BTR for contamination and distortion. **The surface of the BTR is clean and there is no distortion.**

Y N

Clean the BTR. If there is distortion, replace the BTR Roll (PL 6.1) (REP 4.1.1).

Check for contamination in the paper transport path. **The paper transport path is clean.**

Y N

Clean away the contamination.

Check the mirror at the IIT Carriage. **The mirror is clean and there is no distortion.**

Y N

Clean the mirror. If there is distortion, replace the mirror.

Remove the Fusing Unit (PL 7.1) (REP 7.1.1) and check the surface of the Heat Roll for contamination. **The surface of the Heat Roll is clean.**

Y N

Clean away the contamination. If there is difficulty in removing the contamination, replace the Fusing Unit (PL 7.1) (REP 7.1.1).

Check the surface of the BTR for contamination and distortion. **The surface of the BTR is clean and there is no distortion.**

Y N

Clean the BTR. If there is distortion, replace the BTR Roll (PL 6.1) (REP 4.1.1).

Check the mirror at the IIT Carriage. **The mirror is clean and there is no distortion.**

Y N

Clean the mirror. If there is distortion, replace the mirror.

Check the ROS Window for scratches and contamination. **The ROS Window is clean and there are no scratches.**

Y N

Clean the ROS Window. If there are scratches, replace the ROS Window.

Replace the ROS Assembly (PL 2.1) (REP 2.1.1) and the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

IQ10 Unfused Copy/Toner Offset RAP

Printed images are not properly fused onto the paper. When rubbed, the image comes off easily.

Procedure

Check the paper type. **Paper used is within specifications.**

Y **N**

Use paper within specifications.

Use paper stored under room conditions. **The problem reoccurs.**

Y **N**

End

Check the power supply voltage. **The voltage is within the specified range.**

Y **N**

Connect a power supply with voltage within the specified range.

Remove the Fusing Unit (PL 7.1) (REP 7.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Check the fusing temperature using the Diagnostics. **A normal fusing temperature is set.**

Y **N**

Set a normal fusing temperature.

Replace the Fusing Unit (PL 7.1) (REP 7.1.1).

IQ11 Repeating Bands,Streaks,Spots,and Smears RAP

Black lines or blank areas running along the paper in h.orizontal direction.

Procedure

Check the operating parts of the IIT Carriage for foreign substances and distortion. **No distortion or foreign substances are found in the operating parts of the carriage.**

Y **N**

Remove the foreign substances. If the Pulley, Shaft, IIT Carriage Belt (PL 1.3) (REP 1.3.2), etc. is deformed, replace it.

Remove the Drum Cartridge (PL 8.1) (REP 8.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Install the new Drum Cartridge (PL 8.1) (REP 8.1.1) securely. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Check the surface of the BTR for contamination and distortion. **The surface of the BTR is clean and there is no distortion.**

Y **N**

Clean the BTR. If there is distortion, replace the BTR Roll (PL 6.1) (REP 4.1.1).

Check the pitch of the black lines or blank areas. **The pitch of the black lines is approx. 78 mm (Heat Roll circumference).**

Y **N**

Clean the Heat Roll. If there is difficulty in removing the contamination, replace the Fusing Unit (PL 7.1) (REP 7.1.1).

Replace the ROS Assembly (PL 2.1) (REP 2.1.1), followed by the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

IQ12 Mottle RAP

A phenomenon where an uneven density is occurring in the high density patch image.

Procedure

Check the paper type. **Paper used is within specifications.**

Y **N**

Use paper within specifications.

Use paper from a freshly opened packet. **The problem reoccurs.**

Y **N**

End

Remove the Drum Cartridge (PL 8.1) (REP 8.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Install the new Drum Cartridge (PL 8.1) (REP 8.1.1) securely. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Check the surface of the BTR for contamination and distortion. **The surface of the BTR is clean and there is no distortion.**

Y **N**

Clean the BTR. If there is distortion, replace the BTR Roll (PL 6.1) (REP 4.1.1).

Remove the HVPS and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Replace the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

IQ13 Spots RAP

Toner spots and blank areas are spread irregularly over the whole page.

Procedure

Check for contamination on the Platen Glass. **The Platen Glass is clean.**

Y **N**

Clean any contamination on the Platen. If it is very dirty, replace the Top Cover (PL 1.2) (REP 1.2.1).

Remove the Drum Cartridge (PL 8.1) (REP 8.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Install the new Drum Cartridge (PL 8.1) (REP 8.1.1) securely. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Check the surface of the BTR for contamination and distortion. **The surface of the BTR is clean and there is no distortion.**

Y **N**

Clean the BTR. If there is distortion, replace the BTR Roll (PL 6.1) (REP 4.1.1).

Check for contamination in the paper transport path. **The paper transport path is clean.**

Y **N**

Clean away the contamination.

Remove the Fusing Unit (PL 7.1) (REP 7.1.1) and check the surface of the Heat Roll for contamination. **The surface of the Heat Roll is clean.**

Y **N**

Clean away the contamination. If there is difficulty in removing the contamination, replace the Fusing Unit (PL 7.1) (REP 7.1.1).

Check the paper type. **Paper used is within specifications.**

Y **N**

Use paper within specifications.

Use paper from a freshly opened packet. **The problem reoccurs.**

Y **N**

End

Replace the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

IQ14 Black Prints RAP

Paper is printed completely black.

Procedure

Check the operating parts of the IIT Carriage for foreign substances and distortion. **No distortion or foreign substances are found in the operating parts of the carriage.**

Y **N**

Remove the foreign substances. If the IIIT Carriage (PL 1.3) (REP 1.3.2), IIT Carriage Belt (PL 1.3) (REP 1.3.2), etc. is deformed, replace it.

Remove the Drum Cartridge (PL 8.1) (REP 8.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Install the new Drum Cartridge (PL 8.1) (REP 8.1.1) securely. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Remove the HVPS (PL 18.1) (REP 18.1.2) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Check the connection of the HVPS P/J500 and ESS/MCU PWB P/J402 connectors. **The connectors are connected correctly.**

Y **N**

Connect the connector cable securely.

Check the connection between J500-7 and J402-8 for open circuit and short circuit. **The connection between J500-7 and J402-8 is conducting normally with no open circuit and no short circuit.**

Y **N**

Repair the open circuit or short circuit.

Check the connection between the ROS Assembly (PL 2.1) (REP 2.1.1) and the ESS/MCU PWB (PL 18.1) (REP 18.1.1) for open circuit and short circuit. The connections between the ROS J140 and the ESS/MCU PWB J410, as well as **between the ROS J130 and the ESS/MCU J410 are conducting normally with no open circuits and no short circuits.**

Y **N**

Repair the open circuit or short circuit.

Replace the ROS Assembly (PL 2.1) (REP 2.1.1), followed by the HVPS (PL 18.1) (REP 18.1.2) and the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

IQ15 Blank Image RAP

Paper is printed completely white.

Procedure

Check the installation of the ROS Assembly. **The ROS Unit is installed correctly.**

Y **N**

Install the ROS Assembly (PL 2.1) (REP 2.1.1) correctly.

Check the drum ground contact point for contamination and distortion. **The drum ground contact point is clean and there is no distortion.**

Y **N**

Clean the drum ground contact point. Correct the distortion.

Remove the Drum Cartridge (PL 8.1) (REP 8.1.1) and reinstall it. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Install the new Drum Cartridge (PL 8.1) (REP 8.1.1) securely. Turn the power OFF then ON and print. **The problem reoccurs.**

Y **N**

End

Print a page that is entirely black. During the print cycle, turn OFF the power after the feeding sound is heard. (i.e. forcing to stop the transfer in mid-progress). Check the surface of the Drum. **There is a considerable amount of toner left on the surface of the drum.**

Y **N**

Check the connection of the P/J140, P/J410, P/J160, and P/J411 connectors. **The connectors are connected correctly.**

Y **N**

Connect the connector cable securely.

Check the installation of the ROS Assembly (PL 2.1) (REP 2.1.1). **The ROS Assembly is installed securely.**

Y **N**

Install the ROS Assembly (PL 2.1) (REP 2.1.1) securely.

Measure the voltage between the ESS/MCU PWB (PL 18.1) (REP 18.1.1) P410 pin-1 and pin-2. **The voltage is +5VDC.**

Y **N**

Replace the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

Check the connection between J140 and J410 for open circuit and short circuit. **The connection between J140 and J410 is conducting normally with no open circuit and no short circuit.**

Y **N**

Repair the open circuit or short circuit.

Replace the ROS Assembly (PL 2.1) (REP 2.1.1), followed by the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

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Replace the BTR Roll (PL 6.1) (REP 4.1.1), followed by the HVPS (PL 18.1) (REP 18.1.2) and the ESS/MCU PWB (PL 18.1) (REP 18.1.1).

3.3.1 IOT Image Defect Sample

This section describes some Defect Samples and the actions to be taken in case of the following IOT problems:

- IDS1 Auger Mark
- IDS2 Strobing (27mm or 13.5mm Pitch Density)
- IDS3 White Streaks (Process Direction)
- IDS4 Black Bands
- IDS5 Toner Contamination
- IDS6 Toner Splattering
- IDS7 White Spots (Irregular)
- IDS8 Regular Blank Areas in Process Direction (Spots, Streaks, Bands etc.)
- IDS9 Regular Toner Contamination in Process Direction (Spots, Streaks, Bands etc.)
- IDS10 Regular Toner Contamination in Process Direction (Side 2)

3.3.2 IIT Image Defect Sample

This section describes some Defect Samples and the actions to be taken in case of the following IIT problems:

- IDS11 Moire Due to Interference With Copy Documents
- IDS12 Light Background Due to Background Suppression in Copies of Documents With Frames
- IDS13 Background Smear When Using Platen Copy With Non-Standard Documents
- IDS14 Fluctuation In Background Suppression Values for Copies of Documents With Medium Density
- IDS15 Defects Related To Scan Print

IDS1 Auger Mark

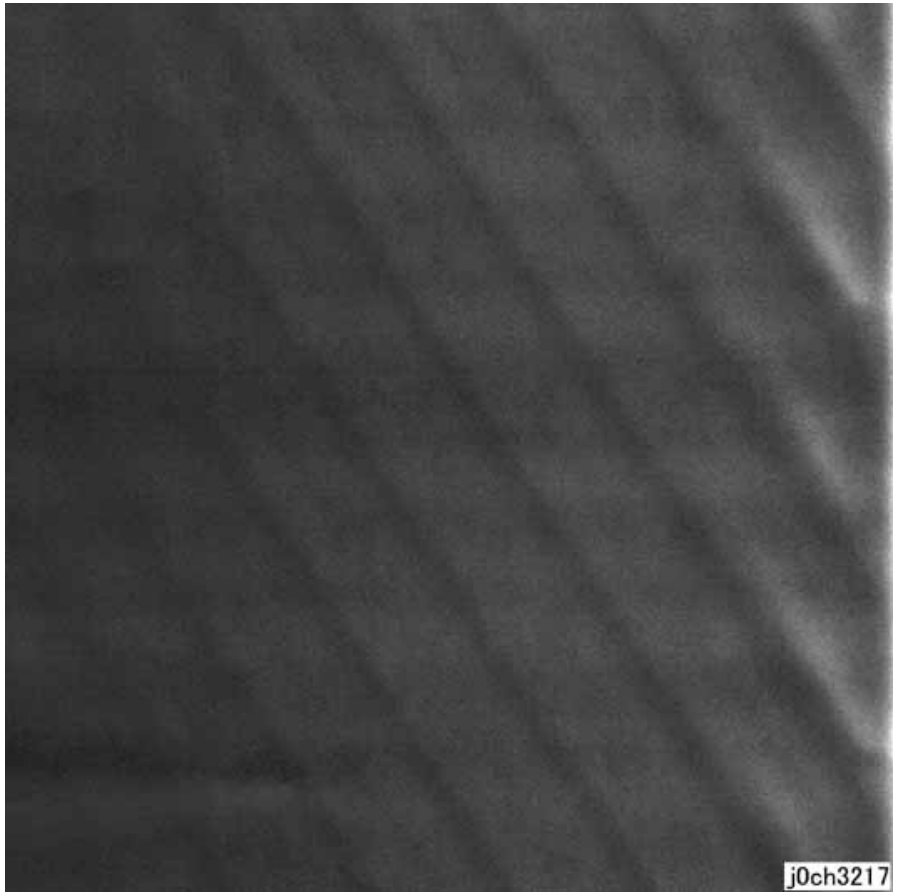

Figure 1 Auger Mark Defect Sample (j0ch3217)

Cause

1. The Developer Magnetic Roll magnetic field failed.
2. There was a drop in the level of developing powder.

Action

1. Replace the Drum Cartridge (PL 8.1) (REP 8.1.1)

   NOTE: *This may occur immediately after a new CRU is installed.-> Correct this by feeding a few sheets of paper.*

IDS2 Strobing (27mm or 13.5mm Pitch Density)

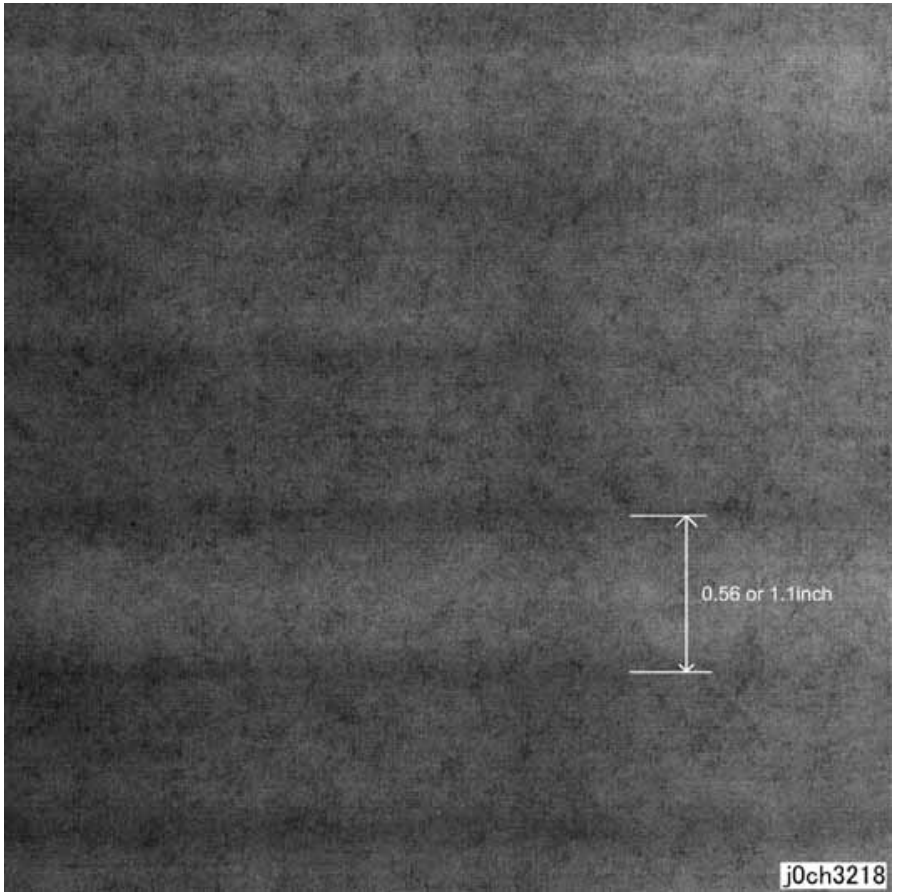

Figure 1 Strobing (27 mm or 13.5 mm Pitch Density) Defect Sample (j0ch3218)

Cause

1. Developer Magnetic Roll bias.

Action

1. Replace the Drum Cartridge (PL 8.1) (REP 8.1.1)

IDS3 White Streaks (Process Direction)

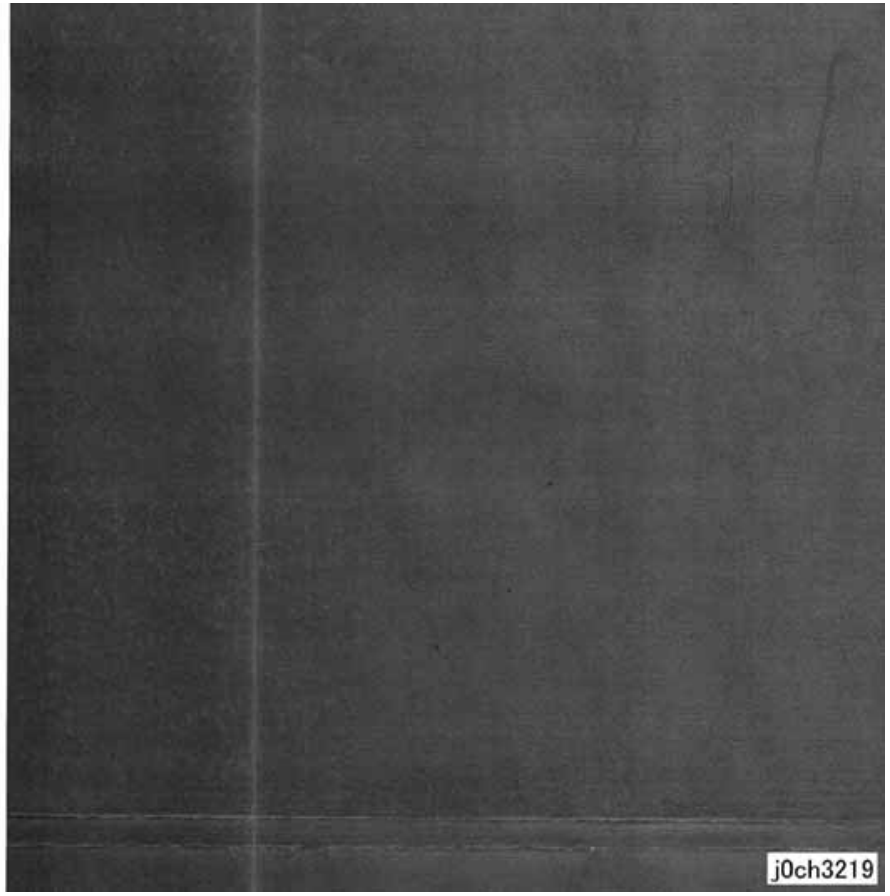

Figure 1 White Streaks (Process Direction) Defect Sample (j0ch3219)

Cause

1. Foreign substances are blocking the ROS Laser.
2. Developing powder clogging on the Developer Magnetic Roll due to foreign substances.

Action

1. Clean the light path and the seal glass between the ROS Assembly (PL 2.1) (REP 2.1.1) and the Drum Cartridge (PL 8.1) (REP 8.1.1).
2. Replace the Drum Cartridge (PL 8.1) (REP 8.1.1)

IDS4 Black Bands

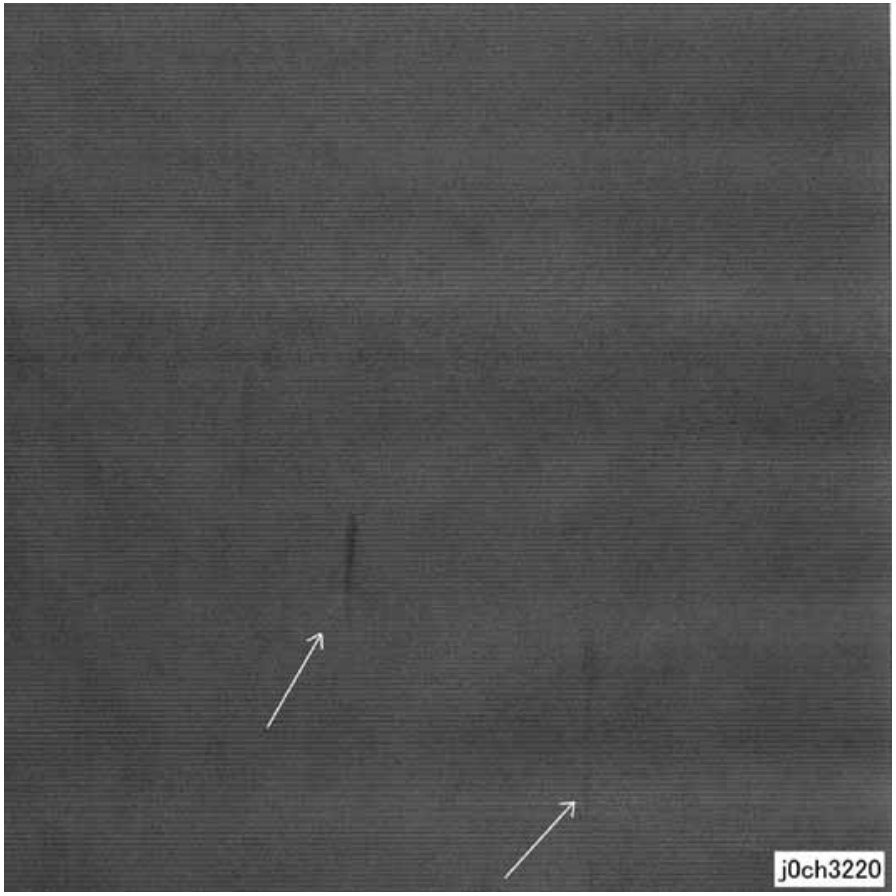

Figure 1 Black Bands Defect Sample (j0ch3220)

Cause

1. The developing powder is not well mixed.

Action

1. Mix the developing powder by processing blank paper.

IDS5 Toner Contamination

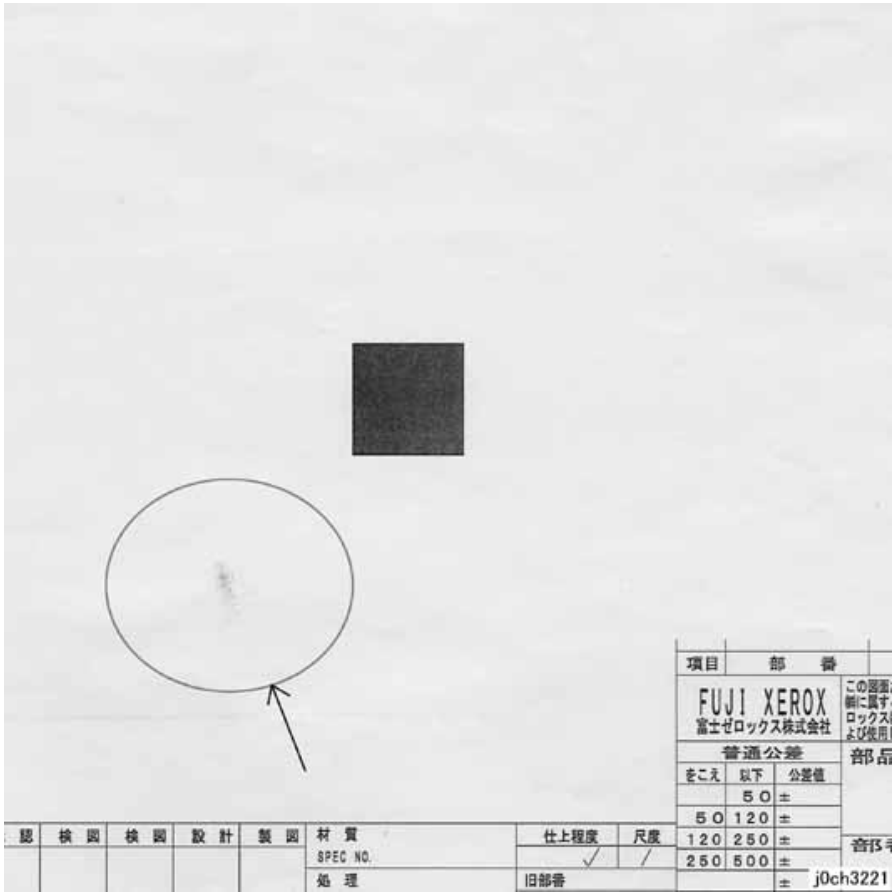

Figure 1 Toner Contamination Defect Sample (j0ch3221)

Cause

1. Cloud toner dropped from the XERO/DEVE Cartridge.

Action

1. Mix the developing powder by feeding blank paper.
2. Replace the Drum Cartridge (PL 8.1) (REP 8.1.1)

IDS6 Toner Splattering

Figure 1 Toner Splattering Defect Sample (j0ch3222)

Cause

1. Paper size mismatch occurred (tray settings and paper size are different).
2. The resistance of the paper increased under dry conditions.

Action

1. Check the tray settings.
2. Use paper from a freshly opened packet.

IDS7 White Spots (Irregular)

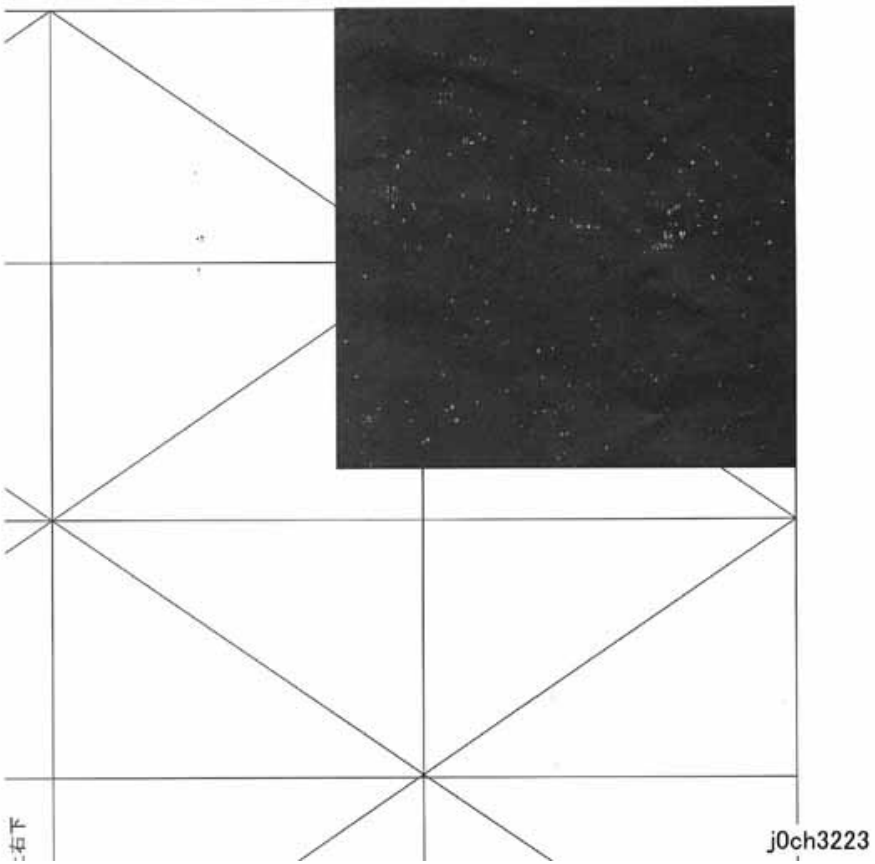

Figure 1 White Spots (Irregular) Defect Sample (j0ch3223)

Cause

1. The resistance of the paper increased under dry conditions.

Action

1. Use paper from a freshly opened packet.

IDS8 Regular Blank Areas In Process Direction (Spots, Streaks, Bands etc.)

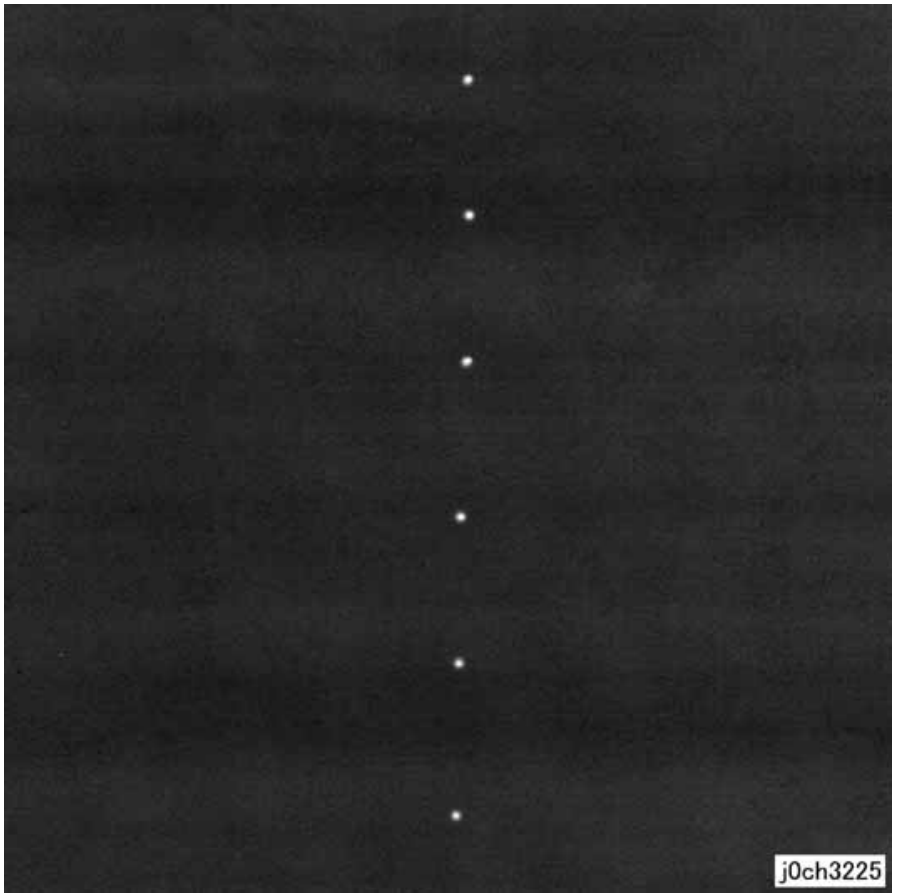

Figure 1 Regular Blank Areas In Process Direction (Spots, Streaks, Bands etc.) Defect Sample (j0ch3225)

Cause

1. 94 mm pitch -> Drum: Scratches or foreign substances
2. 27 mm pitch -> Magnetic Roll: Developing powder stuck on the Magnetic Roll
3. 44 mm pitch -> BCR: Scratches or foreign substances
4. 80 mm pitch -> Heat Roll: Scratches or foreign substances

Action

1. 1,4: Clean or replace the Drum Cartridge (PL 8.1) (REP 8.1.1)/Fusing Unit (PL 7.1) (REP 7.1.1)

2. 2,3: Replace the Drum Cartridge (PL 8.1) (REP 8.1.1)

IDS9 Regular Toner Contamination In Process Direction (Spots, Streaks, Bands etc.)

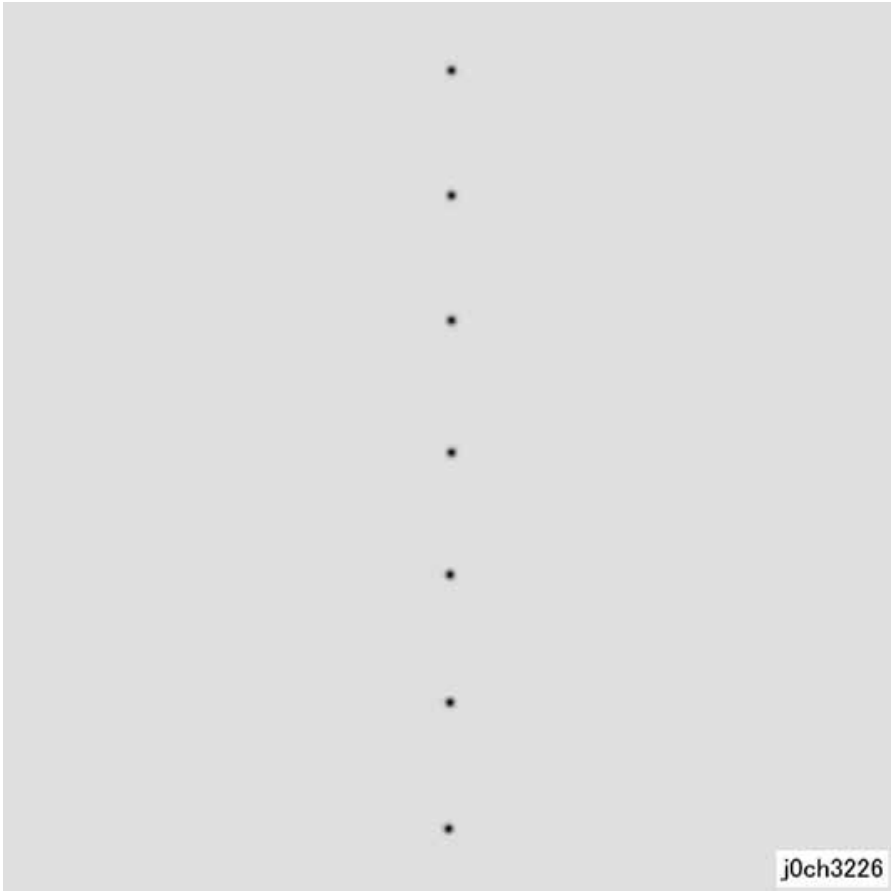

Figure 1 Regular Toner Contamination In Process Direction (Spots, Streaks, Bands etc.) Defect Sample (j0ch3226)

Cause

1. 94 mm pitch -> Drum: Scratches or foreign substances
2. 27 mm pitch -> Magnetic Roll: Developing powder stuck on the Magnetic Roll
3. 38 mm pitch -> BCR: Scratches or foreign substances
4. 79 mm pitch -> Heat Roll: Scratches or foreign substances
5. 47 mm pitch -> Heat Roll (Fusing Unit): Contamination
6. 63 mm pitch -> Registration Roll: Contamination
7. 47 mm pitch -> If this occurs during Duplex feed - Duplex Roll 1, Duplex Roll 2: Contamination

Action

1. 1,4,5,6: Clean or replace the Drum Cartridge (PL 8.1) (REP 8.1.1)/Fusing Unit (PL 7.1) (REP 7.1.1)
2. 2,3: Replace the Drum Cartridge (PL 8.1) (REP 8.1.1)
3. 7: Clean or replace the Duplex Roll1, Duplex Roll 2 (PL 14.4)

IDS10 Regular Toner Contamination In Process Direction (Side 2)

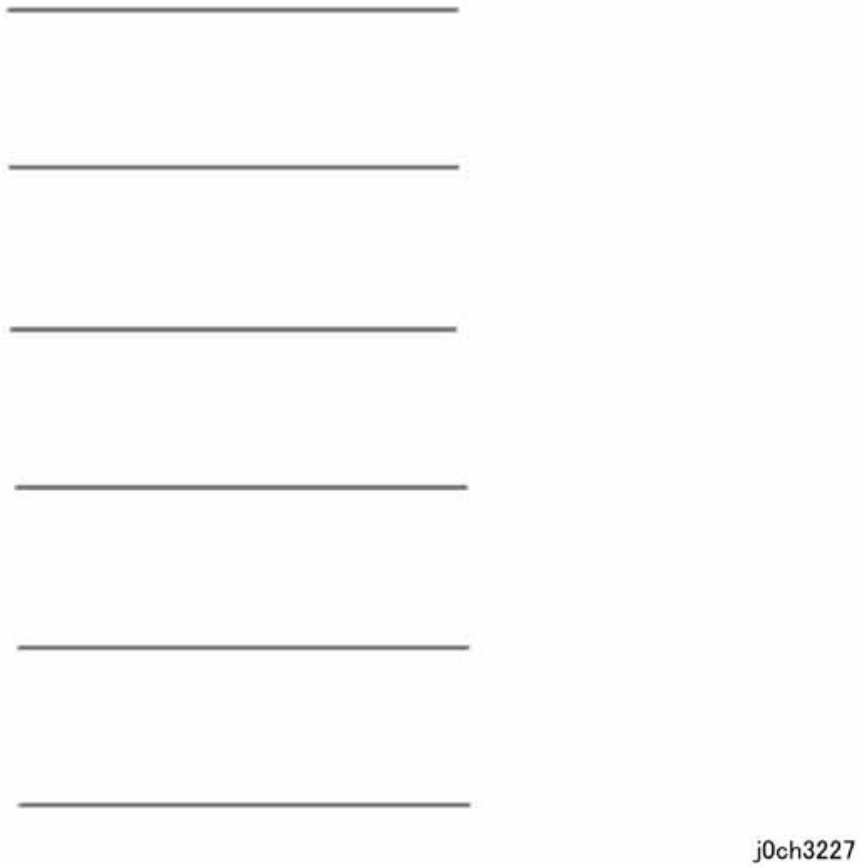

Figure 1 Regular Toner Contamination In Process Direction (Side 2) Defect Sample (j0ch3227)

Cause

1. 94 mm pitch -> Pressure Roll (Fusing Unit): Scratches or foreign substances
2. 50 mm pitch -> BTR: Contamination, scratches or paper size mismatch
3. 38 mm pitch -> BCR: Contamination

Action

1. 1,2,3: Clean or replace the relevant parts.
2. 2: Paper Tray Settings

IDS11 Moire Due to Interference With Copy Documents

Cause

When copying, interference with the document may cause moire. Combinations of certain angles of screen ruling near 150lpi and Reduce/Enlarge ratio may cause moire. Precautions should be taken during enlargement.

Action

- Reduce sharpness. Use KO to change the default value of P4000 from '2' to '1'.
  - Secondary defect: Text is blurred.
- Make copies at a different Reduce/Enlarge ratio.
- Change the orientation of the document.
- If the moire occurs in Photo Mode, change to Photo & Text Mode.

IDS12 Light Background Due to Background Suppression in Copies of Documents With Frames

For documents with dark frames along the Lead Registration Edge, the suppression value is set so large such that areas of medium density appear extremely light.

Figure 1 Light Background Due to Background Suppression in Copies of Documents With Frames Defect Sample (j0lj3229)

Cause

Background Suppression performs background detection of images at a distance of up to 10 mm from the Lead Registration Edge. As there were dark frames along the Lead Registration Edge, it could not detect the original background density, which resulted in the Background Suppression being performed based on the density of the frames.

Action

- Turn OFF the Background Suppression. Use KO to change the default value of P4001 from '1' to '0'.

IDS13 Background Smear When Using Platen Copy With Non-Standard Documents

When the document size is non-standard and the specified scan size is larger than the document size, smear might be generated depending on the background density of the document.

Cause

For cases where the document size is smaller than the scan size, the density of the back of the platen is detected as the background density of the document as the actual scan area includes the back of the platen.

Action

- This can be improved by performing density adjustment.

IDS14 Fluctuation In Background Suppression Values for Copies of Documents With Medium Density

When Automatic Exposure is enabled for documents with medium density background (0.5G), the effectiveness fluctuates for each job.

Cause

As medium density (0.5G) is near the upper limit value for background detection, the Background Suppression value fluctuates according to the result of background detection that varies according to the variations in the density of the document and how the document is placed.

Action

- Turn OFF the Background Suppression. Use KO to change the default value of P4001 from '1' to '0'.

IDS15 Defects Related To Scan Print

Moire may occur when printing out the scanned images.

Cause

Interference with the printer screen and printer driver resolution conversion processing by the document causes moire.

Action

- Reduce sharpness. Use KO to change the default value of P4000 from '2' to '1'.
  Secondary defect: Text is blurred.

- If the Scan resolution is 600 dpi, change it to a lower resolution (200 dpi or 300 dpi).

3.4 Fusing Unit Paper Wrinkle Alignment Adjustment

[Procedure]

1. Installation/removal of Adjustment Bracket
   (1) Remove the Fusing Unit.
   (2) Remove the front screw of the Adjustment Bracket at the front.

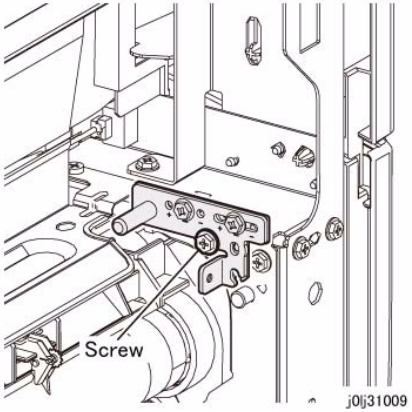

Figure 1 j0lj31009

2. Assembly of Adjustment Bracket
   (1) Parts Configuration
      • At shipment (+/- 0 mm): Triangle mark

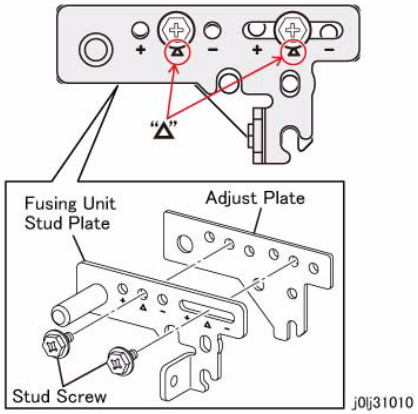

Figure 2 j0lj31010

   (2) Depending on the case, assemble the Fusing Unit Stud Plate and the Adjust Plate such that the surface with the triangle marks (+, -) is at the top.
      • Plus (+0.5 mm) state: '+' mark
      Minus (-0.5 mm) state: '-' mark

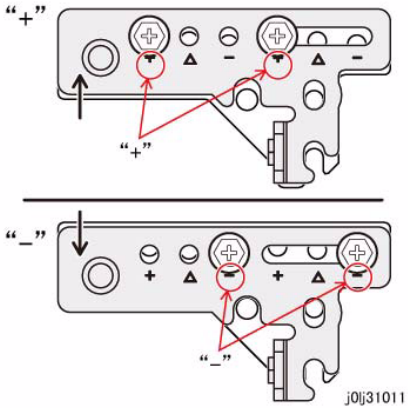

Figure 3 j0lj31011

3. Adjustment Method
   (1) If the wrinkle is at the front, use '-'.

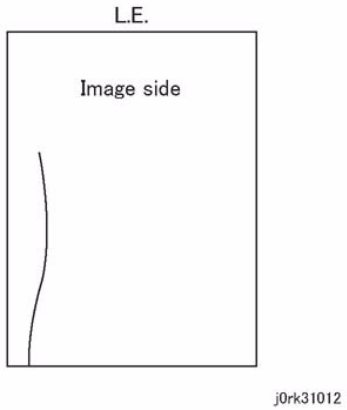

Figure 4 j0rk31012

   (2) If the wrinkle is at the rear, use '+'.

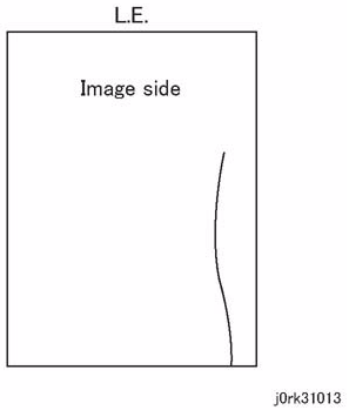

Figure 5 j0rk31013

4. Usage flow of the Alignment Adjustment Bracket

   NOTE: *Use this when pepr wrinkles (*1) has been generated due to interaction.*

   (1) Paper wrinkle due to interaction
   - Paper wrinkle due to interaction between the Fusing Unit, Transfer, and Regi
   - Cause: The positional relation between the various Sub Rolls is wrong, which degenerates the transport form of the paper and results in wrinkles being generated in the Fusing Unit.

   (2) *2: Sampling
   - Paper: A3 SEF
   - Pattern: Half Tone K50%
   - No. of sheets: Simp 5 sheets

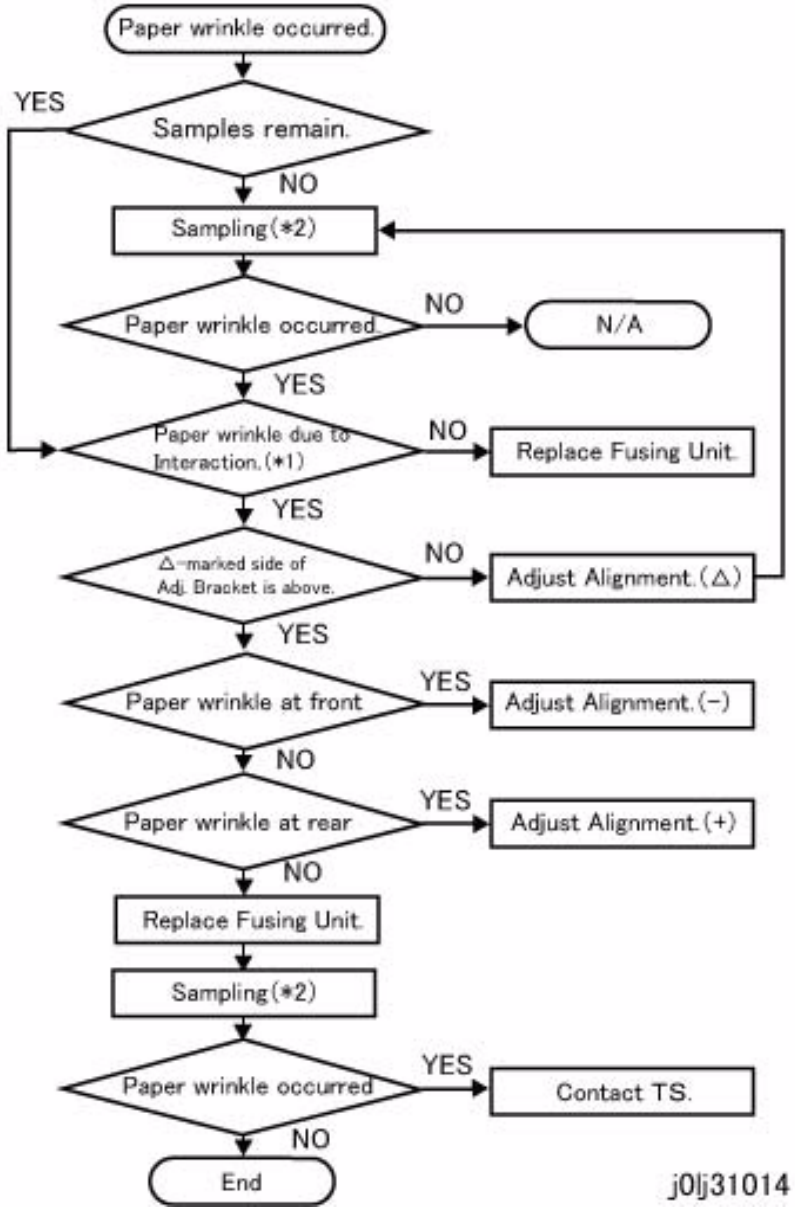

Figure 6 j0lj31014

3.5 Cycle Table

Table 1

Item	Module	Name	Diameter (mm)	Pitch (mm)
1	PH	Regi Roll	20	63
2	DEVE	Mag Roll	16	27*1 13.5 (half-pitch)
3	XERO	BCR	12	38
4		DRUM(OPC)	30	94
5		BTR	16	50
6	Fusing Unit	Heat Roll	25	79
7		Pressure Roll	30	94
8		Exit Roll	15	47

*1: This is 50.24/1.86=27 mm because the rotation is at 1.86 times the peripheral speed.

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4.1 Introduction

This section contains procedures required for parts disassembly, assembly, replacement and adjustment in the field service.

4.1.1 How to Use the Disassembly/Assembly and Adjustment

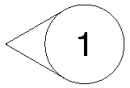
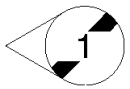
1. For installation procedures, only NOTEs are described here since installation procedures are the reverse of removal ones.
2. (Figure X) at the beginning of a procedure indicates that its detailed steps are shown in illustration. Numbers in the illustration indicate the sequence of the steps.
3. (REP X.X.X) at the end of a procedure indicates the replacement procedure to be referred to.
4. Item numbers of disassembly/assembly and adjustment procedures (i.e. REP/ADJ No.) correlate to PL No. in Chapter 5 Parts List. Therefore, an appropriate replacement or adjustment procedure can easily be referred to a PL No. or vice versa. E.g. The replacement or adjustment procedure of Component PL 1.1 is REP 1.1.X or ADJ 1.1.X.
5. When replacement/adjustment procedures or title items vary by modification or model, the modification number or the model are indicated at the beginning or the end of the respective titles or procedures.

   E.g. 1) REP X.X.X Main PWB [Models with 1V]

   *Indicates that the entire procedure under this title applies to machines with Tag 1V.

   E.g. 2)

Table 1

Symbol	Description
 **Figure 1 4001**	Illustration 1: Indicates that a specific part has been modified by the tag number within the circle.
 **Figure 2 4002**	Illustration 2: Indicates that the configuration of the part shown is the configuration before the part was modified by the number within the circle.

6. Positions or directions of the machine and directions inside the machine used in the procedure are defined as listed below.
   (1) Front: Front of the machine
   (2) Right: Right-hand side when facing the front of the machine.
   (3) Left: Left-hand side when facing the front of the machine.
   (4) Rear: Rear when facing the front of the machine.

4.1.2 Terms and Symbols

The terms and symbols used throughout this manual are explained here.

DANGER

Indicates an imminently hazardous situation, such as death or serious injury if operators do not handle the machine correctly by disregarding the statement.

WARNING

Indicates a potentially hazardous situation, such as death or serious injury if operators do not handle the machine correctly by disregarding the statement.

CAUTION

Indicates a potentially hazardous situation, such as injury if operators do not handle the machine correctly by disregarding the statement.

- Note: Used when work procedures and rules are emphasized.

  Used to alert you to a procedure, if not strictly observed, could result in damage to the machine or equipment.

- Refer: Used when other explanations are given.

- Purpose: Used to explain the purpose of adjustment.

- Important Information Stored Component (ISC)

  This component stores all the important customer information that is input after the installation. When performing replacement, follow the procedures in 'Chapter 4 Adjustment' to replace/discard. Make absolutely sure that no customer information gets leaked outside.

REP 1.2.1 IIT Top Cover

Parts List on PL 1.2

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Platen Cover or the DADF. (REP 56.1.1)
2. Remove the IIT Top Cover. (Figure 1)
   (1) Remove the screw (x7).
   (2) Remove the IIT Top Cover.

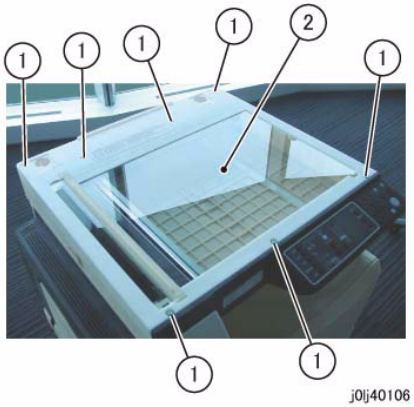


Figure 1 j0lj40106

Replacement

1. To install, carry out the removal steps in reverse order.

REP 1.3.1 IIT Carriage

Parts List on PL 1.3

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Platen Cover or the DADF. (REP 56.1.1)
2. Remove the IIT Top Cover. (REP 1.2.1)
3. Move the IIT Carriage to the opening of the Frame. (Figure 1)
   (1) Rotate the gear in the direction of the arrow.
   (2) Move the IIT Carriage to the opening (Arrow A) of the Frame.

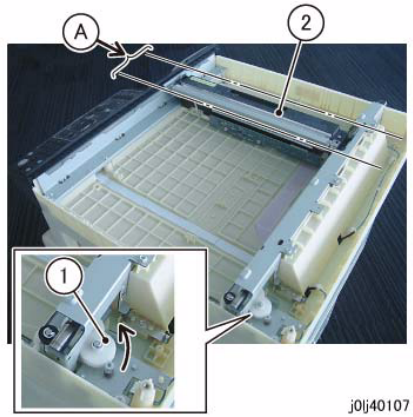


Figure 1 j0lj40107

4. Remove the IIT Carriage Belt from the IIT Carriage. (Figure 2)
   (1) Remove the IIT Carriage Belt in the direction of the arrow.

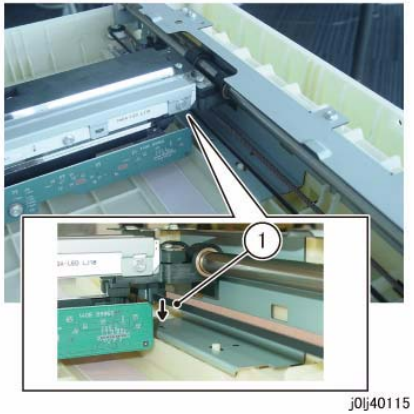


Figure 2 j0lj40115

5. Disconnect the connector at the bottom of the IIT Carriage. (Figure 3)
   (1) Release the hook (x2) and disconnect the connector.
      • Use one hand to hold the CCD PWB firmly in place so that it does not move (does not warp) and disconnect the connector.
   (2) Remove the CCD Cable from the clamp.

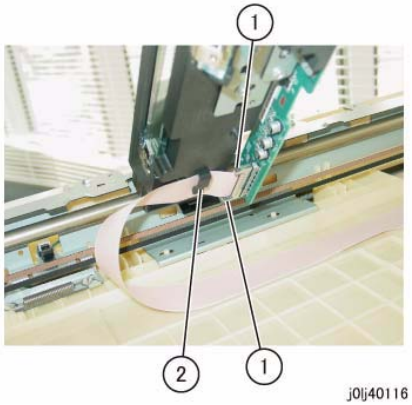


Figure 3 j0lj40116

6. Remove the IIT Carriage and Shaft. (Figure 4)
   (1) Remove the IIT Carriage and Shaft.

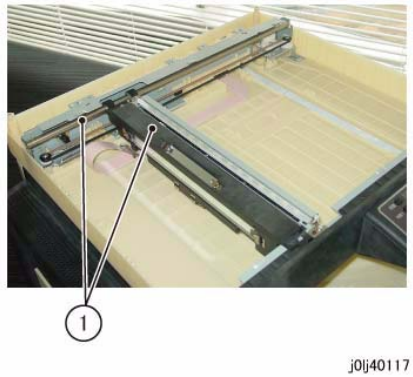


Figure 4 j0lj40117

7. Place the removed IIT Carriage and Shaft upside down and separate the IIT Carriage from the Shaft. (Figure 5)

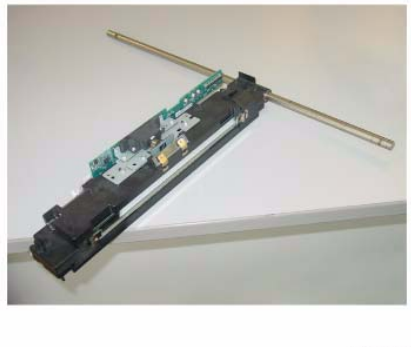


Figure 5 j0lj40118

Replacement

1. To install, carry out the removal steps in reverse order.
2. When connecting the connector to the CCD PWB, use one hand to hold the CCD PWB firmly in place so that it does not move (does not warp).
3. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.
   'Chain Link : 956-804'
   Refer to [6.4.2.9 HFSI Counter Read/Clear].

REP 1.3.2 IIT Carriage Belt

Parts List on PL 1.3

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Platen Cover or the DADF. (REP 56.1.1)
2. Remove the IIT Top Cover. (REP 1.2.1)
3. Move the IIT Carriage to the opening of the Frame. (Figure 1)
   (1) Rotate the gear in the direction of the arrow.
   (2) Move the IIT Carriage to the opening (Arrow A) of the Frame.

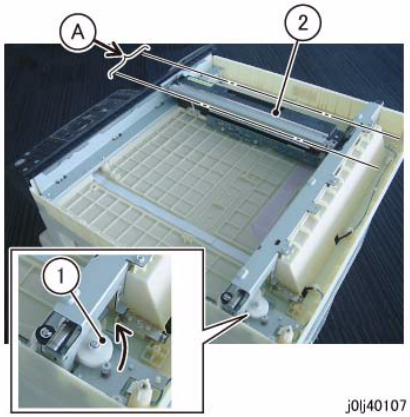


Figure 1 j0lj40107

4. Relax the tension of the IIT Carriage Belt. (Figure 2)
   (1) Remove the spring.
   (2) Loosen the screw (x2).

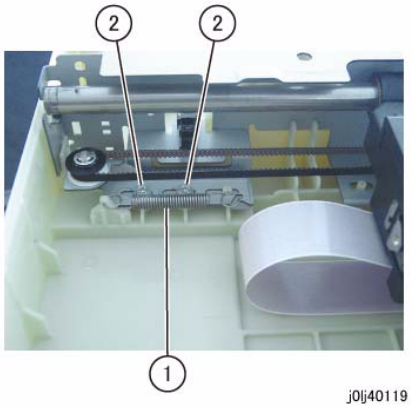


Figure 2 j0lj40119

5. Remove the IIT Carriage Belt from the IIT Carriage. (Figure 3)
   (1) Remove the IIT Carriage Belt in the direction of the arrow.

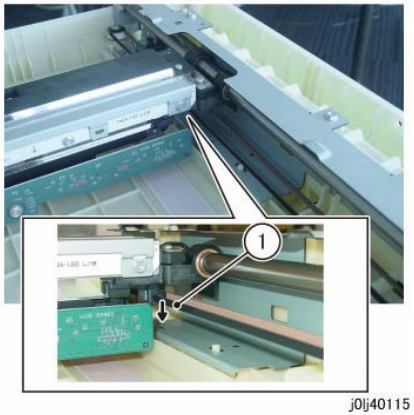


Figure 3 j0lj40115

6. Remove the IIT Carriage Belt. (Figure 4)
   (1) Remove the IIT Carriage Belt from the pulley (x2).

Figure 4 j0lj40120

Replacement

1. To install, carry out the removal steps in reverse order.

REP 1.4.1 Carriage Motor

Parts List on PL 1.4

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Platen Cover or the DADF. (REP 56.1.1)
2. Remove the IIT Top Cover. (REP 1.2.1)
3. Move the IIT Carriage to the opening of the Frame. (Figure 1)
   (1) Rotate the gear in the direction of the arrow.
   (2) Move the IIT Carriage to the opening (Arrow A) of the Frame.

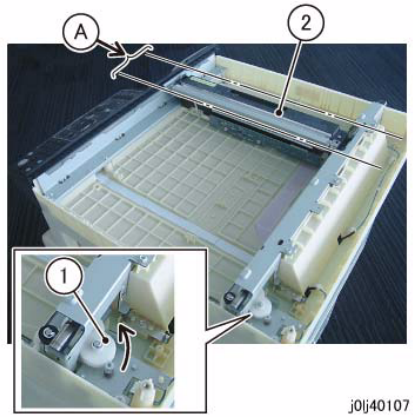


Figure 1 j0lj40107

4. Relax the tension of the IIT Carriage Belt. (Figure 2)
   (1) Remove the spring.
   (2) Loosen the screw (x2).

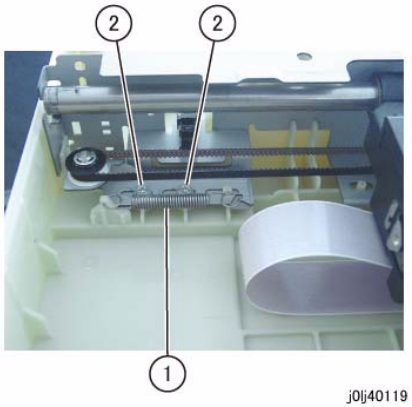


Figure 2 j0lj40119

5. Remove the IIT Carriage Belt from the pulley. (Figure 3)
   (1) Remove the IIT Carriage Belt from the pulley.

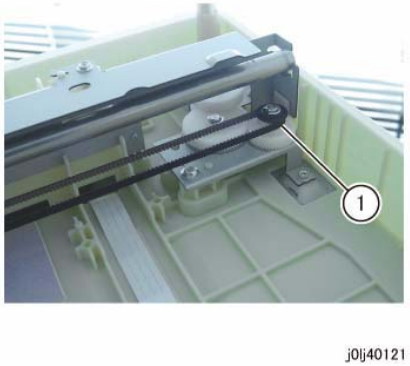


Figure 3 j0lj40121

6. Remove the Carriage Drive and Motor. (Figure 4)
   (1) Remove the Tapping Screw (x2). (Separate Display - 1)
   (2) The Shaft is shifted and loosen the screw. (Separate Display - 2)
   (3) Remove the screw. (Separate Display - 2)
   (4) Remove the Carriage Drive and Motor.
   (5) Disconnect the connector.
   (6) Remove the cable band.

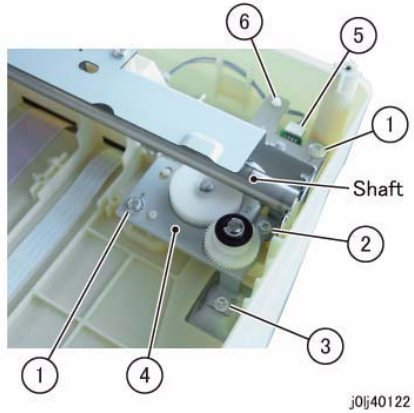


Figure 4 j0lj40122

7. Remove the Carriage Motor. (Figure 5)
   (1) Remove the screw (x2).
   (2) Remove the Carriage Motor.

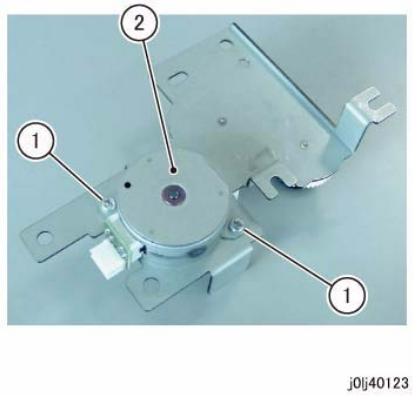


Figure 5 j0lj40123

Replacement

1. To install, carry out the removal steps in reverse order.
2. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.
   'Chain Link : 956-802'

REP 1.5.1 LED Lamp PWB

Parts List on PL 1.5

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Platen Cover or the DADF. (REP 56.1.1)
2. Remove the IIT Top Cover. (REP 1.2.1)
3. Move the IIT Carriage to the opening of the Frame. (Figure 1)
   (1) Rotate the gear in the direction of the arrow.
   (2) Move the IIT Carriage to the opening (Arrow A) of the Frame.

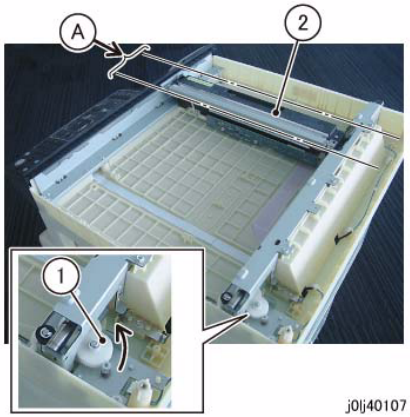


Figure 1 j0lj40107

4. Disconnect the connector of the LED Housing. (Figure 2)
   (1) Lower the block of the Connector Housing in the direction of the arrow.
   (2) Pull out and remove the LED Cable in the direction of the arrow.

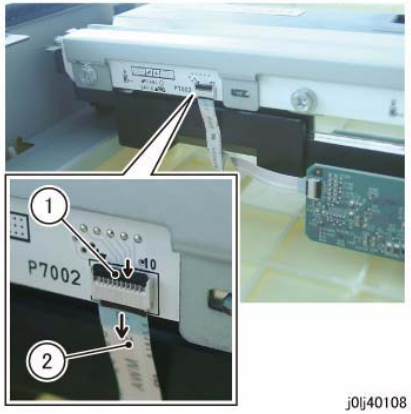


Figure 2 j0lj40108

5. Remove the LED Bracket. (Figure 3)
   (1) Remove the screw (short: x3).
   (2) Remove the LED Bracket.

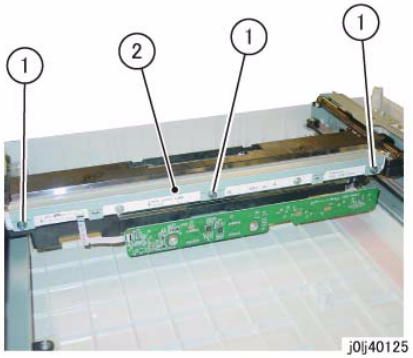


Figure 3 j0lj40125

6. Remove the LED Lamp PWB. (Figure 4)
   (1) Remove the screw (short: x2).
   (2) Remove the LED Lamp PWB.

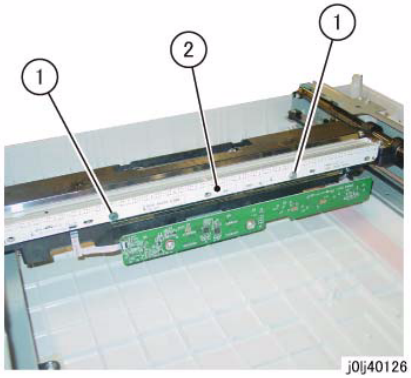


Figure 4 j0lj40126

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the LEB Lamp PWB, tighten the screw of the LED Lamp PWB in the order of 1 then 2. (Figure 5)

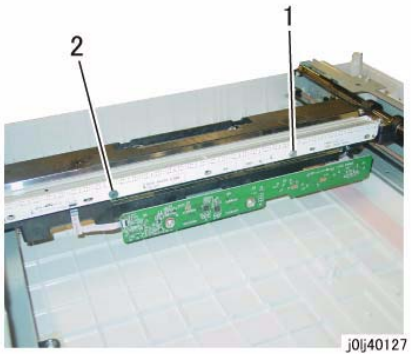


Figure 5 j0lj40127

3. When installing the LEB Bracket, tighten the screw of the LED Bracket in the order of 1 to 3.
   (Figure 6)

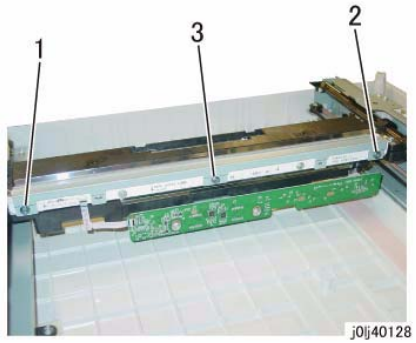


Figure 6 j0lj40128

4. When connecting the connector of the LED Housing, insert it into the Connector Housing until the Line Mark of the LED Cable is at the position indicated in the figure. (Figure 7)

Figure 7 j0lj40114

5. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.
   'Chain Link : 956-804'
   Refer to [6.4.2.9 HFSI Counter Read/Clear].

REP 1.6.1 LCD Display

Parts List on PL 1.6

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Control Panel. (Figure 1)
   (1) Insert a flat head screw driver into the Cutout of Control Panel and release hook (x5) of Control Panel. Open the Control Panel in the arrow direction.

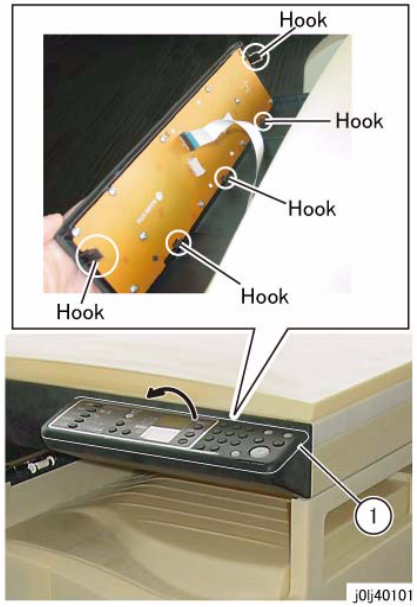


Figure 1 j0lj40101

2. Pull out and remove the UI Cable from the Connector Housing and disconnect the connector.
   (Figure 2)
   (1) Pull out and remove the UI Cable from the Connector Housing.

Figure 2 j0lj40102

3. Remove the UI PWB. (Figure 3)
   (1) Remove the Tapping Screw (x11).
   (2) Remove the UI PWB.

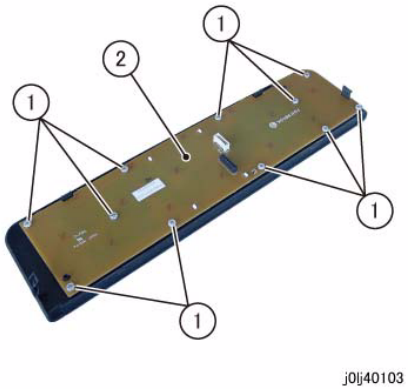


Figure 3 j0lj40103

4. Move the LCD Display. (Figure 4)
   (1) Release the hooks (x4).
   (2) Move the LCD Display in the direction of the arrow.

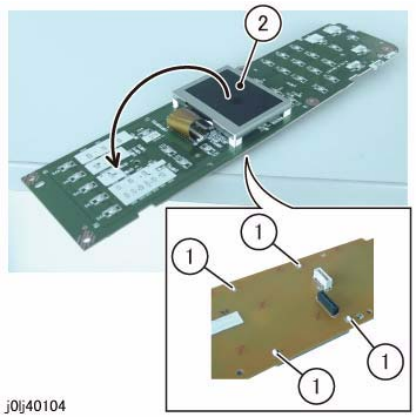


Figure 4 j0lj40104

Figure 6 j0lj40124

5. Disconnect the connector of the LCD Display. (Figure 5)
   (1) Open the block of the Connector Housing in the direction of the arrow and disconnect the Flat Cable.

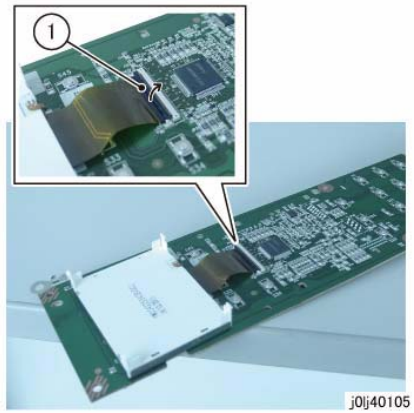


Figure 5 j0lj40105

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Control Panel, press the hook (x3) of the Control Panel in the direction of the arrow to affix the Control Panel securely. (Figure 6)

REP 2.1.1 ROS Assembly

Parts List on PL 2.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Drum Cartridge. (REP 8.1.1)
2. Remove the Toner Cartridge. (PL 8.1)
3. Remove the Front Cover. (REP 19.1.1)
4. Remove the Top Cover. (REP 19.1.2)
5. Disconnect the connector of the ROS Assembly. (Figure 1)
   (1) Release the wire harness from the clamp.
   (2) Disconnect the connector.
   (3) Disconnect the connector (x2).

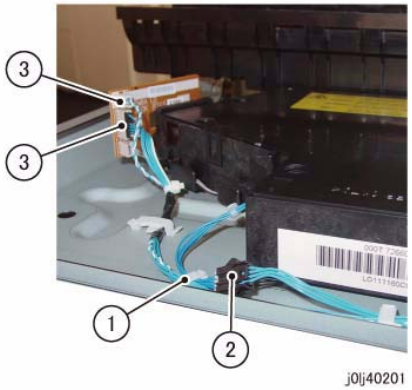


Figure 1 j0lj40201

6. Remove the ROS Assembly. (Figure 2)
   (1) Remove the screw (x5).
   (2) Remove the ROS Assembly.

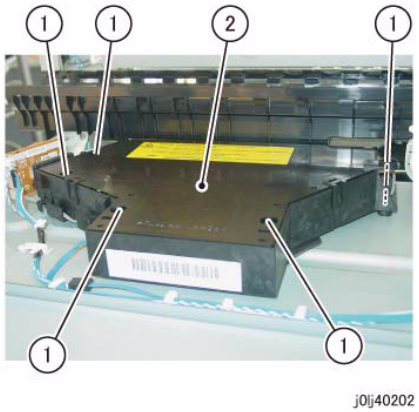


Figure 2 j0lj40202

Replacement

WARNING

When servicing an installed ROS Assembly with the power turned ON, read the Warning Label pasted on the top of the ROS Assembly carefully before proceeding.

1. To install, carry out the removal steps in reverse order.

REP 3.1.1 Main Drive Motor

Parts List on PL 3.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Rear Cover. (REP 19.2.1)
2. Remove the Main Drive Motor. (Figure 1)
   (1) Disconnect the connector (x2).
   (2) Remove the screw (x2).
   (3) Remove the Main Drive Motor.

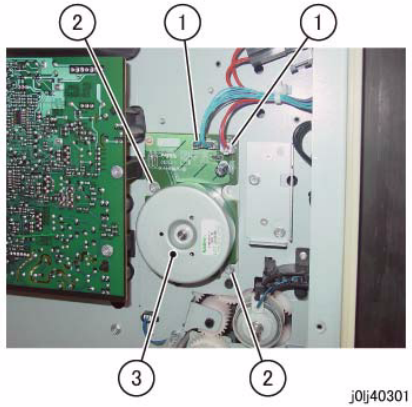


Figure 1 j0lj40301

Replacement

1. To install, carry out the removal steps in reverse order.

REP 3.1.2 Main Drive Housing

Parts List on PL 3.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Drum Cartridge. (REP 8.1.1)
2. Remove the Toner Cartridge. (PL 8.1)
3. Remove the Front Cover. (REP 19.1.1)
4. Remove the Top Cover. (REP 19.1.2)
5. Remove the Cartridge Guide. (REP 8.2.1)
6. Remove the Fusing Unit. (REP 7.1.1)
7. Remove the MSI. (REP 13.1.1)
8. Remove the L/H Cover. (REP 14.1.1)
9. Remove the Registration Chute. (REP 15.1.1)
10. Remove the Rear Cover. (REP 19.2.1)
11. Remove the Registration Roll. (REP 15.1.2)
12. Remove the HVPS. (REP 18.1.2)
13. Remove the Fusing Unit Plate. (Figure 1)
    (1) Remove the Bind Screw.
    (2) Remove the Fusing Unit Plate from the stud.

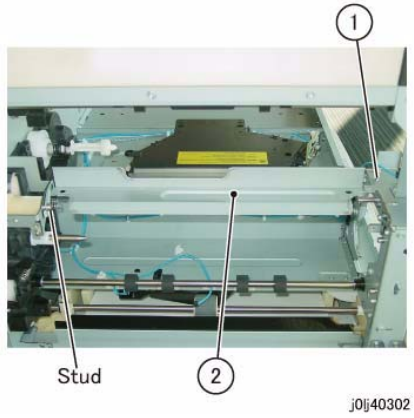


Figure 1 j0lj40302

14. Remove the Fusing Unit Rear Bracket. (Figure 2)
    (1) Remove the screw (x2).

(2) Remove the Fusing Unit Rear Bracket from the stud.

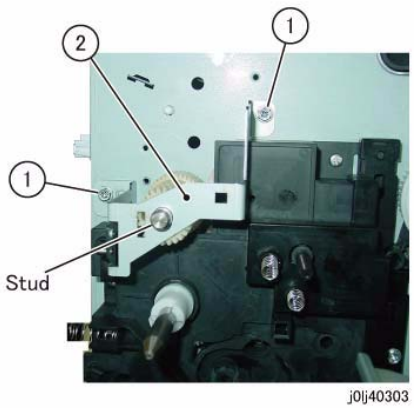


Figure 2 j0lj40303

15. Remove the gear. (Figure 3)
    (1) Remove the gear.

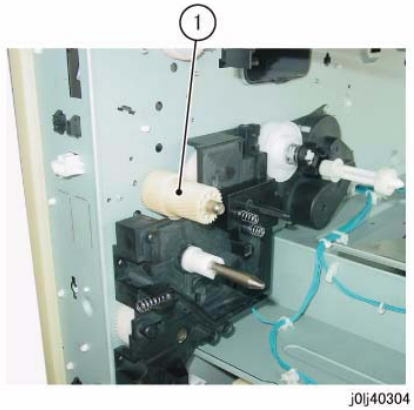


Figure 3 j0lj40304

16. Remove the Stud Bracket. (Figure 4)
    (1) Remove the screw (x2).
    (2) Remove the Stud Bracket.

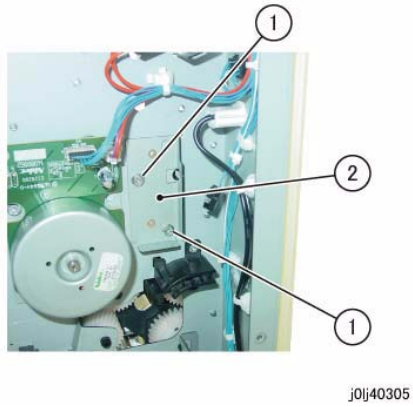


Figure 4 j0lj40305

17. Remove the Main Drive Housing. (Figure 5)
    (1) Remove the screw (x4).
    (2) Remove the Main Drive Housing.

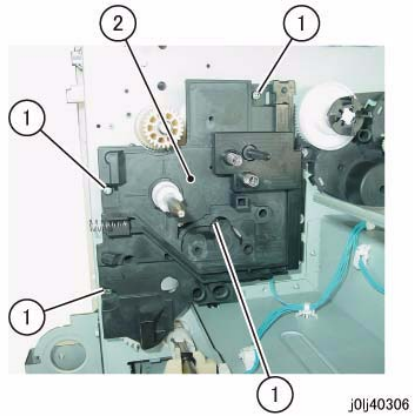


Figure 5 j0lj40306

Replacement

1. To install, carry out the removal steps in reverse order.

REP 4.1.1 NOHAD Fan

Parts List on PL 4.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Rear Cover. (REP 19.2.1)
2. Remove the NOHAD Fan. (Figure 1)
   (1) Release the wire harness from the clamp (x2).
   (2) Disconnect the connector.
   (3) Remove the wire harness from the guide (x2).
   (4) Release the hook (x2) and remove the NOHAD Fan.

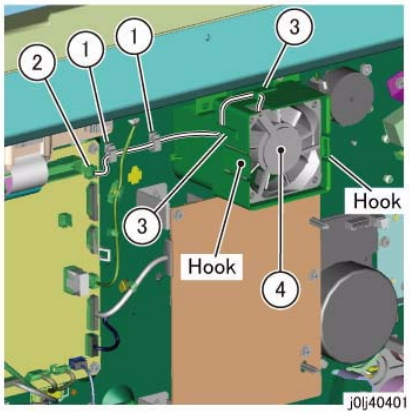


Figure 1 j0lj40401

Replacement

1. To install, carry out the removal steps in reverse order.

REP 6.1.1 BTR Roll

Parts List on PL 6.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Open the L/H Cover.
2. Remove the BTR Roll. (Figure 1)
   (1) Release the hook (x4) of the bearing.
   (2) Remove the BTR Roll.

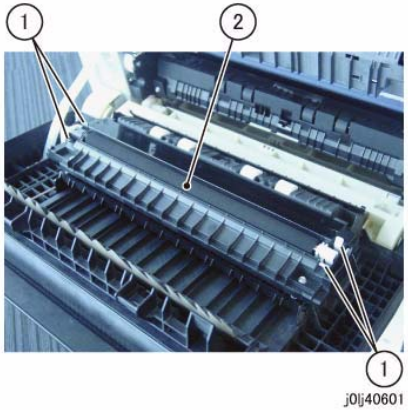


Figure 1 j0lj40601

Reference: This shows the removed BTR Roll. (Figure 2)

***NOTE:** As the bearing is not secured to the BTR Roll, be careful so as not to allow it to drop.*

Figure 2 j0lj40602

Replacement

1. To install, carry out the removal steps in reverse order.
2. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.
   'Chain Link : 950-800'

REP 7.1.1 Fusing Unit

Parts List on PL 7.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

WARNING

Do not work on a hot Fusing Unit until it is cool enough.

1. Open the L/H Cover.
2. Remove the Connector Cover. (Figure 1)
   (1) Remove the screw.
   (2) Remove the Connector Cover.

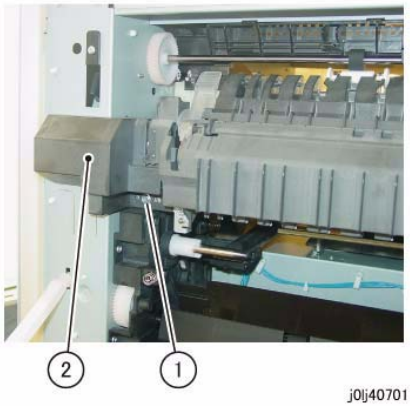


Figure 1 j0lj40701

3. Disconnect the connector. (Figure 2)
   (1) Disconnect the connector (x3).

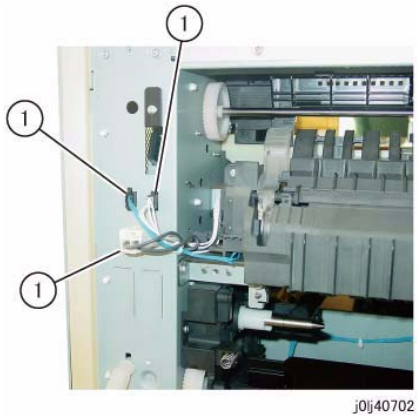


Figure 2 j0lj40702

4. Remove the Fusing Unit. (Figure 3)
   (1) Remove the screw (x2).
   (2) Remove the Fusing Unit.

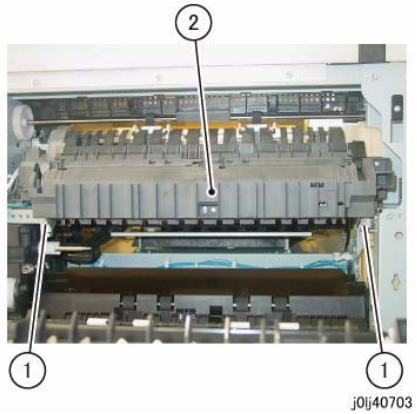


Figure 3 j0lj40703

Replacement

1. To install, carry out the removal steps in reverse order.
2. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.
   'Chain Link : 950-801'

REP 8.1.1 Drum Cartridge

Parts List on PL 8.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

CAUTION

To prevent light fatigue, either wrap the removed Drum Cartridge by using a sheet of black paper or store it in a black bag.

1. Prepare a sheet of black paper or a black bag.
2. Open the L/H Cover.
3. Open the Front Toner Cover.
4. Remove the Drum Cartridge. (Figure 1)
   (1) Loosen the Knob Screw (2).
   (2) Hold onto the handle and pull out the Drum Cartridge.

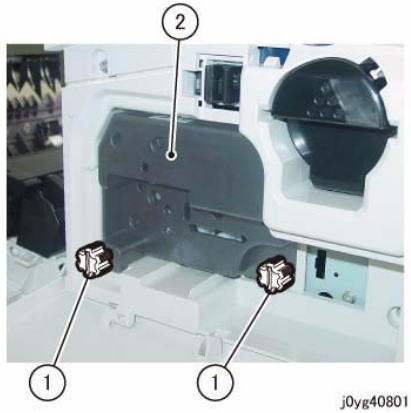


Figure 1 j0yg40801

5. Wrap the removed Drum Cartridge by using a sheet of black paper or store it in a black bag.
   (Figure 2)

Figure 2 j0yg40802

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Drum Cartridge, align the Lower Plate of the Drum Cartridge to the Guide of the Frame.(Figure 3)

Figure 3 j0yg40803

3. When replacing the Drum Cartridge with a new one, install the Drum Cartridge, and then pull the Heat Seal horizontally out of the Drum Cartridge.(Figure 4)

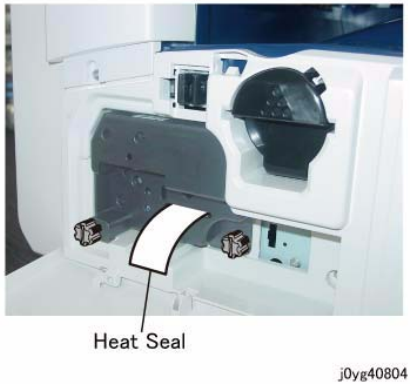


Figure 4 j0yg40804

REP 8.2.1 Cartridge Guide

Parts List on PL 8.2

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Drum Cartridge. (REP 8.1.1)
2. Remove the Toner Cartridge. (PL 8.1)
3. Remove the Front Cover. (REP 19.1.1)
4. Remove the Top Cover. (REP 19.1.2)
5. Remove the Cartridge Guide. (Figure 1)
   (1) Remove the screw.
   (2) Remove the Cartridge Guide from the shaft.
   (3) Remove the Cartridge Guide in the direction of the arrow.

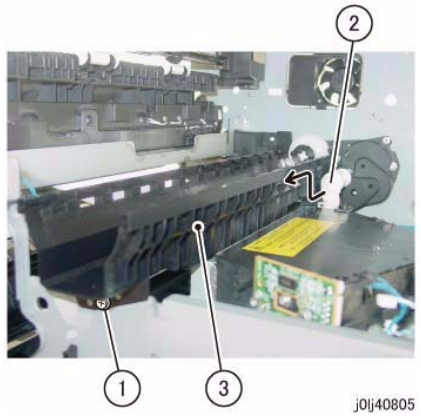


Figure 1 j0lj40805

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Cartridge Guide, insert the boss of the Cartridge Guide into the hole for the boss. (Figure 2)

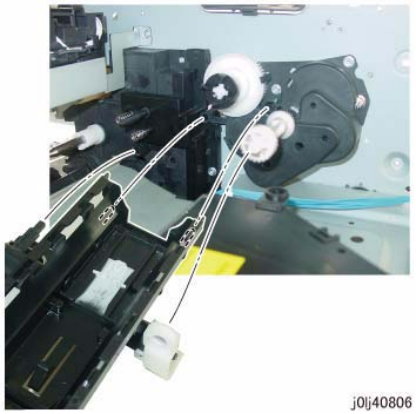


Figure 2 j0lj40806

REP 8.2.2 Dispense Drive

Parts List on PL 8.2

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Drum Cartridge. (REP 8.1.1)
2. Remove the Toner Cartridge. (PL 8.1)
3. Remove the Front Cover. (REP 19.1.1)
4. Remove the Top Cover. (REP 19.1.2)
5. Remove the Cartridge Guide. (REP 8.2.1)
6. Remove the Dispense Drive. (Figure 1)
   (1) Remove the gear.
   (2) Remove the screw (x3).
   (3) Remove the Dispense Drive.

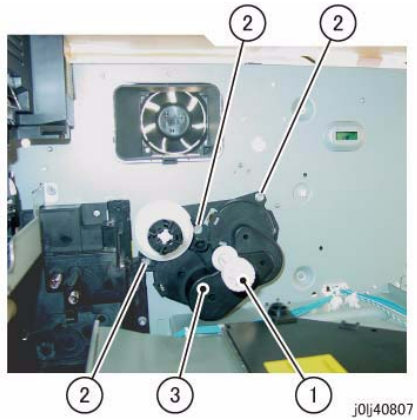


Figure 1 j0lj40807

Replacement

1. To install, carry out the removal steps in reverse order.

REP 9.1.1 Tray 1 Feed Clutch

Parts List on PL 9.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Rear Cover. (REP 19.2.1)
2. Disconnect the connector of the Tray 1 Feed Clutch. (Figure 1)
   (1) Disconnect the connector.
   (2) Remove the wire harness from the Harness Guide.

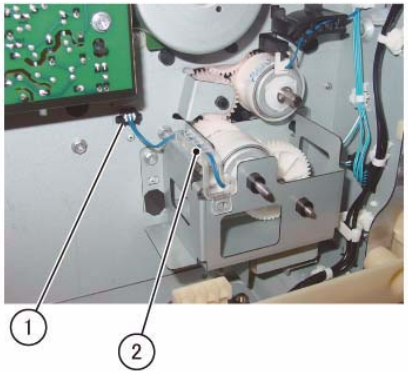


Figure 1 j0lj40901

3. Remove the Drive Bracket. (Figure 2)
   (1) Remove the screw (x2).
   (2) Remove the Drive Bracket.
   (3) Remove the wire harness of the Tray 1 Feed Clutch.

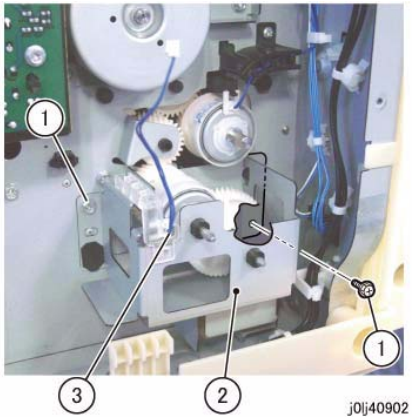


Figure 2 j0lj40902

4. Remove the Tray 1 Feed Clutch. (Figure 3)
   (1) Remove the Tray 1 Feed Clutch.

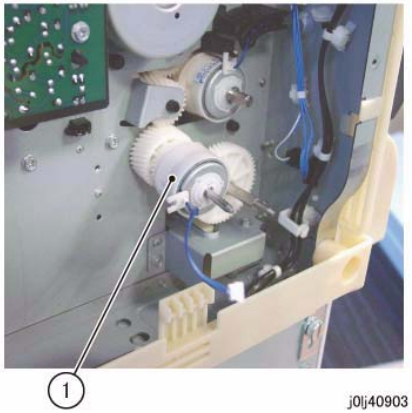
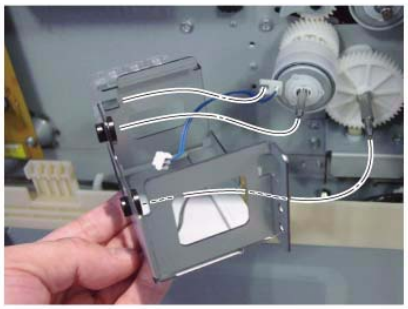


Figure 3 j0lj40903

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Drive Bracket, align the Tab of the Drive Bracket to the Cutout of the Tray 1 Feed Clutch. (Figure 4)



j0lj40904

Figure 4 j0lj40904

REP 9.1.2 Tray 1

Parts List on PL 9.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the paper from Tray 1.
2. Pull out Tray 1 until the position where it is stopped by the stopper.
3. Remove Tray 1. (Figure 1)
   (1) Lift up the front of Tray 1 and free the rear right side of Tray 1.
   (2) Free the rear left side of Tray 1 in the direction of the arrow.

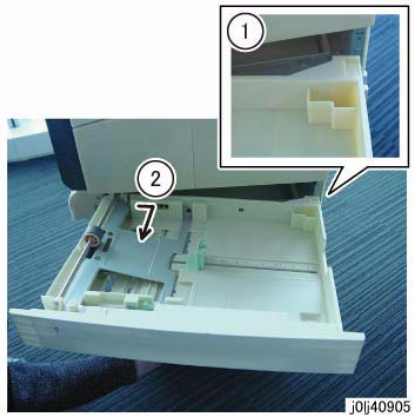


Figure 1 j0lj40905

Replacement

1. To install, carry out the removal steps in reverse order.

REP 9.2.1 Tray 1 Feed Roll and Tray 1 Retard Pad

Parts List on PL 9.2

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

NOTE: *The Tray 1 Feed Roll and the Tray 1 Retard Pad must be replaced at the same time.*

1. Remove Tray 1. (REP 9.1.2)
2. Remove the Bearing Cover. (Figure 1)
   (1) Remove the Tapping Screw.
   (2) Remove the Bearing Cover.

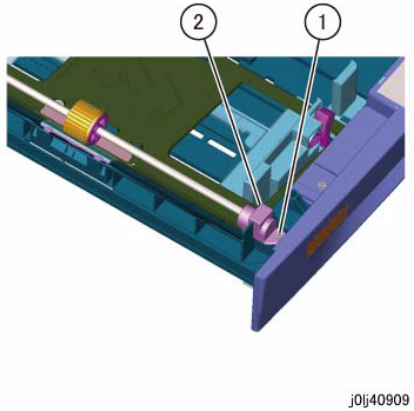


Figure 1 j0lj40909

3. Remove the Tray 1 Feed Roll and Shaft. (Figure 2)
   (1) Release the hook to remove the bearing.
   (2) Remove the Tray 1 Feed Roll and Shaft.

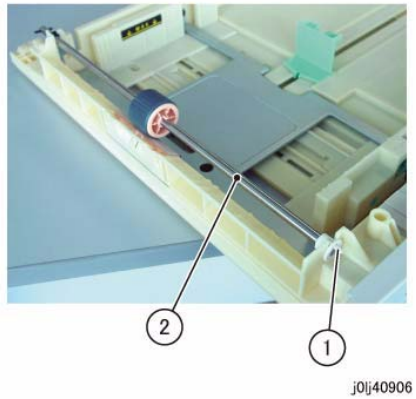


Figure 2 j0lj40906

4. Remove the Tray 1 Feed Roll. (Figure 3)
   (1) Release the hook and remove the Tray 1 Feed Roll in the direction of the arrow.

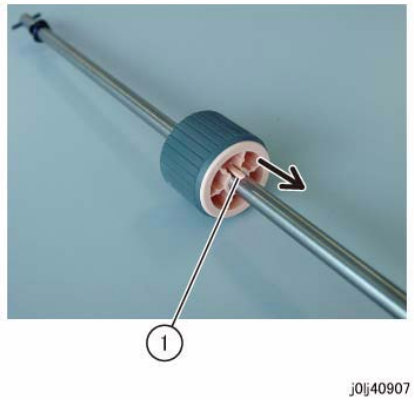


Figure 3 j0lj40907

5. Remove the Tray 1 Retard Pad. (Figure 4)
   (1) Release the hook and open the Tray 1 Retard Pad.
   (2) Remove the Tray 1 Retard Pad.
   (3) Pull out and remove the shaft.

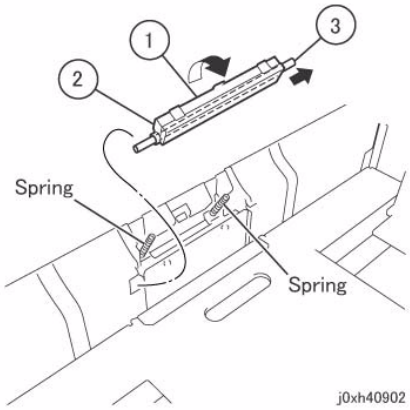


Figure 4 j0xh40902

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Tray 1 Retard Pad, attach the spring (x2) to the hole (x2) of the Tray 1 Retard Pad. (Figure 5)

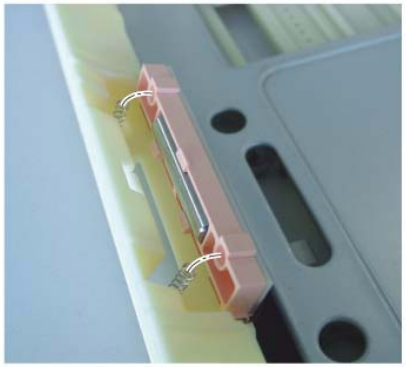


Figure 5 j0lj40908

3. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.

   'Chain Link : 950-803'

REP 10.1.1 Tray 2 Feeder

Parts List on PL 10.1

Removal

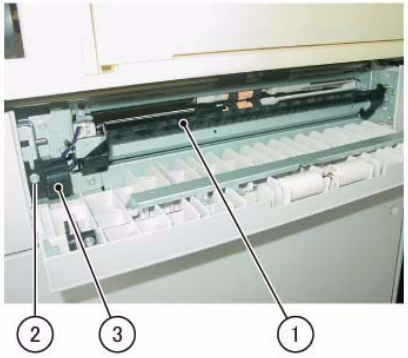
WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

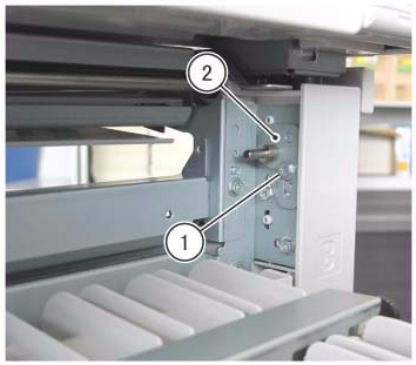
1. Remove Tray 2.
2. Open the Left Cover Assembly of the One Tray Module.
3. Remove the Feed Out Chute and the Connector Cover. (Figure 1)
   (1) Remove the Feed Out Chute.
   (2) Remove the screw.
   (3) Remove the Connector Cover.



j0lj41001

Figure 1 j0lj41001

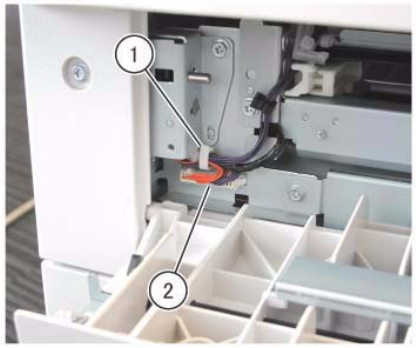
4. Remove the Stud Assembly. (Figure 2)
   (1) Remove the screw.
   (2) Remove the Stud Assembly.



j0xh41002

Figure 2 j0xh41002

5. Disconnect the connector. (Figure 3)
   (1) Release the wire harness from the clamp.
   (2) Disconnect the connector.



j0xh41003

Figure 3 j0xh41003

6. Remove the Tray 2 Feeder. (Figure 4)
   (1) Remove the screw (x2).
   (2) Remove the Tray 2 Feeder.

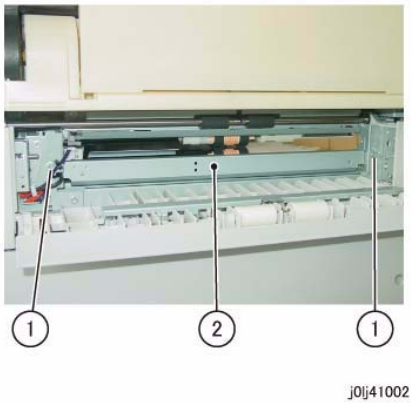


Figure 4 j0lj41002

Replacement

1. To install, carry out the removal steps in reverse order.
2. After a replacement, enter the CE Mode and use [Initialize HFSI Counter] to clear the HFSI counter.

   'Chain Link : 950-804'

   Refer to [6.4.2.9 HFSI Counter Read/Clear].

REP 10.3.1 Tray 2 Feed/Retard/Nudger Roll

Parts List on PL 10.3

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

NOTE: *The Feed/Retard/Nudger Rolls must be replaced at the same time.*

1. Remove Tray 1/2.
2. Remove the Tray 2 Feed/Retard/Nudger Roll. (Figure 1)
   (1) Slide the Front Chute towards you.
   (2) Remove the Tray 2 Feed/Retard/Nudger Roll.

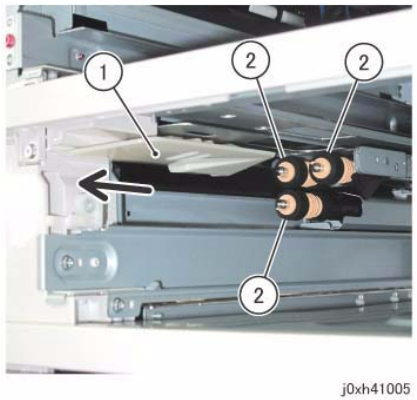


Figure 1 j0xh41005

Replacement

1. To install, carry out the removal steps in reverse order.
2. After a replacement, enter the CE Mode and use [Initialize HFSI Counter] to clear the HFSI counter.

   'Chain Link : 950-804'

REP 10.6.1 STM PWB

Parts List on PL 10.6

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

CAUTION

Static electricity may damage electrical parts.

Static electricity may damage electrical parts. Always wear a wrist band during servicing. If a wrist band is not available, touch some metallic parts before servicing to discharge the static electricity.

1. Remove the Docking Bracket (x2). (Figure 1)
   (1) Remove the Docking Screw (x2).
   (2) Remove the Docking Bracket (x2).

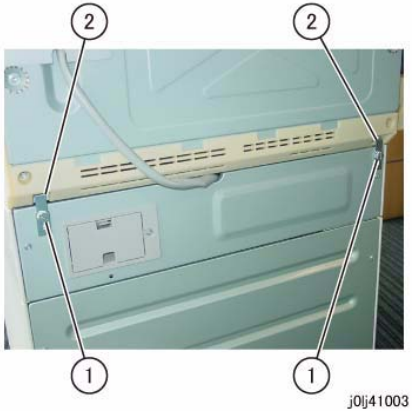


Figure 1 j0lj41003

2. Remove the Rear Cover of the One Tray Module. (Figure 2)
   (1) Remove the screw (x2).
   (2) Remove the Rear Cover.

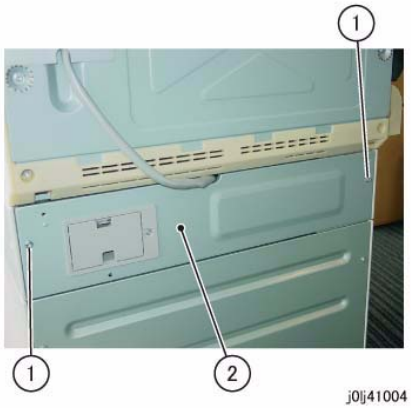


Figure 2 j0lj41004

3. Remove the STM PWB. (Figure 3)
   (1) Disconnect the connector (x4).
   (2) Remove the screw (x4).
   (3) Remove the STM PWB.

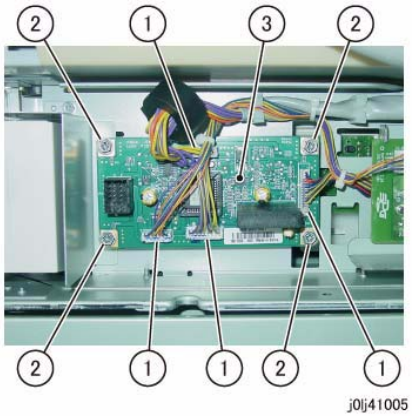


Figure 3 j0lj41005

Replacement

1. To install, carry out the removal steps in reverse order.

REP 10.6.2 STM Takeaway Motor

Parts List on PL 10.6

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

CAUTION

Static electricity may damage electrical parts.

Static electricity may damage electrical parts. Always wear a wrist band during servicing. If a wrist band is not available, touch some metallic parts before servicing to discharge the static electricity.

1. Remove the Docking Bracket (x2). (Figure 1)
   (1) Remove the Docking Screw (x2).
   (2) Remove the Docking Bracket (x2).

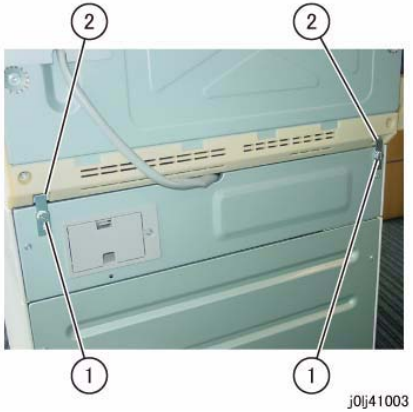


Figure 1 j0lj41003

2. Remove the Rear Cover of the One Tray Module. (Figure 2)
   (1) Remove the screw (x2).
   (2) Remove the Rear Cover.

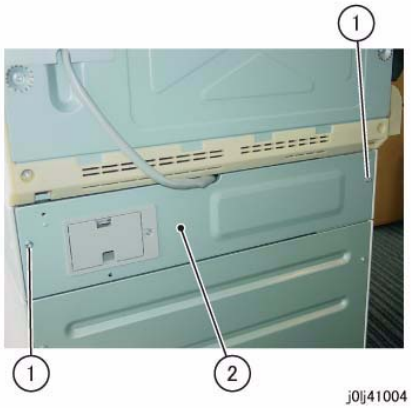


Figure 2 j0lj41004

3. Remove the STM Takeaway Motor. (Figure 3)
   (1) Disconnect the connector.
   (2) Remove the screw (x2).
   (3) Remove the STM Takeaway Motor.

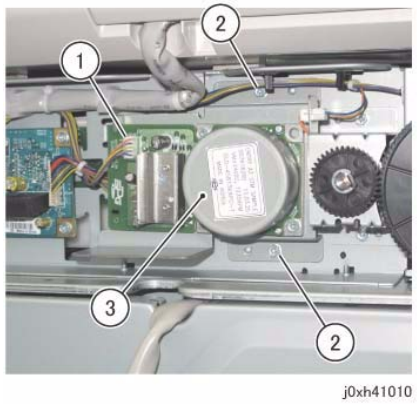


Figure 3 j0xh41010

Replacement

1. To install, carry out the removal steps in reverse order.

REP 13.1.1 MSI

Parts List on PL 13.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Hinge Rear Cover. (Figure 1)
   (1) Remove the screw.
   (2) Remove the Hinge Rear Cover.

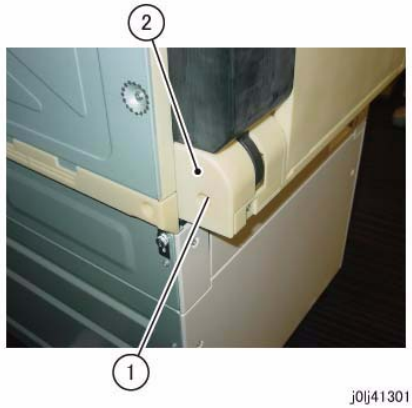


Figure 1 j0lj41301

2. Disconnect the connector. (Figure 2)
   (1) Release the wire harness from the clamp.
   (2) Disconnect the connector.
   (3) Remove the cable band.

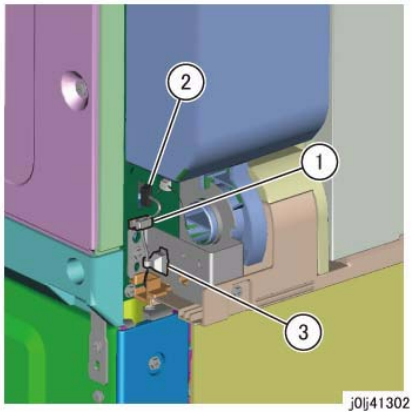


Figure 2 j0lj41302

3. Remove the MSI. (Figure 3)
   (1) Remove the screw (x2).
   (2) Remove the MSI.

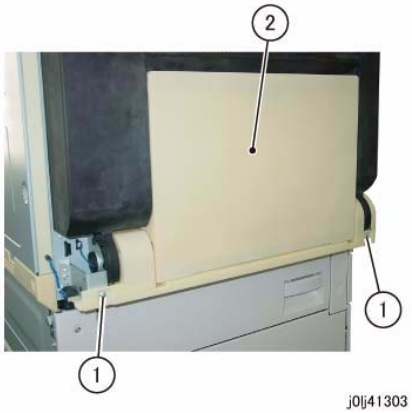
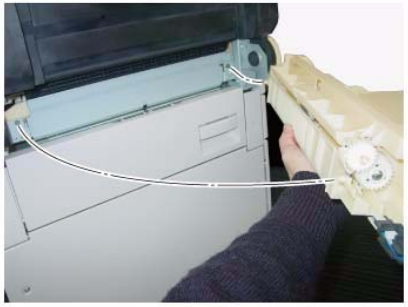


Figure 3 j0lj41303

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the MSI, insert the boss (x2) of the MSI into the holes for the boss. (Figure 4)



j0lj41304

Figure 4 j0lj41304

3. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.

   'Chain Link : 950-802'

   Refer to [6.4.2.9 HFSI Counter Read/Clear].

REP 13.3.1 MSI Nudger/Feed Roll

Parts List on PL 13.3

Removal

WARNING

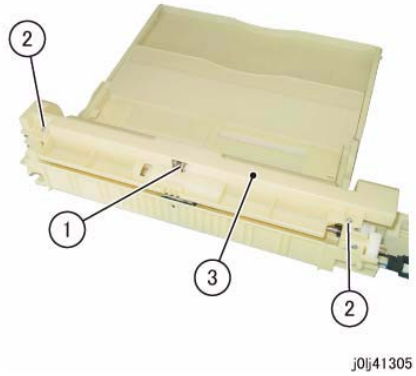
When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

NOTE: *The MSI Nudger Roll, the MSI Feed Roll, and the MSI Retard Pad must be replaced at the same time.*

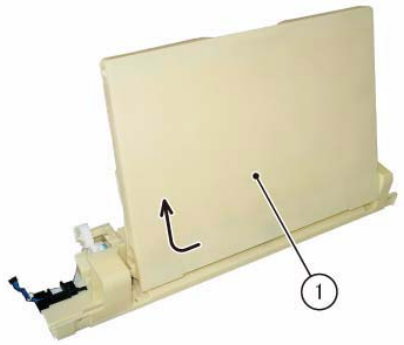
1. Remove the MSI. (REP 13.1.1)
2. Remove the MSI Top Cover. (Figure 1)
   (1) Remove the spring.
   (2) Remove the Tapping Screw (x2).
   (3) Remove the MSI Top Cover.



j0lj41305

Figure 1 j0lj41305

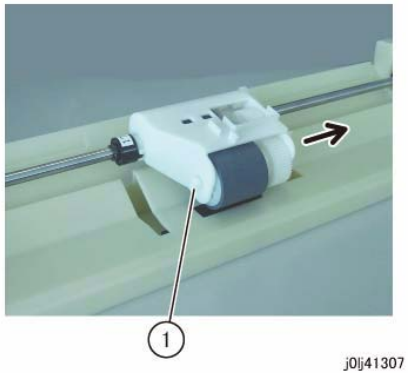
3. Remove the MSI Tray. (Figure 2)
   (1) Remove the MSI Tray in the direction of the arrow.



j0lj41306

Figure 2 j0lj41306

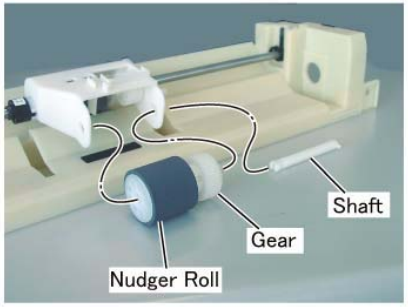
4. Remove the shaft of the MSI Nudger Roll. (Figure 3)
   (1) Release the hook of the shaft and remove the shaft in the direction of the arrow.



j0lj41307

Figure 3 j0lj41307

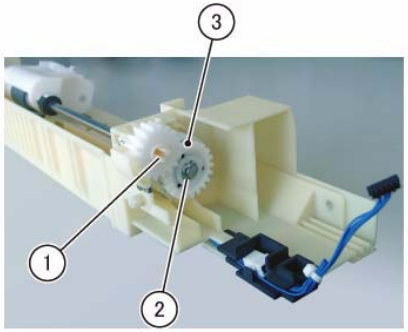
5. Remove the MSI Nudger Roll. (Figure 4)



j0lj41308

Figure 4 j0lj41308

6. Shift the MSI Feed Clutch from the shaft. (Figure 5)
   (1) Release the hook to remove the gear.
   (2) Remove the E-Clip.
   (3) Shift the MSI Feed Clutch from the shaft.



j0lj41309

Figure 5 j0lj41309

7. Remove the MSI Feed Roll Assembly. (Figure 6)
   (1) Remove the KL-Clip (x2).
   (2) Remove the MSI Feed Roll Assembly.

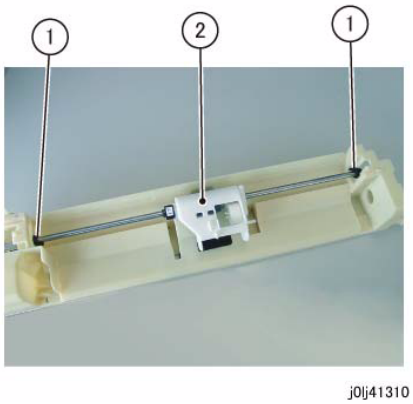


Figure 6 j0lj41310

8. Move the housing to the tip of the shaft. (Figure 7)
   (1) Remove the Bearing.
   (2) Remove the KL-Clip.
   (3) Move the housing in the direction of the arrow until it is at the tip of the shaft.

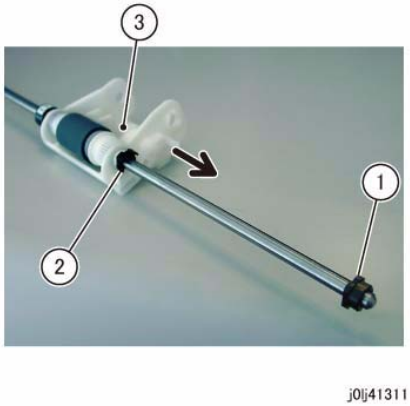


Figure 7 j0lj41311

9. Remove the MSI Feed Roll. (Figure 8)
   (1) Remove the gear.
   (2) Remove the MSI Feed Roll.

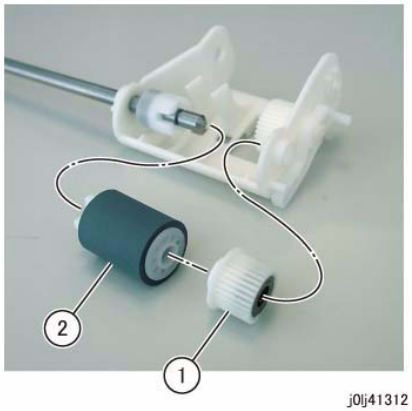


Figure 8 j0lj41312

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the MSI Feed Clutch, align the Cutout of the MSI Feed Clutch to the Tab. (Figure 9)

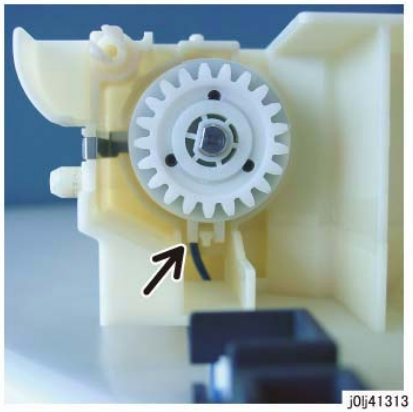


Figure 9 j0lj41313

3. When installing the MSI Top Cover, store the Link in the Guide of the MSI Top Cover. (Figure 10)
   - After installing the MSI Top Cover, check and make sure that the Link is at the position shown in the figure from the hole of the MSI Top Cover.

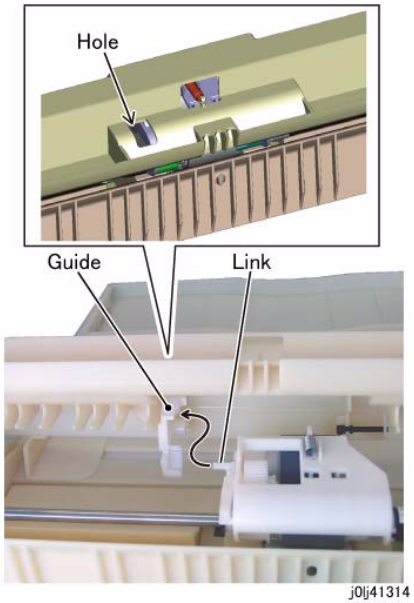


Figure 10 j0lj41314

4. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.
   'Chain Link : 950-802'
   Refer to [6.4.2.9 HFSI Counter Read/Clear].

REP 13.3.2 MSI Retard Pad

Parts List on PL 13.3

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

NOTE: *The MSI Nudger Roll, the MSI Feed Roll, and the MSI Retard Pad must be replaced at the same time.*

1. Remove the MSI. (REP 13.1.1)
2. Remove the screws that secure the MSI Lower Cover at the bottom of the MSI. (Figure 1)
   (1) Remove the Tapping Screw (x2).

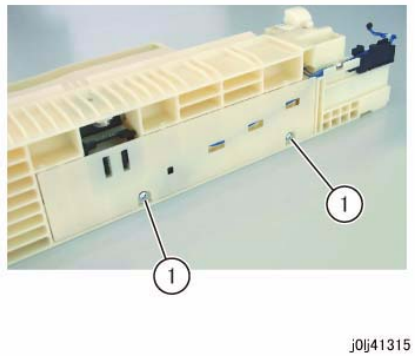


Figure 1 j0lj41315

3. Release the hook (x3) and release the boss (x3) from the installation holes to remove the MSI Lower Cover. (Figure 2)

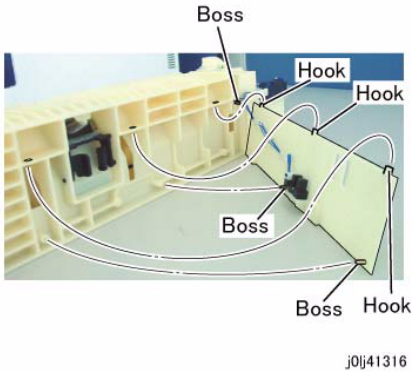


Figure 2 j0lj41316

4. Remove the MSI Retard Pad. (Figure 3)
   (1) Remove the spring.
   (2) Release the boss (x2) from the installation holes and remove the MSI Retard Pad.

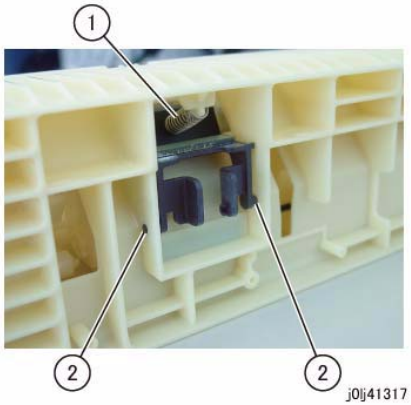


Figure 3 j0lj41317

Replacement

1. To install, carry out the removal steps in reverse order.
2. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.
   'Chain Link : 950-802'

REP 14.1.1 L/H Cover

Parts List on PL 14.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the MSI. (REP 13.1.1)
2. Pull out Tray 1 slightly and remove the screw that secures the Hinge Front Cover. (Figure 1)
   (1) Remove the screw.

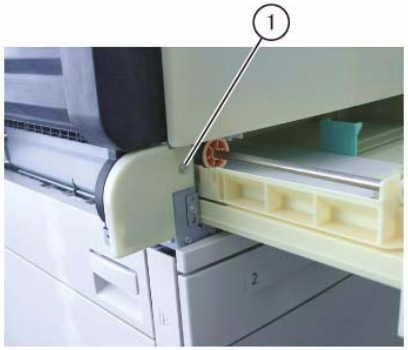


Figure 1 j0lj41401

3. Release the hook (x2) and release the boss (x2) from the installation holes to remove the Hinge Front Cover. (Figure 2)

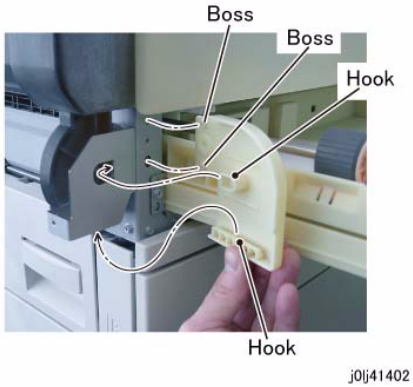


Figure 2 j0lj41402

4. [Duplex Type]: Disconnect the connector. (Figure 3)
   (1) Disconnect the connector.

Figure 3 j0lj41403

5. Remove the L/H Cover. (Figure 4)
   (1) Rotate by 90 degrees and remove the L/H Cover Support.
   (2) With the L/H Cover in 90 degrees opened state, align the Tab of the L/H Cover to the Cutout of the Right Hinge and release the boss (x2) of the L/H Cover in the direction of the arrow.

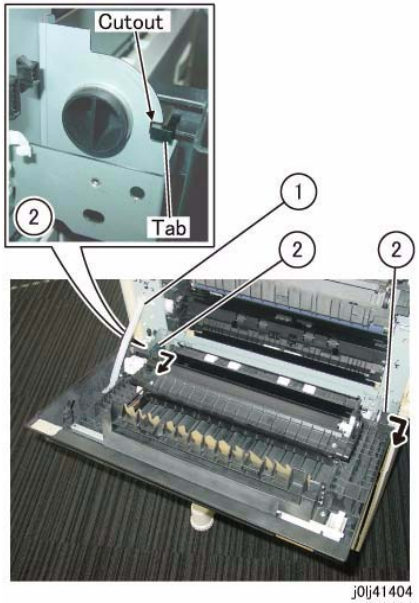


Figure 4 j0lj41404

Replacement

1. To install, carry out the removal steps in reverse order.

REP 15.1.1 Registration Chute

Parts List on PL 15.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Drum Cartridge. (REP 8.1.1)
2. Remove the Front Cover. (REP 19.1.1)
3. Remove the MSI. (REP 13.1.1)
4. Remove the L/H Cover. (REP 14.1.1)
5. Remove the Drum Cartridge Guide. (Figure 1)
   (1) Remove the screw.
   (2) Remove the Drum Cartridge Guide.

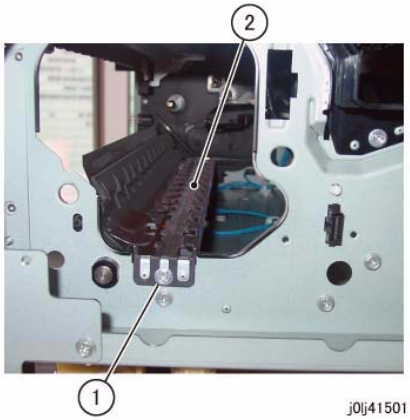


Figure 1 j0lj41501

6. Release the wire harness from the clamp. (Figure 2)
   (1) Release the wire harness from the clamp.

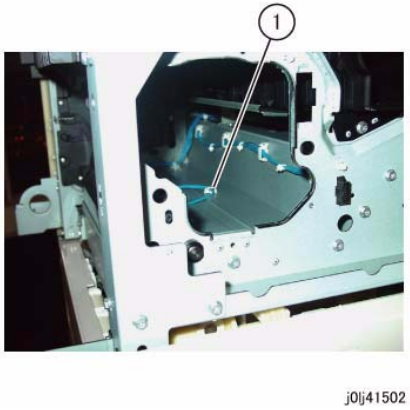


Figure 2 j0lj41502

7. Remove the L/H Chute. (Figure 3)
   (1) Remove the screw (x2).
   (2) Remove the L/H Chute.

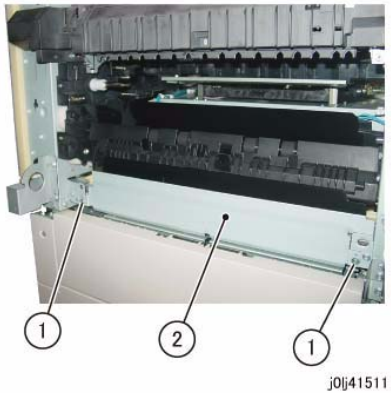
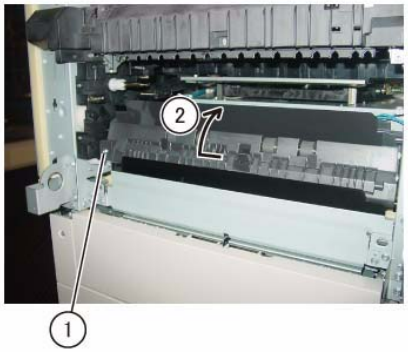


Figure 3 j0lj41511

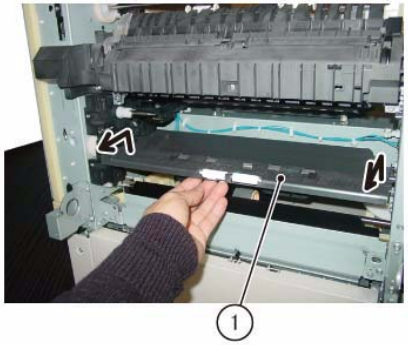
8. Rotate the Registration Chute. (Figure 4)
   (1) Remove the Tapping Screw.
   (2) Move the Registration Chute slightly to the rear and rotate it in the direction of the arrow.



j0lj41503

Figure 4 j0lj41503

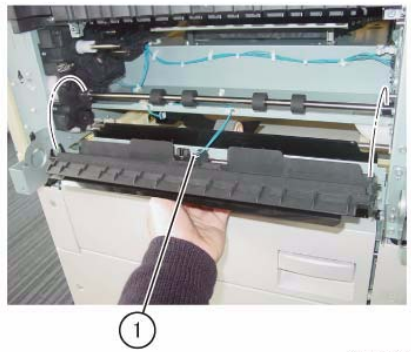
9. Remove the Registration Chute from the bearing (x2) of the Registration Roll. (Figure 5)
   (1) Remove the Registration Chute.



j0lj41504

Figure 5 j0lj41504

10. Disconnect the connector and remove the Registration Chute. (Figure 6)
    (1) Disconnect the connector and remove the Registration Chute.

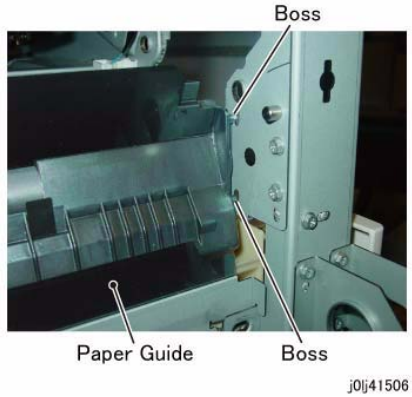


j0lj41505

Figure 6 j0lj41505

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Registration Chute, insert the boss (x2) of the Registration Chute into the holes for the boss. (Figure 7)
3. When installing the Registration Chute, install the Registration Chute to the inner side of the Paper Guide. (Figure 7)



j0lj41506

Figure 7 j0lj41506

4. When installing the Drum Cartridge Guide, insert the boss (x2) of the Drum Cartridge Guide into the holes for the boss. (Figure 8)

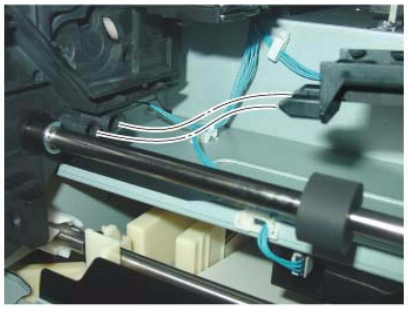


Figure 8 j0lj41507

REP 15.1.2 Registration Roll

Parts List on PL 15.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Drum Cartridge. (REP 8.1.1)
2. Remove the Front Cover. (REP 19.1.1)
3. Remove the MSI. (REP 13.1.1)
4. Remove the L/H Cover. (REP 14.1.1)
5. Remove the Registration Chute. (REP 15.1.1)
6. Remove the Rear Cover. (REP 19.2.1)
7. Remove the Registration Clutch. (Figure 1)
   (1) Release the wire harness from the clamp.
   (2) Disconnect the connector.
   (3) Remove the wire harness from the Harness Guide.
   (4) Remove the E-Clip.
   (5) Remove the Registration Clutch and the gear.

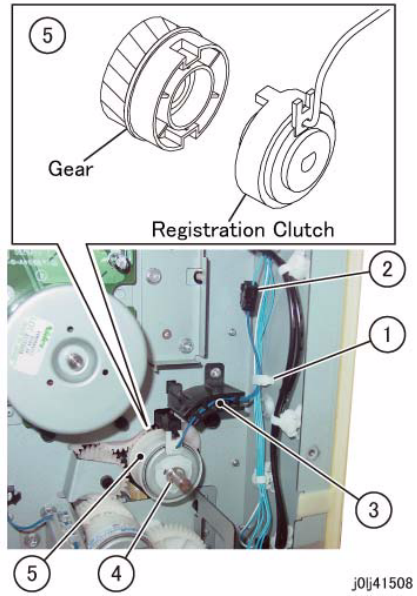
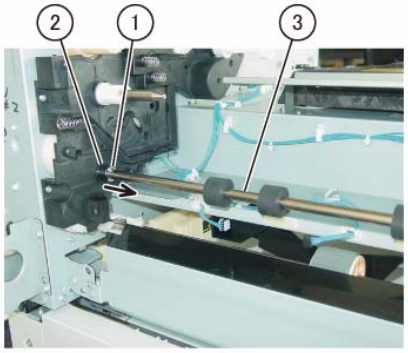


Figure 1 j0lj41508

8. Remove the Registration Roll. (Figure 2)
   (1) Remove the E-Clip.
   (2) Move the bearing in the direction of the arrow.
   (3) Remove the Registration Roll.

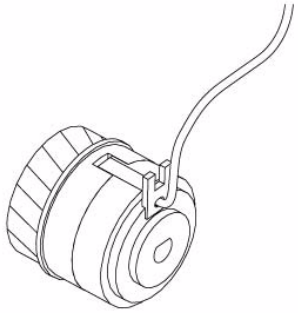


j0lj41509

Figure 2 j0lj41509

Replacement

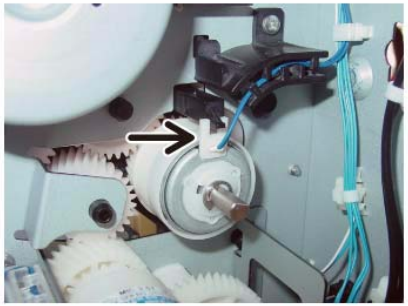
1. To install, carry out the removal steps in reverse order.
2. When installing the Registration Clutch, align the Tab (x2, top and bottom) of the Registration Clutch to the Cutout (x2, top and bottom) of the gear. (Figure 3)



j0lj41512

Figure 3 j0lj41512

3. When installing the Registration Clutch, align the Cutout of the Registration Clutch to the Tab.
   (Figure 4)



j0lj41510

Figure 4 j0lj41510

REP 17.1.1 Exit Cover

Parts List on PL 17.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Drum Cartridge. (REP 8.1.1)
2. Remove the Toner Cartridge. (PL 8.1)
3. Remove the Front Cover. (REP 19.1.1)
4. Remove the Fusing Unit. (REP 7.1.1)
5. Remove the Top Cover. (REP 19.1.2)
6. Remove the Exit Cover. (Figure 1)
   (1) Remove the screw.
   (2) Release the hook (x6).
   (3) Remove the Exit Cover.

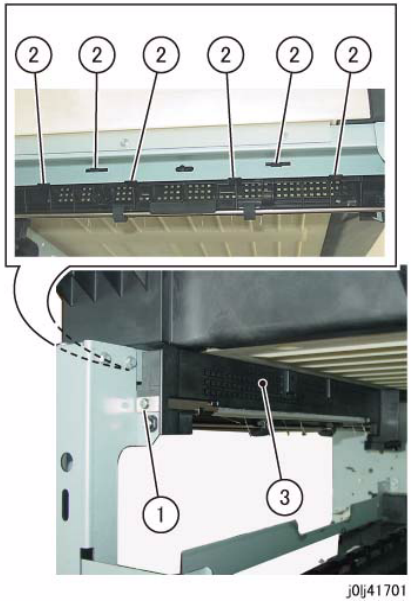


Figure 1 j0lj41701

Reference: This shows the removed Exit Cover. (Figure 2)

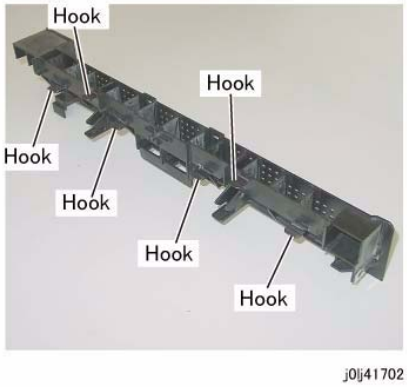


Figure 2 j0lj41702

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Exit Cover, insert the boss of the Exit Cover into the hole of the Frame.
   (Figure 3)

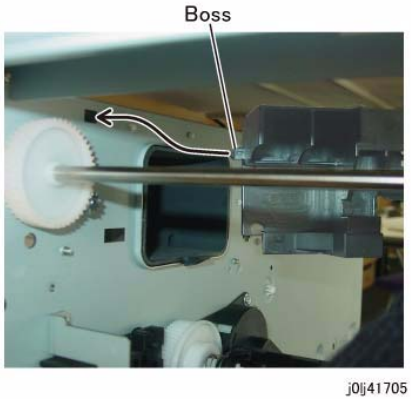


Figure 3 j0lj41705

REP 17.1.2 Exit Roll

Parts List on PL 17.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Fusing Unit. (REP 7.1.1)
2. Remove the MSI. (REP 13.1.1)
3. Remove the L/H Cover. (REP 14.1.1)
4. Remove the Fusing Unit Cover. (Figure 1)
   (1) Remove the screw.
   (2) Remove the Fusing Unit Cover.

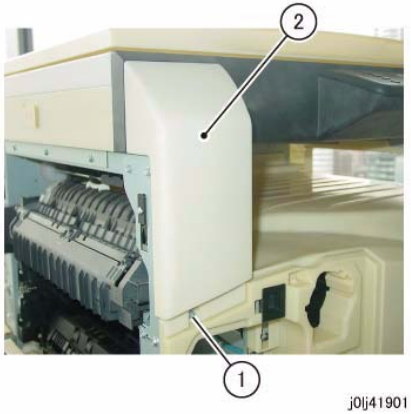


Figure 1 j0lj41901

CAUTION

When removing the Exit Roll, be careful so as not to drop the bearing at the rear of the Exit Roll into the machine. (Figure 3)

5. Remove the Exit Roll. (Figure 2)
   (1) Remove the E-Clip or the KL-Clip.
   (2) Move the bearing in the direction of the arrow.
   (3) Remove the Exit Roll.

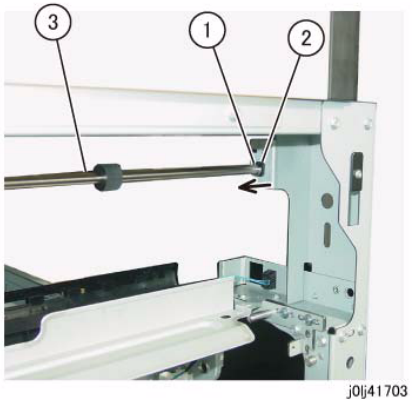


Figure 2 j0lj41703

Reference: This shows the removed Exit Roll. (Figure 3)

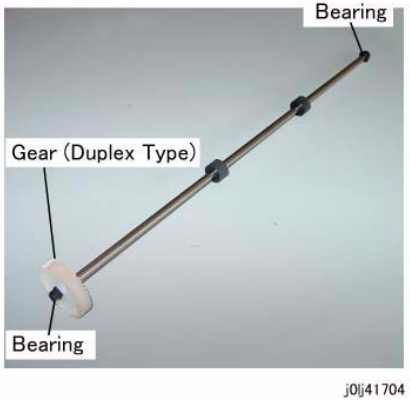


Figure 3 j0lj41704

Replacement

1. To install, carry out the removal steps in reverse order.

REP 18.1.1 ESS/MCU PWB

Parts List on PL 18.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

CAUTION

Static electricity may damage electrical parts.

Static electricity may damage electrical parts. Always wear a wrist band during servicing. If a wrist band is not available, touch some metallic parts before servicing to discharge the static electricity.

CAUTION

Do not get yourself hurt by a soldered portion on the back of the PWB.

1. Remove the Rear Cover. (REP 19.2.1)
2. Remove the Connector Bracket. (Figure 1)
   (1) Remove the screw (x2).
   (2) Remove the Connector Bracket.

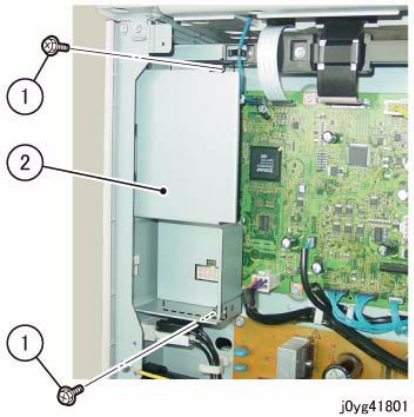


Figure 1 j0yg41801

3. Disconnect the connector. (Figure 2)
   (1) Disconnect the connector (x19).

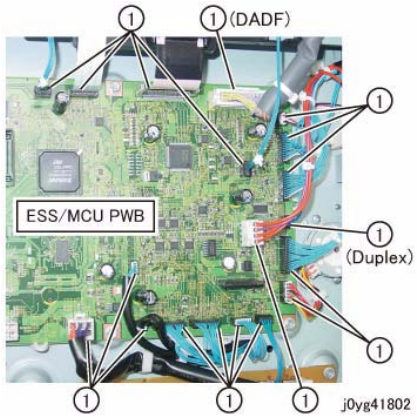


Figure 2 j0yg41802

4. Remove the ESS/MCU PWB. (Figure 3)
   (1) Remove the screw (x6).
   (2) Release the hook and remove the ESS/MCU PWB.

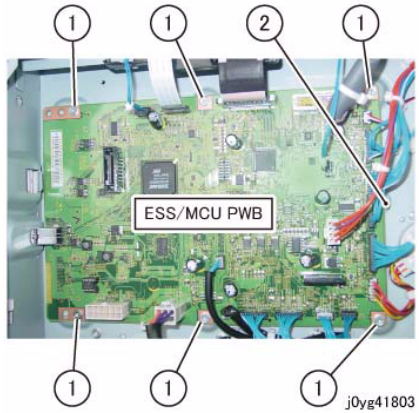


Figure 3 j0yg41803

Replacement

1. To install, carry out the removal steps in reverse order.
2. When replacing the ESS/MCU PWB, remove the EEP ROM from the old ESS/MCU PWB, and install it to the new one. (Figure 4)

Figure 4 j0lj41804

3. Turning ON the power switch will cause 016-334 (NVM Data Mismatch) to be displayed.
   (The Billing/Meter is stored in the EEP ROM at 2 locations. Since the ESS/MCU PWB is a new one, it contains a different value.)
   To take corrective action, enter the Diag Mode and input Clain-Link number '621-400' to perform NVM matching.
   For more details on the procedure, refer to [6.4.2.15 Checking and Repairing the Billing Counter (621-400)].

REP 18.1.2 HVPS

Parts List on PL 18.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

CAUTION

Static electricity may damage electrical parts.

Static electricity may damage electrical parts. Always wear a wrist band during servicing. If a wrist band is not available, touch some metallic parts before servicing to discharge the static electricity.

CAUTION

Do not get yourself hurt by a soldered portion on the back of the PWB.

1. Remove the Rear Cover. (REP 19.2.1)
2. Remove the HVPS. (Figure 1)
   (1) Disconnect the connector.
   (2) Remove the screw (x4).
   (3) Remove the HVPS.

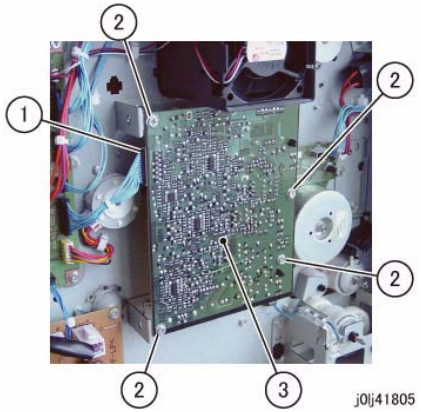


Figure 1 j0lj41805

Replacement

1. To install, carry out the removal steps in reverse order.

REP 18.1.3 LVPS

Parts List on PL 18.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

CAUTION

Static electricity may damage electrical parts.

Static electricity may damage electrical parts. Always wear a wrist band during servicing. If a wrist band is not available, touch some metallic parts before servicing to discharge the static electricity.

CAUTION

Do not get yourself hurt by a soldered portion on the back of the PWB.

1. Remove the Rear Cover. (REP 19.2.1)
2. Remove the Docking Bracket. (Figure 1)
   (1) Remove the Docking Screw.
   (2) Remove the Docking Bracket.

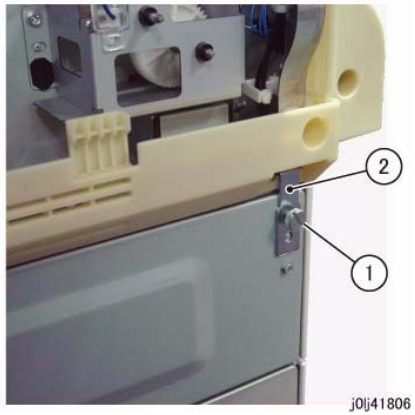


Figure 1 j0lj41806

3. Remove the Rear Lower Cover. (Figure 2)
   (1) Remove the screw (x2).
   (2) Remove the Rear Lower Cover.

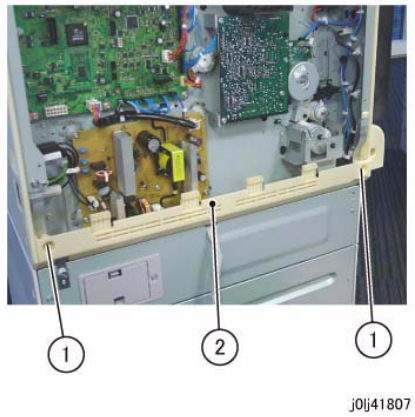


Figure 2 j0lj41807

4. Disconnect the connector of the LVPS. (Figure 3)
   (1) Disconnect the connector (x4).

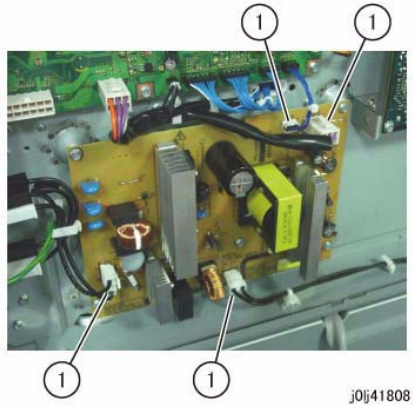


Figure 3 j0lj41808

5. Remove the LVPS. (Figure 4)
   (1) Remove the screw (x5).
   (2) Remove LVPS.

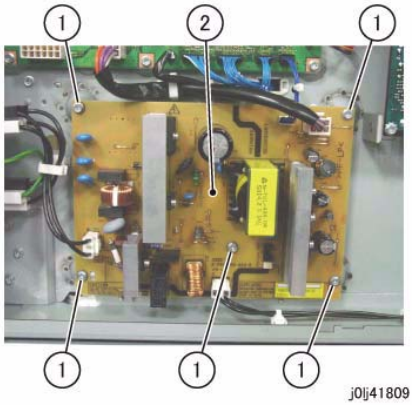


Figure 4 j0lj41809

Replacement

1. To install, carry out the removal steps in reverse order.

REP 19.1.1 Front Cover

Parts List on PL 19.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Drum Cartridge. (REP 8.1.1)
2. Remove the Toner Cartridge. (PL 8.1)
3. Remove the Fusing Unit Cover. (Figure 1)
   (1) Remove the screw.
   (2) Remove the Fusing Unit Cover.

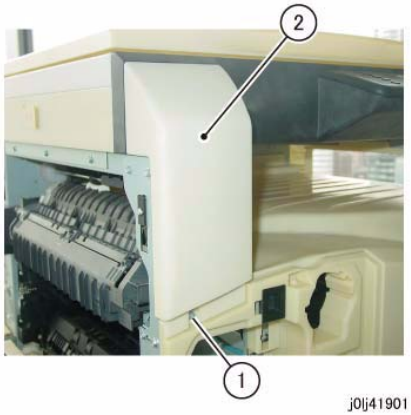


Figure 1 j0lj41901

4. Remove the Connector Blank Cover. (Figure 2)
   (1) Remove the screw.
   (2) Remove the Connector Blank Cover.

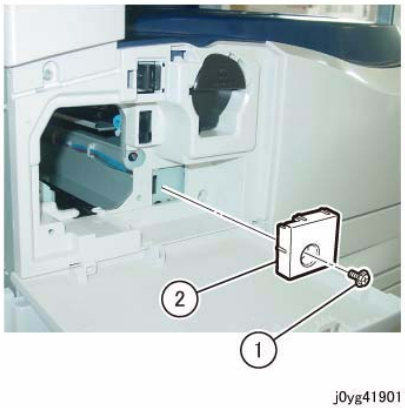


Figure 2 j0yg41901

5. Remove the screw that secures the Front Cover at the right. (Figure 3)
   (1) Remove the screw.

Figure 3 j0lj41902

6. Remove the Front Cover. (Figure 4)
   (1) Remove the screw.
   (2) Remove the Front Cover.

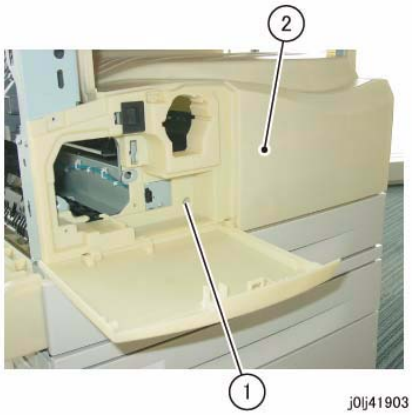


Figure 4 j0lj41903

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Front Cover, attach the hook (x3) of the Front Cover to the Frame. (Figure 5)
   - There are also hooks at the left of the Front Cover.

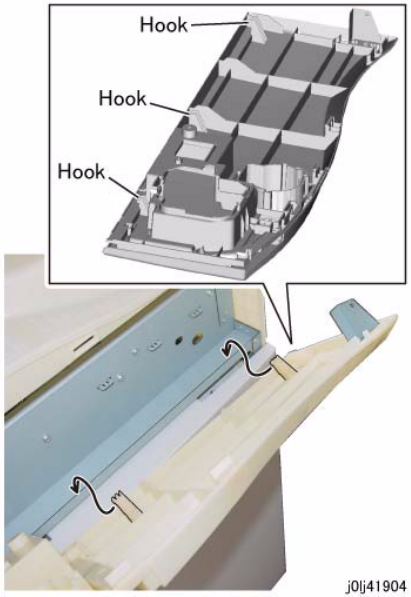


Figure 5 j0lj41904

REP 19.1.2 Top Cover

Parts List on PL 19.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Drum Cartridge. (REP 8.1.1)
2. Remove the Toner Cartridge. (PL 8.1)
3. Remove the Front Cover. (REP 19.1.1)
4. Pull out Tray 1 slightly.
5. Remove the Right Cover. (Figure 1)
   (1) Remove the screw (x3).
   (2) Remove the Right Cover.

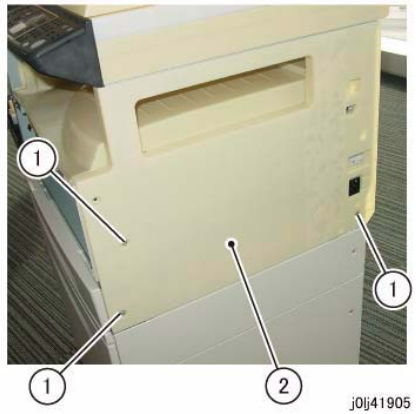


Figure 1 j0lj41905

6. Remove the Top Cover. (Figure 2)
   (1) Remove the Top Cover.

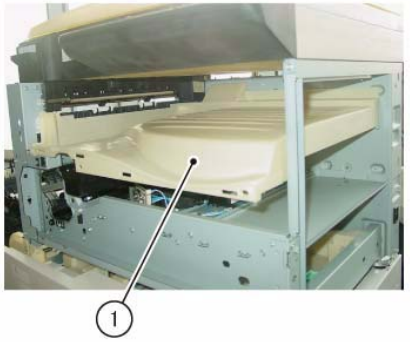


Figure 2 j0lj41906

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Top Cover, insert the Tab (x3) of the Top Cover to the Tab Slot (x3) of the Frame. (Figure 3)

Figure 3 j0lj41907

3. When installing the Top Cover, insert the portion of the Top Cover that is shown in the figure into the Slot of the Exit Cover. (Figure 4)

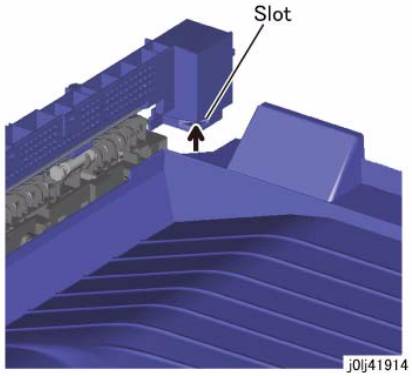


Figure 4 j0lj41914

4. Install the Top Cover with its front left side positioned as shown in the figure. (Figure 5)

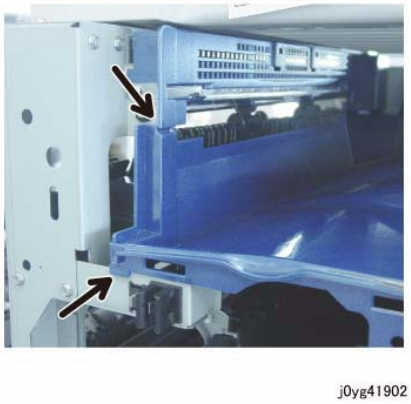


Figure 5 j0yg41902

5. When installing the Right Cover, insert the hook (x2) of the Right Cover to the hole (x2) of the Frame. (Figure 6)

j0lj41909

Figure 6 j0lj41909

6. Install the Right Cover as shown in the figure. (Figure 7)

j0lj41910

Figure 7 j0lj41910

REP 19.2.1 Rear Cover

Parts List on PL 19.2

Removal

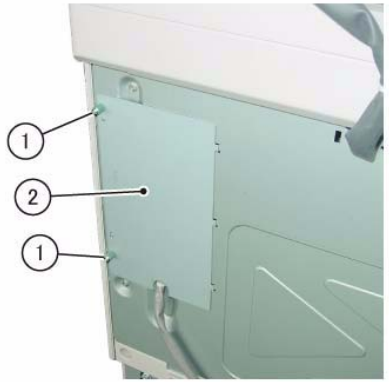
WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. [Machines with One Tray Module]: Remove the STM Connector Cover. (Figure 1)
   (1) Remove the Thumbscrew (x2).
   (2) Remove the STM Connector Cover.



j0yg41903

Figure 1 j0yg41903

2. [Machines with One Tray Module]: Disconnect the connector. (Figure 2)
   (1) Release the Wire Harness from the clamp.
   (2) Remove the cable band.
   (3) Disconnect the connector.

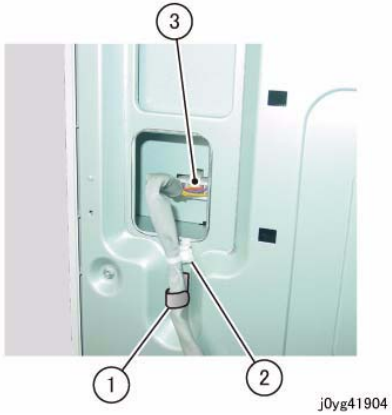


Figure 2 j0yg41904

3. Remove the Rear Cover. (Figure 3)
   (1) Remove the screw (x5).
   (2) Remove the Rear Cover.

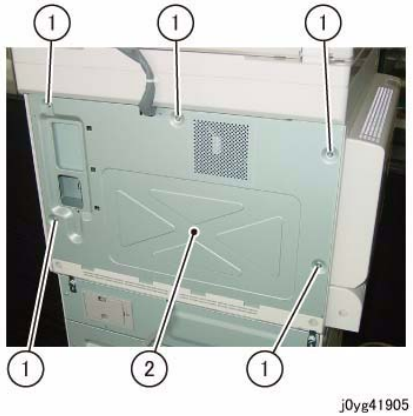


Figure 3 j0yg41905

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.1.1 DADF

Parts List on PL 56.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the Rear Cover. (REP 19.2.1)
2. Disconnect the connector. (Figure 1)
   (1) Remove the cable band (x2).
   (2) Disconnect the connector.

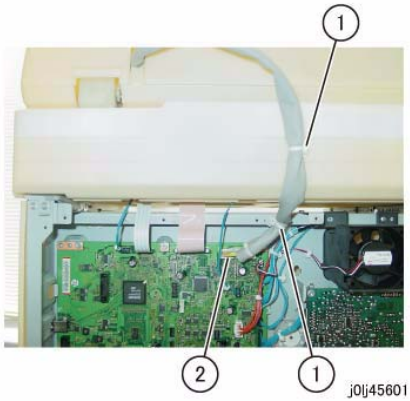


Figure 1 j0lj45601

3. Remove the DADF. (Figure 2)
   (1) Slant the Counter Balance in the direction of the arrow and remove it.

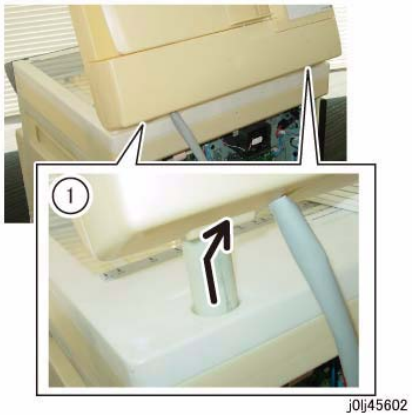


Figure 2 j0lj45602

Replacement

1. To install, carry out the removal steps in reverse order.
2. Install the DADF. (Figure 3)
   (1) Insert the tabs of the Counter Balance into the grooves of the installation holes.

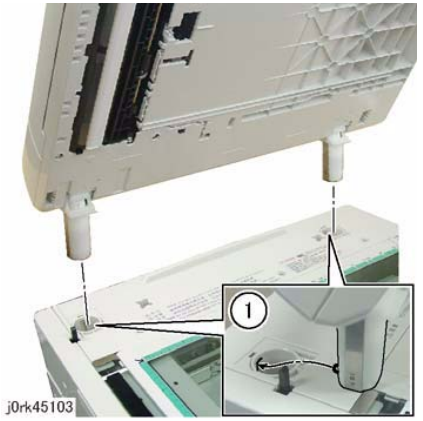


Figure 3 j0rk45103

3. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.
   'Chain Link : 955-806'
   'Chain Link : 955-807'
   'Chain Link : 955-808'
   'Chain Link : 955-810'
   'Chain Link : 955-812'
   'Chain Link : 955-826'

'Chain Link : 955-828'

Refer to [6.4.2.9 HFSI Counter Read/Clear].

REP 56.1.2 DADF Platen Cushion

Parts List on PL 56.1

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

NOTE: *The DADF Platen Cushion is pasted on with double sided adhesive tapes.*

1. Peel off the DADF Platen Cushion. (Figure 1)
   (1) Peel off the DADF Platen Cushion.

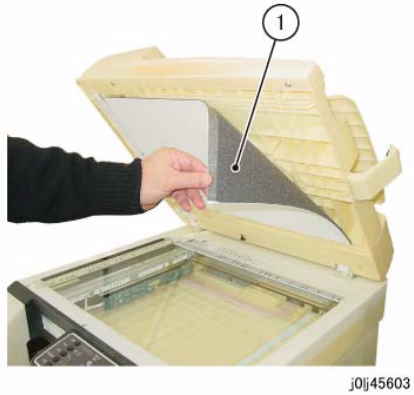


Figure 1 j0lj45603

Replacement

1. Paste on the DADF Platen Cushion. (Figure 2)
   (1) Place the DADF Platen Cushion on the Platen Glass.
   (2) Set up the gap between the Regi Guide and Platen Guide.
   (3) Slowly lower the DADF to paste the DADF Platen Cushion to it.

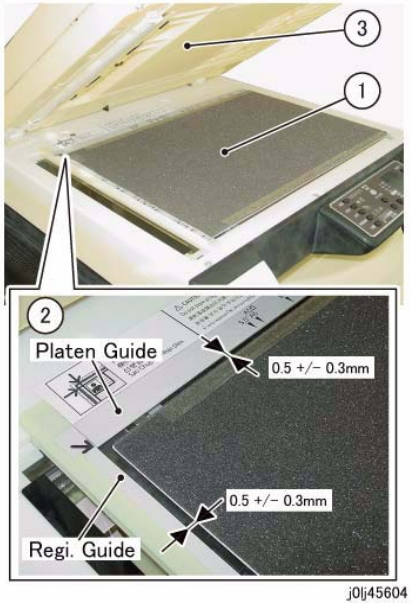


Figure 2 j0lj45604

REP 56.2.1 DADF Front Cover

Parts List on PL 56.2

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Open the Upper Feeder.
2. Open the DADF.
3. Remove the DADF Front Cover. (Figure 1)
   (1) Remove the Tapping Screw (x4).
   (2) Remove the DADF Front Cover in the direction of the arrow.

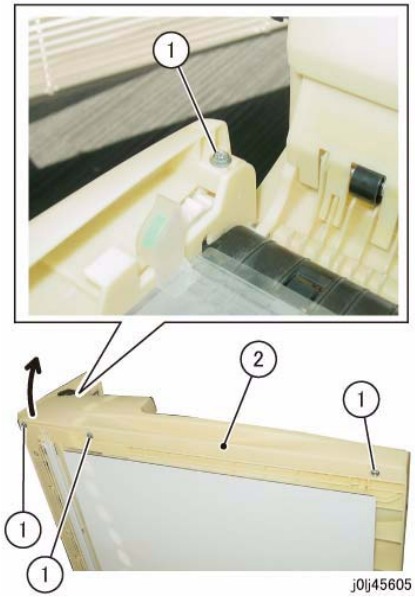


Figure 1 j0lj45605

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.2.2 DADF Rear Cover

Parts List on PL 56.2

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the screws that secure the DADF Rear Cover. (Figure 1)
   (1) Open the Upper Feeder.
   (2) Remove the Tapping Screw.

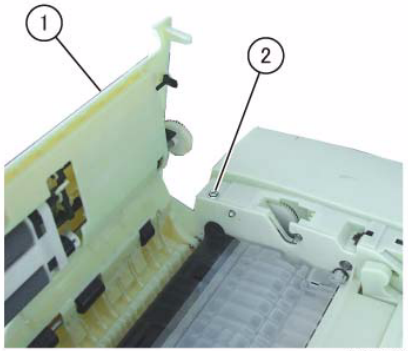


Figure 1 j0lj45606

2. Remove the screws that secure the DADF Rear Cover. (Figure 2)
   (1) Open the Document Tray.
   (2) Remove the Tapping Screw.

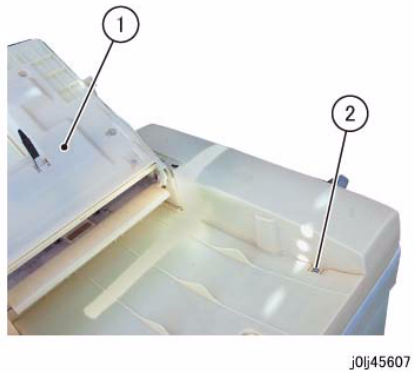


Figure 2 j0lj45607

3. Release the hook (x3) of the DADF Rear Cover. (Figure 3)
   (1) Release the hook (x3).

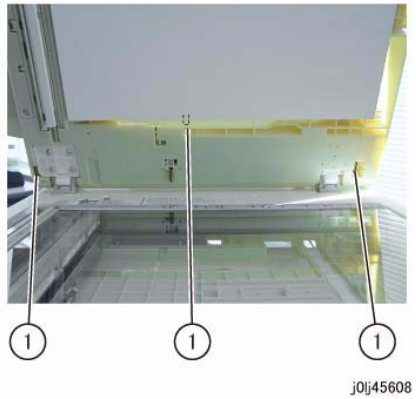


Figure 3 j0lj45608

4. Remove the DADF Rear Cover. (Figure 4)
   (1) Remove the DADF Rear Cover in the direction of the arrow.

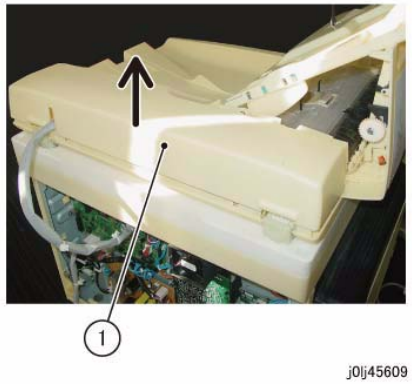


Figure 4 j0lj45609

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.2.3 DADF PWB

Parts List on PL 56.2

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

CAUTION

Static electricity may damage electrical parts.

Static electricity may damage electrical parts. Always wear a wrist band during servicing. If a wrist band is not available, touch some metallic parts before servicing to discharge the static electricity.

CAUTION

Do not get yourself hurt by a soldered portion on the back of the PWB.

1. Remove the DADF Rear Cover. (REP 56.2.2)
2. Disconnect the connector. (Figure 1)
   (1) Disconnect the connector (x9).

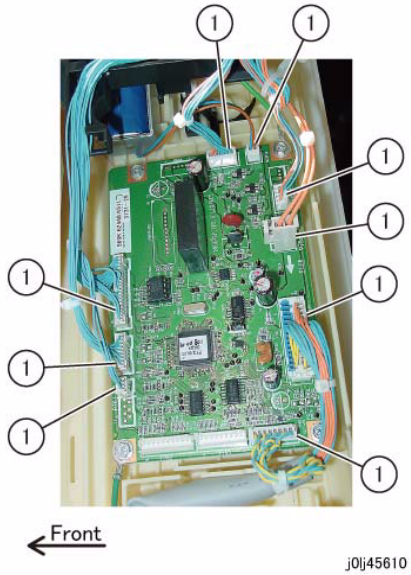


Figure 1 j0lj45610

3. Remove the DADF PWB. (Figure 2)
   (1) Remove the Tapping Screw (x2) and the Ground Wire (x2).
   (2) Remove the Tapping Screw (x2).
   (3) Remove the DADF PWB.

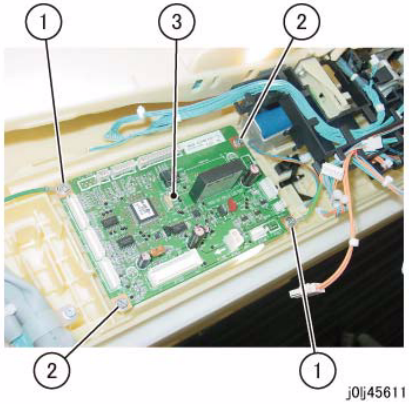


Figure 2 j0lj45611

Replacement

1. To install, carry out the removal steps in reverse order.
2. When replacing the DADF PWB, remove the ROM from the old DADF PWB, and install it to the new one. (Figure 3)

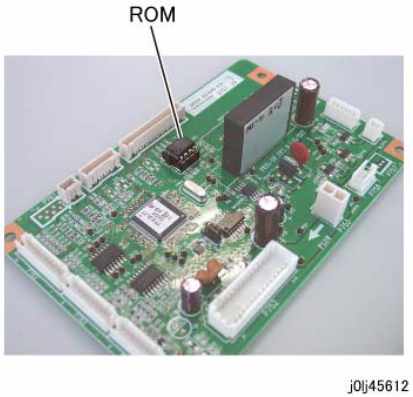


Figure 3 j0lj45612

REP 56.2.4 Upper Feeder

Parts List on PL 56.2

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the DADF Front Cover. (REP 56.2.1)
2. Remove the DADF Rear Cover. (REP 56.2.2)
3. Remove the Hinge Bracket at the front. (Figure 1)
   (1) Remove the Tapping Screw.
   (2) Remove the Hinge Bracket.

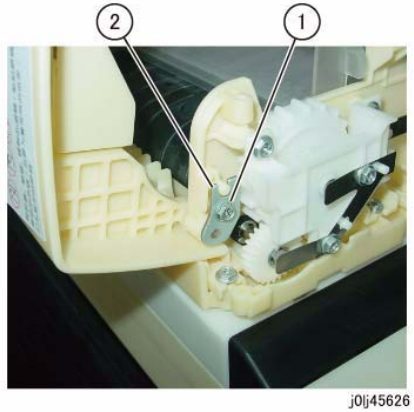


Figure 1 j0lj45626

4. Remove the Hinge Bracket at the rear and remove the Upper Feeder. (Figure 2)
   (1) Remove the Tapping Screw.
   (2) Remove the Hinge Bracket.
   (3) Remove the Upper Feeder.

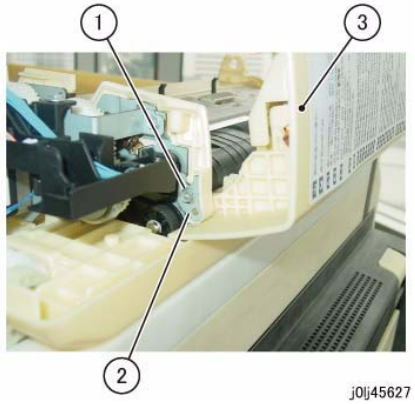


Figure 2 j0lj45627

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.2.5 DADF Feeder Assembly

Parts List on PL 56.2

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the DADF Front Cover. (REP 56.2.1)
2. Remove the DADF Rear Cover. (REP 56.2.2)
3. Remove the Document Tray. (REP 56.9.1)
4. Remove the Harness Guide and the wire harness. (REP 56.6.1)
5. Remove the Upper Feeder. (REP 56.2.4)
6. Disconnect the connector of the Exit Nip Release Solenoid. (Figure 1)
   (1) Disconnect the connector.

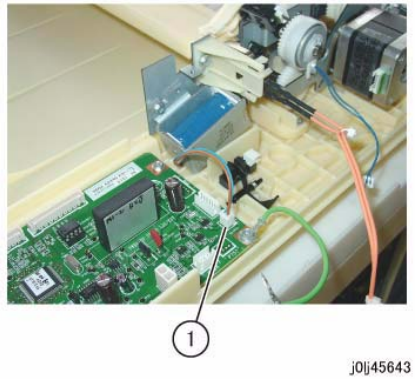


Figure 1 j0lj45643

7. Remove the screws that secure the DADF Feeder Assembly at the rear. (Figure 2)
   (1) Remove the Tapping Screw (x3).

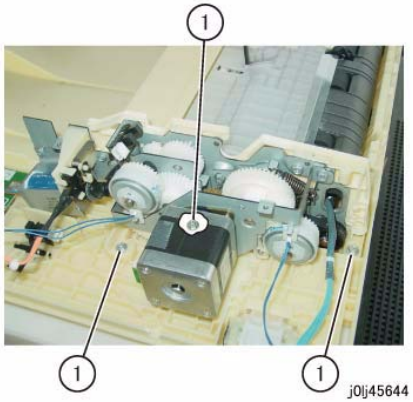


Figure 2 j0lj45644

8. Remove the DADF Feeder Assembly. (Figure 3)
   (1) Remove the Tapping Screw (x3).
   (2) Remove the DADF Feeder Assembly.

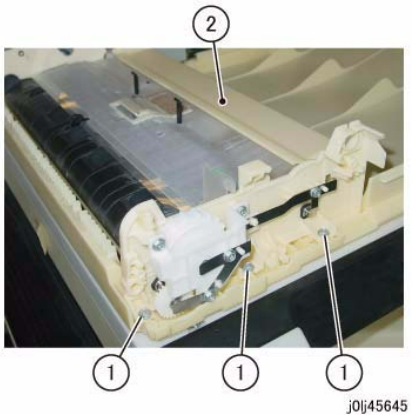


Figure 3 j0lj45645

Reference: This shows the removed DADF Feeder Assembly. (Figure 4)

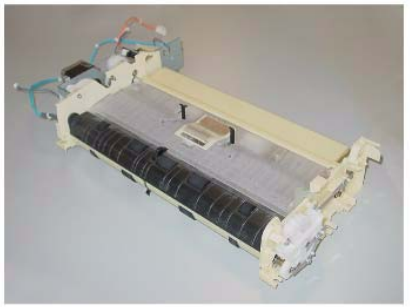


Figure 4 j0lj45646

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.3.1 Left Counter Balance

Parts List on PL 56.3

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the DADF. (REP 56.1.1)
2. Turn the DADF upside down.
3. Remove the Left Counter Balance. (Figure 1)
   (1) Remove the Tapping Screw (x4).
   (2) Remove the Left Counter Balance.

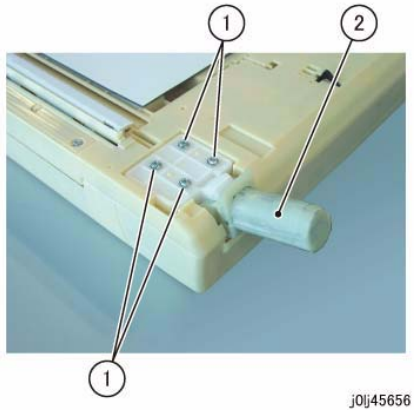


Figure 1 j0lj45656

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.3.2 Right Counter Balance

Parts List on PL 56.3

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the DADF Rear Cover. (REP 56.2.2)
2. Remove the DADF. (REP 56.1.1)
3. Record the position of the scale for the Right Counter Balance. (Figure 1)

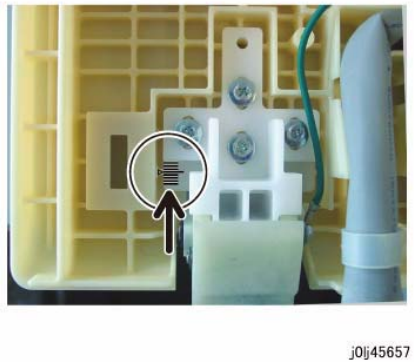


Figure 1 j0lj45657

4. Remove the Right Counter Balance. (Figure 2)
   (1) Remove the Tapping Screws that secure the Ground Wire.
   (2) Remove the Tapping Screw (x4).
   (3) Remove the Right Counter Balance.

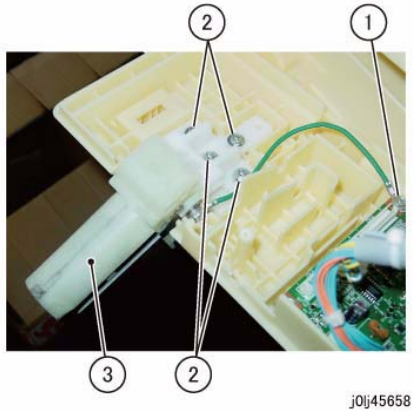


Figure 2 j0lj45658

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.5.1 DADF Feed/Nudger Roll

Parts List on PL 56.5

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

NOTE: *The DADF Feed Roll, the DADF Nudger Roll, and the DADF Retard Pad must be replaced at the same time.*

1. Open the Upper Feeder.
2. Remove the Upper Feeder Chute. (Figure 1)
   (1) Remove the screw (x2).
   (2) Remove the Upper Feeder Chute.

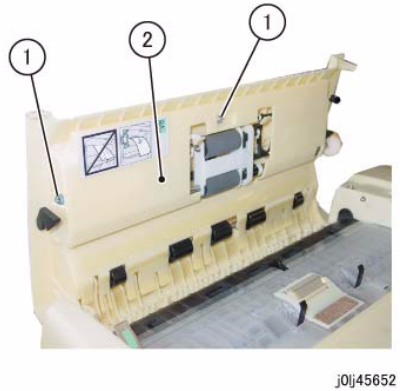


Figure 1 j0lj45652

3. Remove the Feed Roll Nudger Roll Assembly. (Figure 2)
   (1) Remove the KL-Clip.
   (2) Move the bearing in the direction of the arrow.
   (3) Remove the Feed Roll Nudger Roll Assembly.

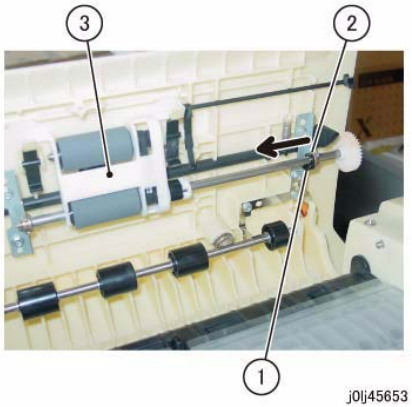


Figure 2 j0lj45653

4. Remove the Feed Roll and the Nudger Roll. (Figure 3)
   (1) Remove the Bearing.
   (2) Remove the KL-Clip.
   (3) Release the hook to remove the housing.
   (4) Remove the Feed Roll.
   (5) Remove the Nudger Roll.

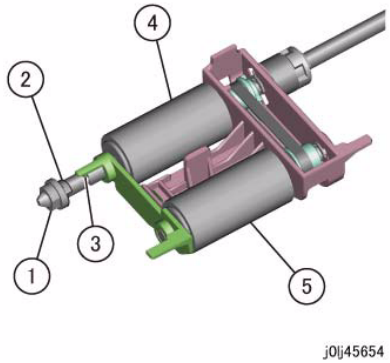


Figure 3 j0lj45654

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Feed Roll and the Nudger Roll, install them such that they are rotating in the clockwise direction.
3. When installing the Feed Roll Nudger Roll Assembly, install it such that the Tab (x2) of the Feed Roll Nudger Roll Assembly are at the inner side of the Set Link. (Figure 4)

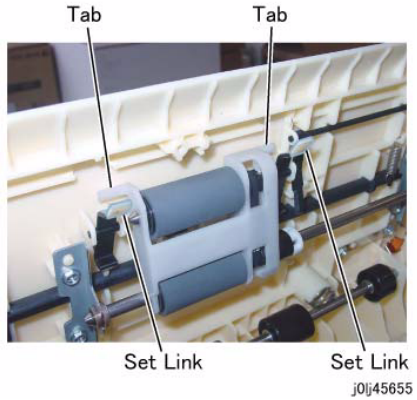


Figure 4 j0lj45655

4. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.
   'Chain Link : 955-806'
   Refer to [6.4.2.9 HFSI Counter Read/Clear].

REP 56.6.1 Harness Guide and Wire Harness

Parts List on PL 56.6

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the DADF Front Cover. (REP 56.2.1)
2. Remove the DADF Rear Cover. (REP 56.2.2)
3. Remove the Document Tray. (REP 56.9.1)
4. Disconnect P760 and remove the wire harness from the Harness Guide. (Figure 1)
   (1) Disconnect the connector.
   (2) Remove the wire harness from the Harness Guide.

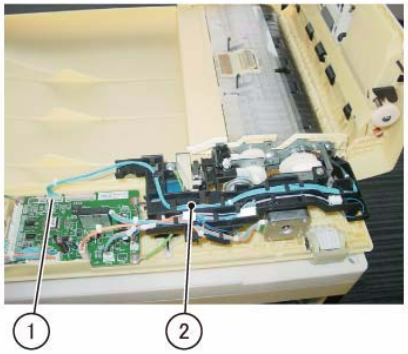


Figure 1 j0lj45618

5. Disconnect P753 and remove the wire harness from the Harness Guide. (Figure 2)
   (1) Disconnect the connector.
   (2) Remove the wire harness from the Harness Guide.

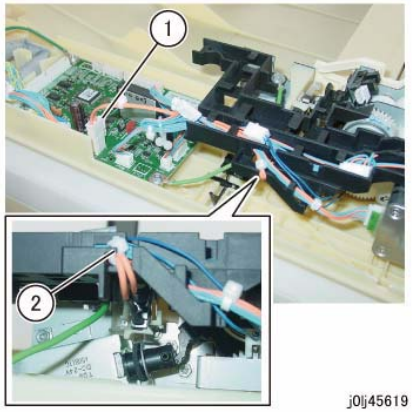


Figure 2 j0lj45619

6. Disconnect the connector of the DADF Takeaway Clutch and remove the wire harness from the Harness Guide. (Figure 3)
   (1) Disconnect the connector.
   (2) Remove the wire harness from the Harness Guide.

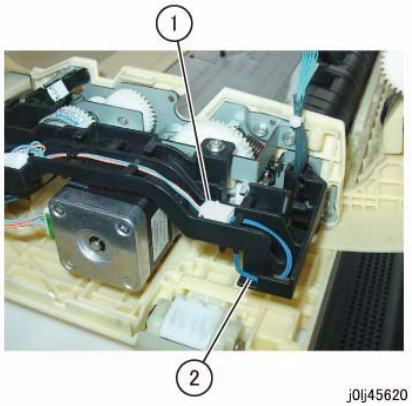
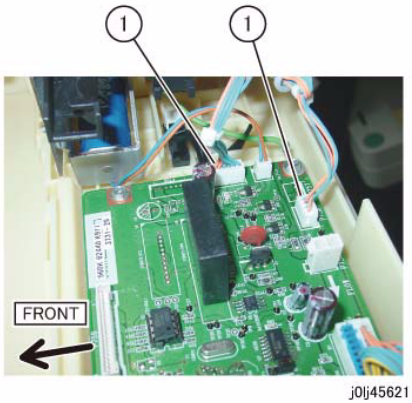


Figure 3 j0lj45620

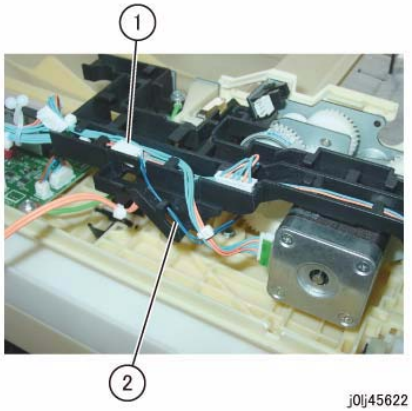
7. Disconnect the DADF PWB connectors. (Figure 4)
   (1) Disconnect the connector (x2).



j0lj45621

Figure 4 j0lj45621

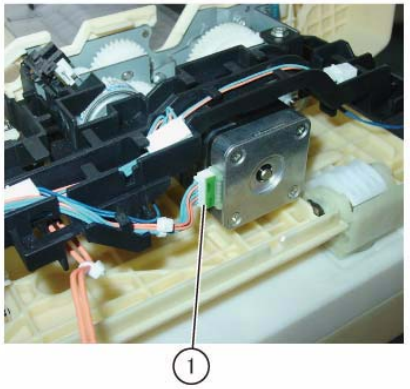
8. Disconnect the connector of the DADF Feed Clutch and remove the wire harness from the Harness Guide. (Figure 5)
   (1) Disconnect the connector.
   (2) Remove the wire harness from the Harness Guide.



j0lj45622

Figure 5 j0lj45622

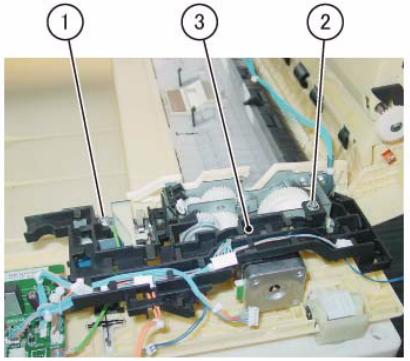
9. Disconnect the connector of the DADF Feed Motor. (Figure 6)
   (1) Disconnect the connector.



j0lj45623

Figure 6 j0lj45623

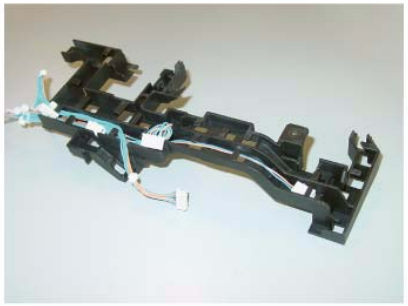
10. Remove the Harness Guide and the wire harness. (Figure 7)
    (1) Remove the screw and the Ground Wire.
    (2) Remove the screw.
    (3) Remove the Harness Guide and the wire harness.



j0lj45624

Figure 7 j0lj45624

Reference: This shows the removed Harness Guide and wire harness. (Figure 8)



j0lj45625

Figure 8 j0lj45625

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.6.2 DADF Feed Motor

Parts List on PL 56.6

Removal

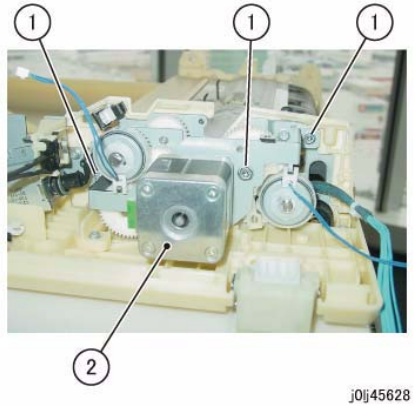
WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the DADF Front Cover. (REP 56.2.1)
2. Remove the DADF Rear Cover. (REP 56.2.2)
3. Remove the Document Tray. (REP 56.9.1)
4. Remove the Harness Guide and the wire harness. (REP 56.6.1)
5. Remove the DADF Feed Motor. (Figure 1)
   (1) Remove the screw (x3).
   (2) Remove the DADF Feed Motor.

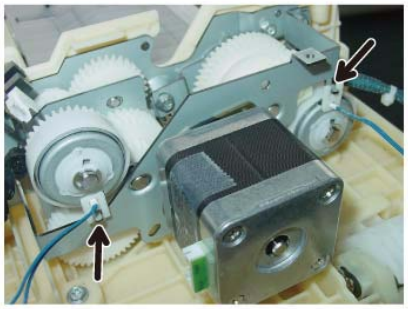


j0lj45628

Figure 1 j0lj45628

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the DADF Feed Motor, align the Tab (x2) of the DADF Feed Motor Bracket to the Cutout (x2) of the DADF Feed Clutch and DADF Takeaway Clutch. (Figure 2)



j0lj45630

Figure 2 j0lj45630

REP 56.7.1 DADF Drive Belt

Parts List on PL 56.7

Removal

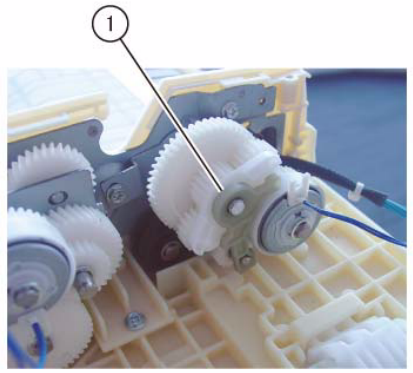
WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the DADF Front Cover. (REP 56.2.1)
2. Remove the DADF Rear Cover. (REP 56.2.2)
3. Remove the Document Tray. (REP 56.9.1)
4. Remove the Harness Guide and the wire harness. (REP 56.6.1)
5. Remove the DADF Feed Motor. (REP 56.6.2)
6. Remove the link. (Figure 1)
   (1) Remove the link.



j0lj45631

Figure 1 j0lj45631

7. Remove the gear and bracket. (Figure 2)
   (1) Remove the washer (large: thin).
   (2) Remove the washer (small: thick).
   (3) Remove the gear and bracket.

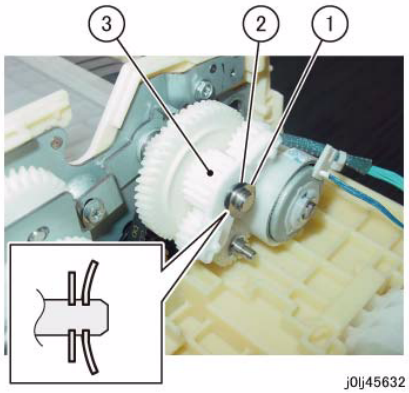


Figure 2 j0lj45632

8. Remove the DADF Takeaway Clutch. (Figure 3)
   (1) Remove the E-Clip.
   (2) Remove the DADF Takeaway Clutch.

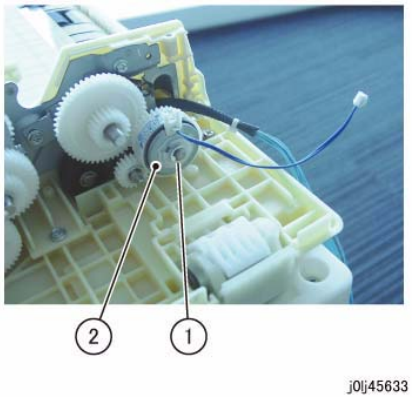


Figure 3 j0lj45633

9. Remove the gear. (Figure 4)
   (1) Loosen the screw.
   (2) Remove the spring.
   (3) Remove the gear.

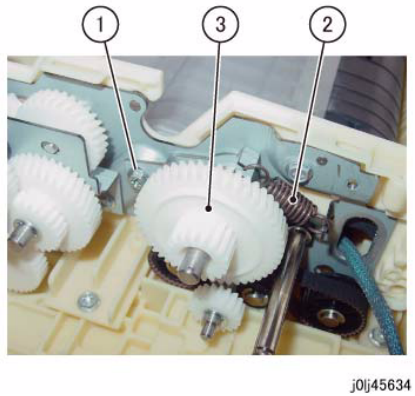


Figure 4 j0lj45634

10. Remove the DADF Drive Belt. (Figure 5)
    (1) Remove the DADF Drive Belt.

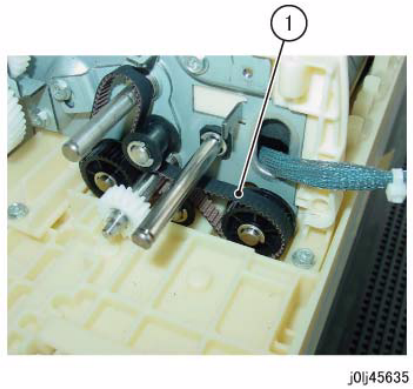


Figure 5 j0lj45635

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.9.1 Document Tray

Parts List on PL 56.9

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the DADF Front Cover. (REP 56.2.1)
2. Remove the DADF Rear Cover. (REP 56.2.2)
3. Remove the wire harness of the Document Tray from the Harness Guide. (Figure 1)
   (1) Disconnect the connector (x4).
   - For the type that comes with DADF Open Sensor, disconnect the connector of the DADF Open Sensor.

   (2) Remove the wire harness from the Harness Guide.

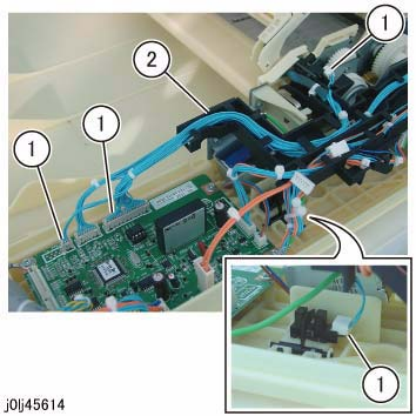


Figure 1 j0lj45614

Reference: This shows the removed wire harness of the Document Tray. (Figure 2)

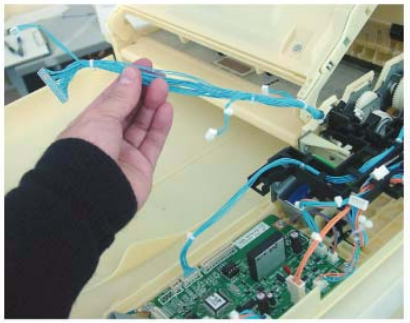


Figure 2 j0lj45615

4. Remove the boss of the Document Tray at the front. (Figure 3)
   (1) Squeeze the boss of the Document Tray in the direction of the arrow and remove it from the hole.

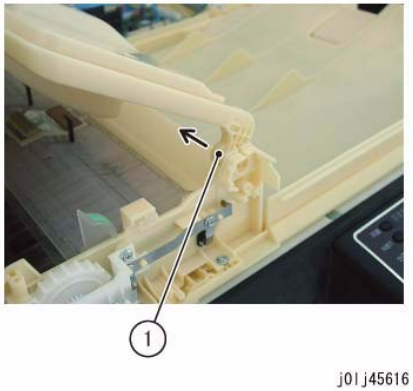


Figure 3 j0lj45616

5. Remove the wire harness through the hole at the rear. (Figure 4)
   (1) Remove the wire harness through the hole.

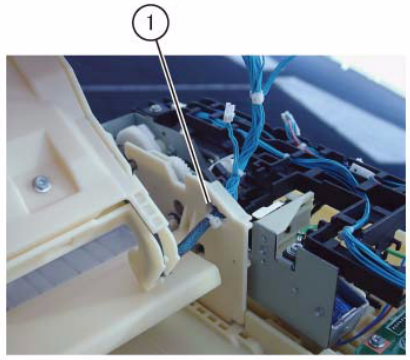


Figure 4 j0lj45617

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.9.2 Retard Chute

Parts List on PL 56.9

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the DADF Front Cover. (REP 56.2.1)
2. Remove the DADF Rear Cover. (REP 56.2.2)
3. Remove the Document Tray. (REP 56.9.1)
4. Open the Retard Chute.
5. Remove the Retard Chute. (Figure 1)
   (1) Remove the Retard Chute in the direction of the arrow.

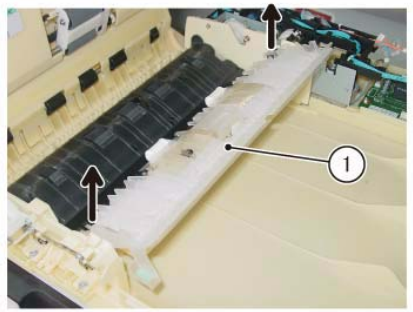


Figure 1 j0lj45647

NOTE: *For the type that comes with washer attached to the boss at the rear, be careful so as to not lose the washer. (Figure 2)*

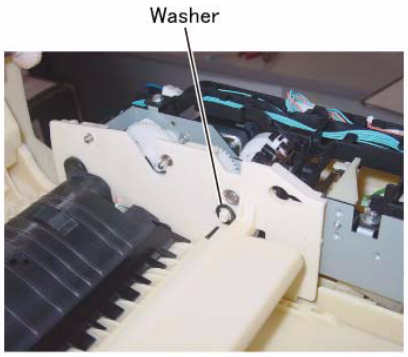


Figure 2 j0lj45648

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.9.3 Invert Chute

Parts List on PL 56.9

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Open the Upper Feeder.
2. Open the Retard Chute.
3. Remove the Invert Chute. (Figure 1)
   (1) Remove the Tapping Screw (x2).
   (2) Remove the Invert Chute.

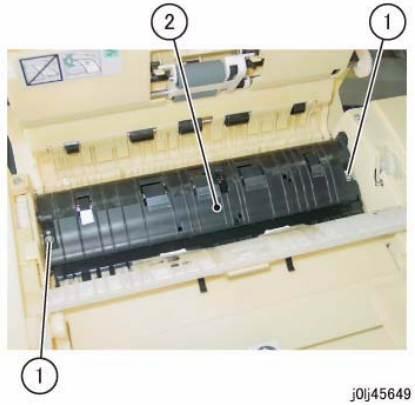


Figure 1 j0lj45649

Replacement

1. To install, carry out the removal steps in reverse order.

REP 56.10.1 DADF Takeaway Roll

Parts List on PL 56.10

Removal

WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

1. Remove the DADF Front Cover. (REP 56.2.1)
2. Remove the DADF Rear Cover. (REP 56.2.2)
3. Remove the Document Tray. (REP 56.9.1)
4. Remove the Harness Guide and the wire harness. (REP 56.6.1)
5. Remove the Upper Feeder. (REP 56.2.4)
6. Remove the Invert Chute. (REP 56.9.3)
7. Remove the DADF Feed Motor. (REP 56.6.2)
8. Remove the link. (Figure 1)
   (1) Remove the link.

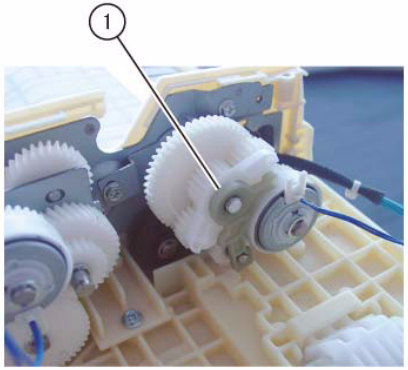


Figure 1 j0lj45631

9. Remove the gear and bracket. (Figure 2)
   (1) Remove the washer (large: thin).
   (2) Remove the washer (small: thick).
   (3) Remove the gear and bracket.

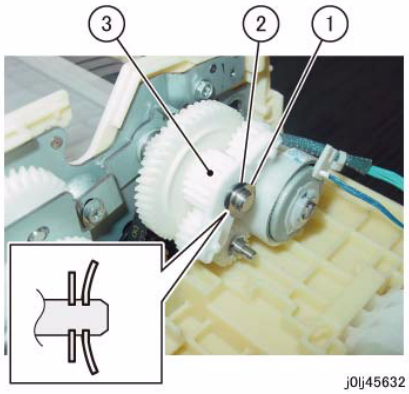


Figure 2 j0lj45632

10. Remove the DADF Takeaway Clutch. (Figure 3)
    (1) Remove the E-Clip.
    (2) Remove the DADF Takeaway Clutch.

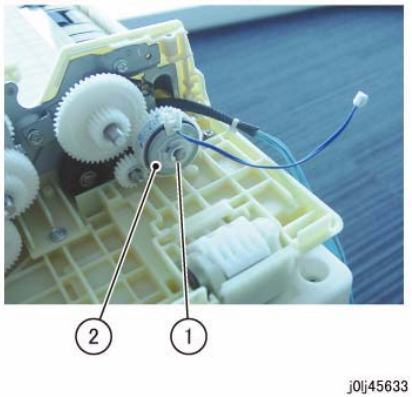
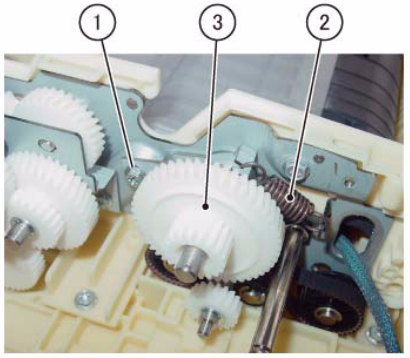


Figure 3 j0lj45633

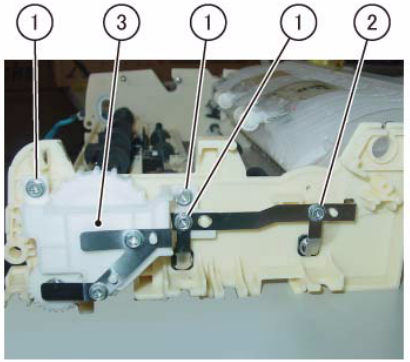
11. Remove the gear. (Figure 4)
    (1) Loosen the screw.
    (2) Remove the spring.
    (3) Remove the gear.



j0lj45634

Figure 4 j0lj45634

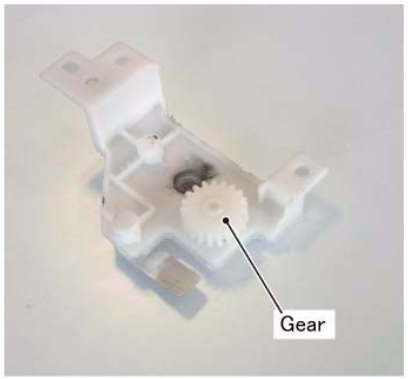
12. Remove the Bracket and Ground Plate at the front. (Figure 5)
    (1) Remove the Tapping Screw (x3).
    (2) Loosen the screw.
    (3) Remove the Bracket and Ground Plate.



j0lj45636

Figure 5 j0lj45636

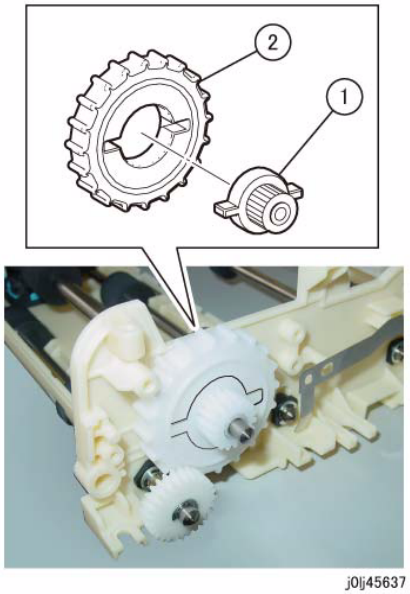
NOTE: *Be careful so as to not lose the gear under the Bracket and Ground Plate. (Figure 6)*



j0lj45641

Figure 6 j0lj45641

13. Remove the Knob Handle. (Figure 7)
    (1) Remove the gear.
    (2) Remove the Knob Handle.



j0lj45637

Figure 7 j0lj45637

14. Remove the bearing at the front. (Figure 8)

(1) Remove the KL-Clip.
(2) Remove the Bearing.

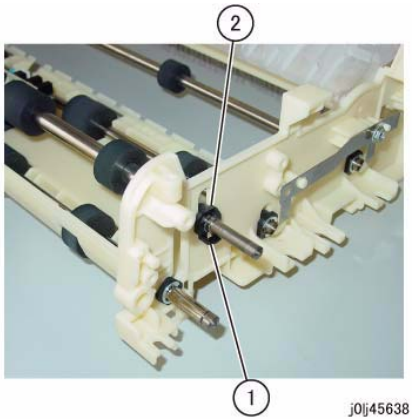


Figure 8 j0lj45638

15. Remove the bearing at the rear and remove the DADF Takeaway Roll. (Figure 9)
    (1) Remove the E-Clip.
    (2) Remove the Bearing.
    (3) Remove the DADF Takeaway Roll.

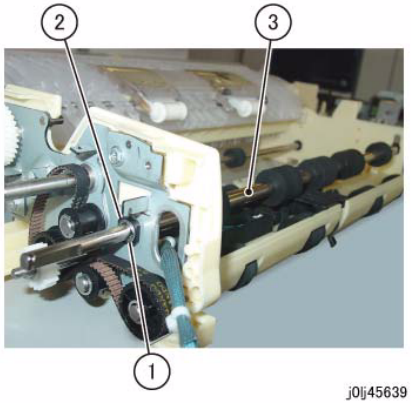


Figure 9 j0lj45639

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Bracket and Ground Plate, install the Ground Plate as shown in the figure.
   (Figure 10)

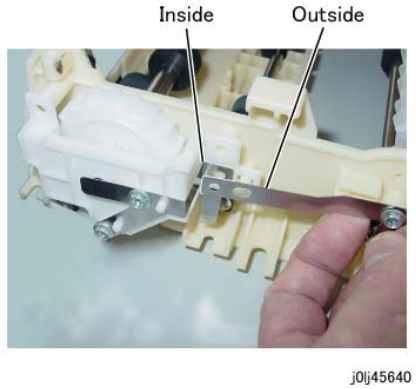


Figure 10 j0lj45640

REP 56.10.2 Sensor Bracket

Parts List on PL 56.10

Removal

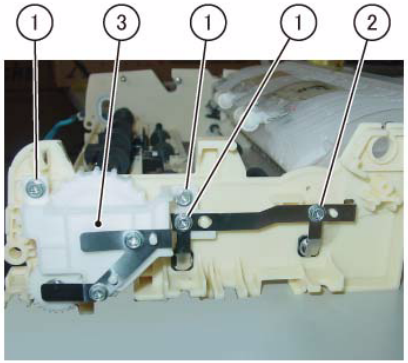
WARNING

When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

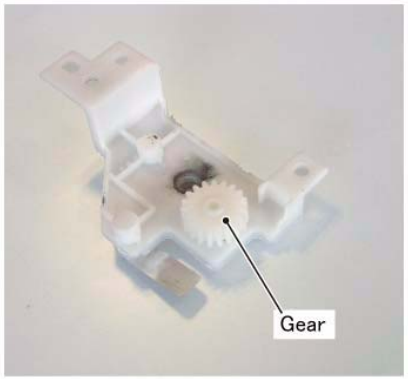
1. Remove the DADF Front Cover. (REP 56.2.1)
2. Remove the DADF Rear Cover. (REP 56.2.2)
3. Remove the Invert Chute. (REP 56.9.3)
4. Remove the Bracket and Ground Plate at the front. (Figure 1)
   (1) Remove the Tapping Screw (x3).
   (2) Loosen the screw.
   (3) Remove the Bracket and Ground Plate.



j0lj45636

Figure 1 j0lj45636

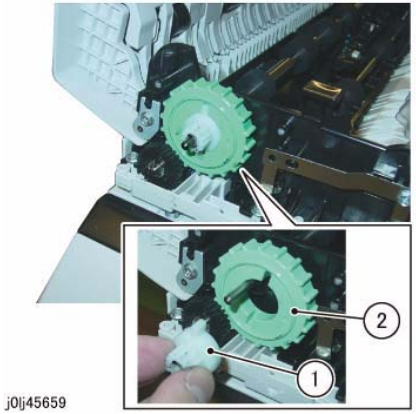
NOTE: *Be careful so as to not lose the gear under the Bracket and Ground Plate. (Figure 2)*



j0lj45641

Figure 2 j0lj45641

5. Remove the Knob Handle. (Figure 3)
   (1) Remove the gear.
   (2) Remove the Knob Handle.



j0lj45659

Figure 3 j0lj45659

6. Remove the Bearing of the DADF Takeaway Roll. (Figure 4)
   (1) Remove the KL-Clip.
   (2) Remove the Bearing.

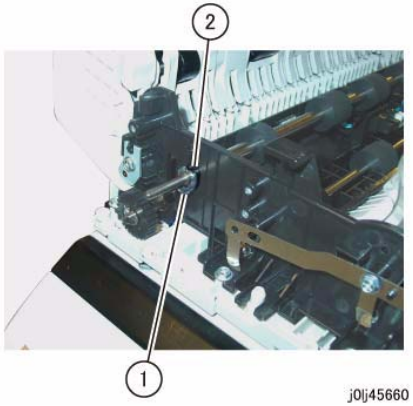


Figure 4 j0lj45660

7. Remove the screws that secure the Sensor Bracket. (Figure 5)
   (1) Disconnect the connector.
   (2) Remove the Tapping Screw (x2).

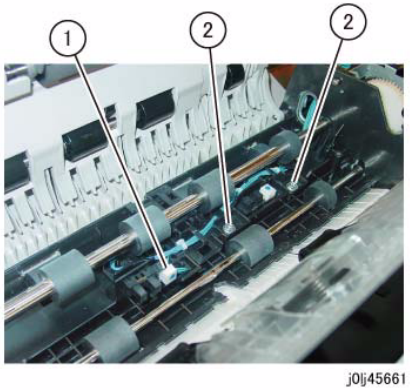


Figure 5 j0lj45661

8. Remove the Sensor Bracket from underneath the DADF Takeaway Roll. (Figure 6)
   (1) Lift up the Front side of the DADF Takeaway Roll.
   (2) Remove the Sensor Bracket.

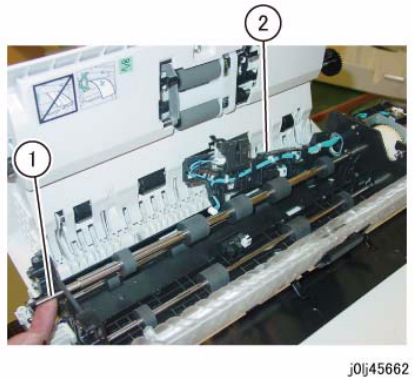


Figure 6 j0lj45662

9. Remove the DADF Pre Regi Sensor. (Figure 7)
   (1) Release the hook to remove the DADF Pre Regi Sensor.
   (2) Disconnect the connector.

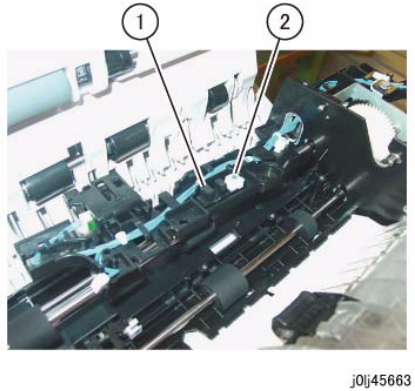
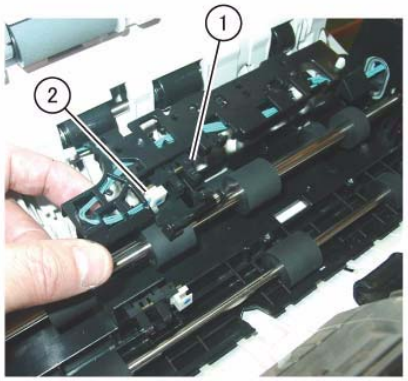


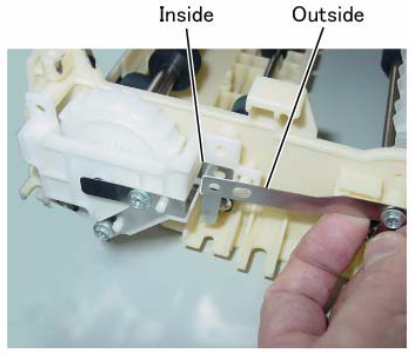
Figure 7 j0lj45663

10. Remove the DADF Regi Sensor at the back of the Sensor Bracket. (Figure 8)
    (1) Release the hook to remove the DADF Regi Sensor.
    (2) Disconnect the connector.



j0lj455664

Figure 8 j0lj45664

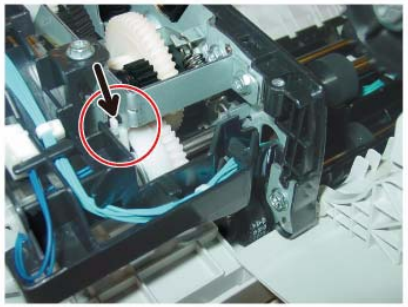


j0lj45640

Figure 10 j0lj45640

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the Bearing of the DADF Takeaway Roll, align the Cutout of the DADF Takeaway Clutch at the Rear side to the Tab of the Bracket of the DADF Feed Motor. (Figure 9)



j0lj45665

Figure 9 j0lj45665

3. When installing the Bracket and Ground Plate, install the Ground Plate as shown in the figure.
   (Figure 10)

REP 56.13.1 DADF Retard Pad

Parts List on PL 56.13

Removal

WARNING

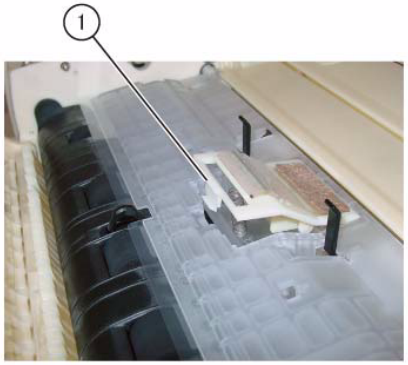
When turning OFF the power switch, check that the 'Data' lamp is OFF and that there is no Job in progress.

Turn OFF the power switch and make sure that the screen display turns OFF.

Check that the power switch is OFF and unplug the power plug.

NOTE: *The DADF Retard Pad, the DADF Feed Roll, and the DADF Nudger Roll must be replaced at the same time.*

1. Open the Upper Feeder.
2. Remove the DADF Retard Pad. (Figure 1)
   (1) Release the hook, open the DADF Retard Pad, and then remove the DADF Retard Pad.

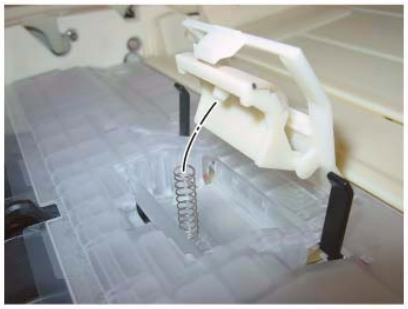


j0lj45650

Figure 1 j0lj45650

Replacement

1. To install, carry out the removal steps in reverse order.
2. When installing the DADF Retard Pad, attach the spring to the boss of the DADF Retard Pad.
   (Figure 2)



j0lj45651

Figure 2 j0lj45651

3. After a replacement, enter the Diag Mode and use [Initialize HFSI Counter] to clear the HFSI counter.
   'Chain Link : 955-806'
   Refer to [6.4.2.9 HFSI Counter Read/Clear].

ADJ 1.3.1 IIT Lead Edge Registration

Purpose

To adjust the IIT scan timing in the Slow Scan direction and to correct the copy position.

CAUTION

Avoid using this procedure when performing the adjustment of the Lead Edge Registration. This procedure should be performed only when the actual IIT Regi is not appropriate. This is because the IIT Lead Edge Registration affects the precision of the document size detection, etc.

***NOTE:** Before performing this procedure, make sure that the IOT Lead Edge Registration is appropriate. (Refer to ADJ 18.1.1 IOT Side/Lead Edge Registration.)*

Check

1. Place the Test Chart (499T283) on the Platen Glass correctly and make a copy in the following copy mode:
   - Copy Mode: 'Black'
   - Paper Size: 'A3'
   - Reduce / Enlarge: '100%'
   - No. of Copies: '2'
2. Check that the distance between the lead edge of the 2nd copy and the reference line is 10.0 +/-1.6 mm or the same as the dimension on the Test Chart. (Figure 1)

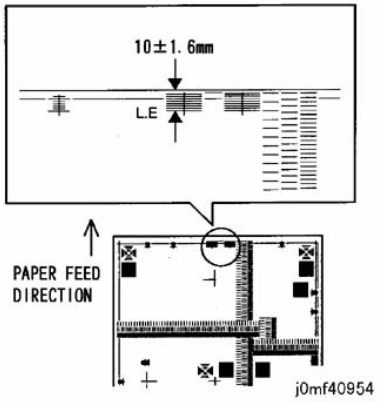


Figure 1 j0mf40954

3. If the value is not within the specified range, adjust it as follows:

Adjustment

1. Enter NVM [715-050] Platen SS Registration Adjustment.
2. Change the value.
   - Change amount for 1 step: 2 pulse
   - Increment of the value: The image moves towards the Tail Edge.
   - Decrement of the value: The image moves towards the Lead Edge.

ADJ 1.3.2 IIT Side Registration

Purpose

To adjust the IIT scan timing in the Fast Scan direction and to correct the copy position.

CAUTION

Avoid using this procedure when performing the adjustment of the Side Registration. This procedure should be performed only when the actual IIT Regi is not appropriate. This is because the IIT Side Registration affects the precision of the document size detection, etc.

***NOTE:** Before performing this procedure, make sure that the IOT Lead Edge Registration is appropriate. (Refer to ADJ 18.1.1 IOT Side/Lead Edge Registration.)*

Check

1. Load A3 paper into Tray 1.
2. Place the Test Chart (499T283) on the Platen Glass correctly and make a copy in the following copy mode:
   - Copy Mode: 'Black'
   - Paper Tray: Tray 1
   - Reduce / Enlarge: '100%'
   - No. of Copies: '2'
3. Check that the distance between the side edge of the 2nd copy and the specified value is 10.0 +/-2.1 mm or the same as the dimension on the Test Chart. (Figure 1)

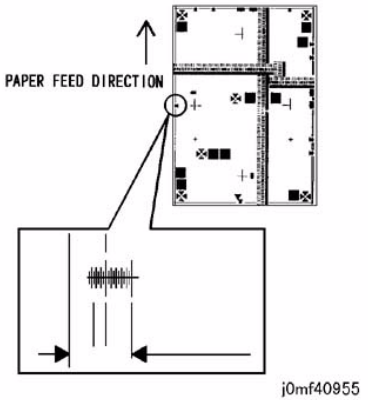


Figure 1 j0mf40955

4. If the value is not within the specified range, adjust it as follows:

Adjustment

1. Enter NVM [715-053] Platen FS Registration Adjustment.
2. Change the value.
   - Change amount for 1 step: 1 dot
   - Increment of the value: The image moves towards the IN side.
   - Decrement of the value: The image moves towards the OUT side.

ADJ 8.1.1 ATC Sensor Read & Tone Up/Down

Purpose

To judge the status of the current TC (toner density) in the Developer Housing Assy based on the output value of the ATC Sensor. Tone Up / Down will be performed depending on that status.

Overview

1. ATC Sensor Read
   - This function uses the ATC Sensor to detect the TC (toner density) in the Developer Housing Assy and, at the same time, calculate and display the ATC Target Value.

     To be more specific, when the specified time after the Developer Housing Assy drive had started and agitation had been performed, the ATC Sensor output is sampled (by the specified number of times) and the samples are run through filtering and sectional averaging to compute the ATC Output Value.

2. Tone Up/Down
   - This function adjusts the toner density based on the that quantity was entered.

3. Adjustment Guideline
   - The difference between [ATC Correction Target Value] and [ATC Average Value] must be within 60 and the toner density is of 2% part equivalent.
   - The adjustment amount is such that the difference between [ATC Correction Target Value] and [ATC Average Value] must be within 30 for both Tone Up / Down and the output is equivalent to A4L_7 sheets.

4. Image Quality Restrictions
   - As the Tray to be used is Tray 1, only standard paper types that are supported for use with the Tray 1 can be selected.
   - The maximum number of sheets for each Tone Up / Down is 20 sheets.

Adjustment

- For the adjustment procedure, refer to the following:
  1. 6.4.2.12 ATC Sensor Read
  2. 6.4.2.13 Tone Up/Down

ADJ 18.1.1 IOT Lead Edge/Side Edge Registration

Purpose

To align the image on the drum with the proper position (Lead/Side Edge) of the paper.

Check

1. Load A4 paper into the Tray in SEF orientation.

   NOTE: *The Tray Select will follow the setting value of NVM [623-021] (DIAG_TEST_PRINT_INPUT_TRAY).*

2. Enter the CE Mode and input 999-980 (Maintenance Report) in the Chain-Link.
3. Pressing the [Start] button prints the Maintenance Report.
4. Measure the Lead and Side Edges of the print pattern.
   - Lead Edge: Part A of the pattern
   - Side Edge: Part B of the pattern

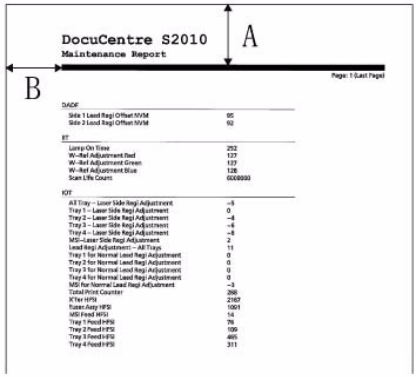


Figure 1 j0lj41895

5. Check that the measured values of the Lead Edge (A) and Side Edge (B) fall within the corresponding specifications.

   NOTE: *To perform measurement for the Lead Edge (A) and Side Edge (B) of Duplex printouts, load the Maintenance Report that was output on the Platen, and make a 1 -> 2 Sided copy to perform the measurement.*

Table 1 IOT Lead Edge/Side Edge

Item	Simplex	Duplex	MSI
Lead Edge (A)	30 +/- 2.4 mm	30 +/- 3.4 mm	30 +/- 3.1 mm
Side Edge (B)	30 +/- 3.0 mm	30 +/- 3.4 mm	30 +/- 3.2 mm

Adjustment

1. Enter the CE Mode.
2. Adjust the NVM until each measured value of the Lead Edge (A) and Side Edge (B) fall within the specifications of the corresponding mode.
   - If the measured value is short: Set a larger value.
   - If the measured value is long: Set a smaller value.

Table 2 NVM List

Chain-Link	Name	Min	Initial	Max	Step
742-001	PH_LEAD_REGI_ALL_TRAY	-50	0	50	2msec
742-002	PH_LEAD_REGI_TRAY1	-50	0	50	2msec
742-003	PH_LEAD_REGI_TRAY2	-50	0	50	2msec
742-004	PH_LEAD_REGI_MSI	-50	0	50	2msec
742-005	PH_LEAD_REGI_DUPLEX	-50	0	50	2msec
742-041	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_ALL_TRAY	-50	0	50	0.169mm
742-042	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_TRAY1	-50	0	50	0.169mm
742-043	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_TRAY2	-49	0	49	0.169mm
742-044	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_MSI	-50	0	50	0.169mm
742-045	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_DUP_ALL_TRAY	-50	0	50	0.169mm
742-046	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_DUP_TRAY1	-50	0	50	0.169mm
742-047	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_DUP_TRAY2	-50	0	50	0.169mm
742-048	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_DUP_MSI	-50	0	50	0.169mm

3. After adjustment, print the Maintenance Report in the same mode again.
4. Repeat the procedure until the measured values of the Lead Edge (A) and Side Edge (B) fall within the specifications.

ADJ 18.1.2 Edge Erase Value Adjustment

Purpose

To correct both (Rear/Front) sides, Lead Edge and Tail Edge erase values of the image.

NOTE: *The IOT Lead Edge/Side Edge Registration must be adjusted.*

Check

1. Specify a Tray loaded with paper. Make a black copy without using any originals and leaving the Platen Cover open.
2. Check that the white sections of the Lead Edge, Tail Edge, and both Side Edges are 4 mm.

Adjustment

1. Enter the CE Mode.
2. Adjust the NVM until the white sections of the Lead Edge, Tail Edge, and both Side Edges are 4 mm.

   Increasing the setting value increases the amount of edge erase for the Lead Edge, Tail Edge, and both Sides.

   This setting affect all 4 sides equally and it is not possible to perform individual setting for the Lead Edge only, etc.

Table 1 NVM List

Chain-Link	Name	Min	Initial	Max	Step
780-066	Edge Erase Copy Job	0	40	500	0.1mm

3. After adjustment, make another black copy without using any originals and leaving the Platen Cover open.
4. Adjust until the white sections of the Lead Edge, Tail Edge, and both Side Edges are 4 mm.

ADJ 18.2.1 Things to take note when replacing Important Information Stored Components (ISC)

Purpose

After installation, any data that the customer has registered are very important. To lose or leak the data would be an unforgivable offence. To gain the trust of customers, it is essential for CE to be knowledgeable about the name of components that store these data. The CE must also have full understanding on how to handle these components when replacing them.

Procedure

This product stores important data in the following components. Perform the operation according to the following procedures.

NOTE: *IBG) Collect/discard components according to the separately pre-determined procedures.*

Table 1

	Component Name	Stored Information	Pre-replacement operation	Post-replacement operation
1	EEP ROM (ESS/MCU PWB)	• Product Code • Serial Number • Copy Counter/ Print Counter • HFSI Counter(IIT/IOT) • Machine System Parameter	To restore the settings later, print the reports. When replacing the PWB, remove the EEP ROM from the old PWB, and install it to the new one.	Restore settings according to the reports. When replacing the PWB, remove the EEP ROM from the old PWB, and install it to the new one.
2	EEP ROM (NET I/F PWB)	• MAC Address • IP Address • Network System Parameter	To restore the settings later, print the reports. When replacing the PWB, remove the EEP ROM from the old PWB, and install it to the new one.	Restore settings according to the reports. When replacing the PWB, remove the EEP ROM from the old PWB, and install it to the new one.

ADJ 18.2.2 Firmware Version Upgrade

Purpose

Perform this procedure when updating the machine firmware (Controller, DADF, UI Panel), or when reinstallation of the machine firmware is required due to failure of some sort.

NOTE: *For STM version upgrade, perform the PWB replacement only.*

<How to obtain the Firmware>

Download the Firmware Version Upgrade Tool (FWDLMgr.exe) and the machine Firmware from the country-specific download sites when upgrading the machine Firmware version.

NOTE: *Downloading the machine Firmware from the web site may take some time (depending on the environment) because of the file size. Hence, download the machine Firmware into the PC (PSW) in advance before visiting the customer.*

NOTE: *Required installation environment*

- *OS : Windows 2000*
- *CPU: Pentium (100 MHz) or higher*
- *Memory: 32 MB or higher*
- *Free Hard Disk Space: 200 MB or higher*

NOTE: *Connection Cables*

- *499T 07776: USB Cable (2 m)*

NOTE: *Precautions during installation*

The downloaded data is a compressed file. Extract the data and perform the Firmware upgrade.

<How to check the machine Firmware version>

The following are the 2 ways to check the machine Firmware version. Check the version before and after performing the Firmware upgrade.

1. Print the report (System Settings Report) to check.
   (1) Enter the System Administrator Mode.
      i. Press the [Log In / Out] button and hold it down for 4 s or longer until the following screen is displayed.

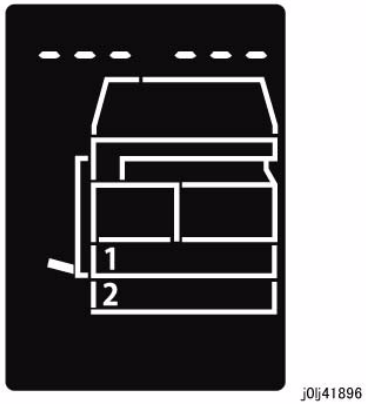


Figure 1 j0lj41896

ii. Use the keypad to enter the Passcode [11111]*1 (5 '1' digits) and press the [Start] button.

NOTE: **1 : Default Value*

iii. The Program Number input screen is displayed.

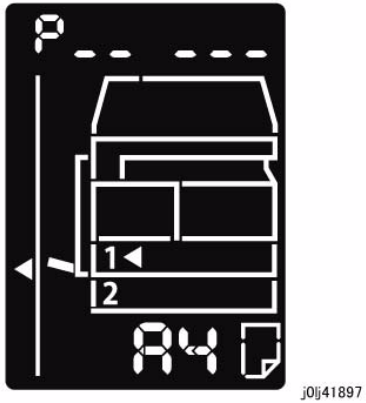


Figure 2 j0lj41897

(2) Load any one of A4 SEF, A4 LEF, Letter SEF, or Letter LEF into the Tray.
(3) Enter '202' at the Program Number and press the [Start] button.
(4) Enter '1' for [System Settings] and press the [Start] button.
(5) Once printing has completed, press the [Log In / Out] button to exit from the System Administrator Mode.

2. Check on the UI screen.
   (1) Perform the same procedure up to [The Program Number input screen is displayed.] of [1. Print the report to check.].
   (2) Enter the Program Number of the PWB that you want to check and press the [Start] button.

Table 1

Program Number	PWB
900	Controller
901	UI Panel
902	DADF

   (3) Once printing has completed, press the [Log In / Out] button to exit from the System Administrator Mode.

Procedure

For the method of machine Firmware update, only DLD method (USB 2.0) is supported.

PJL method (Port 9100: Network) is not supported.

1. Turn ON the PC (PSW).
2. After the PC has started up, use a USB Cable to connect the PC to the machine. (Figure 1)

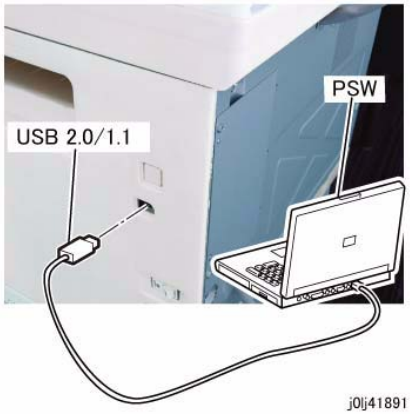


Figure 3 j0lj41891

3. Set the machine to Download Mode.
   (1) Press and hold down the [Energy Saver] button, then turn ON the power to start the machine in Download Mode.
   (2) When the machine has started in Download Mode, it will enter the Ready to Download state after the initial screen.

Figure 4 j0lj41892

   (3) Starting the download displays an animation showing that it is in progress. However, the progress animation will not be displayed when it is for the UI Panel. Instead, the 'dL' display will be flashing.

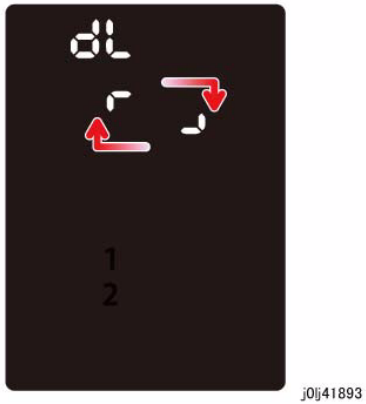


Figure 5 j0lj41893

- In case of UI Panel ('dL' is flashing)

j0lj41898

Figure 6 j0lj41898

(4) When the Download Mode has completed successfully, the machine will reboot automatically.

j0lj41894

Figure 7 j0lj41894

ADJ 56.1.1 DADF Lead-Skew Adjustment

Parts List on PL 56.1

Purpose

To correct the feeding of the original by adjusting the position of the DADF.

(DADF Lead-Skew, Perpendicularity)

Check

1. Place the Test Chart (499T 00283) on the DADF.
2. Make a copy using the following settings in Copy mode.
   - Color Mode: 'Black'
   - Paper Tray: 'A3'
   - Reduce/Enlarge: '100%'
   - No. of Copies: '3'
3. Check that the difference in the distance (A and B) from the side edges of the 3 copies is within 0 +/-0.5 mm. (Figure 1)

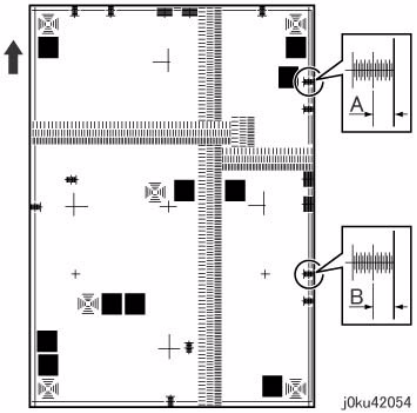


Figure 1 j0ku42054

Adjustment

1. Remove the DADF Rear Cover. (REP 56.2.2)
2. Adjust the position of the DADF by moving the DADF in direction A or B. (Figure 2)
   (1) Loosen the screw (x3).
   (2) Move the DADF in direction A or B.
   (3) Tighten the screw (x3).

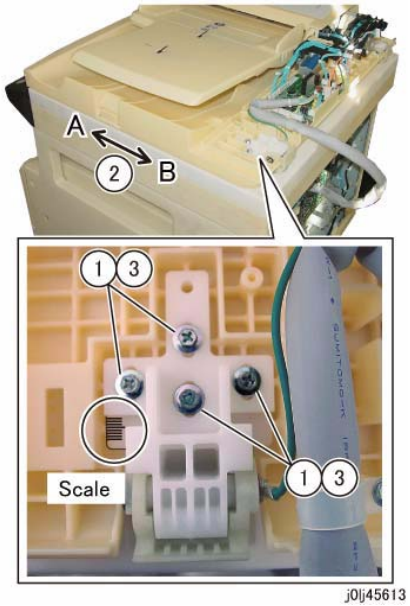


Figure 2 j0lj45613

- The DADF moved in direction A. (Figure 3)

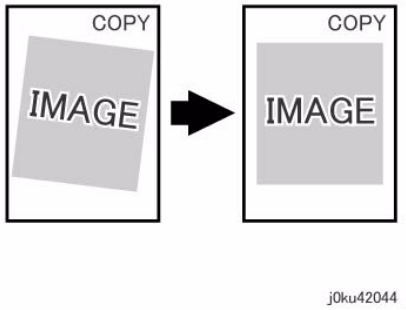


Figure 3 j0ku42044

- The DADF moved in direction B. (Figure 4)

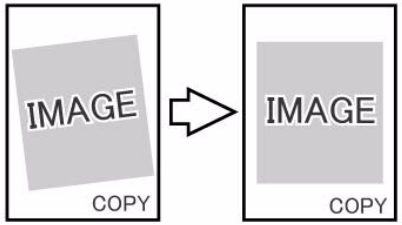


Figure 4 j0ku42043

3. Reinstall the DADF Rear Cover.
4. After adjustment, perform DADF Side Regi (ADJ 56.1.2) and DADF Lead Edge Regi. (ADJ 56.1.3).

ADJ 56.1.2 DADF Side Registration

Purpose

To adjust the original to the proper position (drum shaft direction) on the Platen.

NOTE: *The following adjustments must be made before carrying out checking and adjustment.*

- *IOT Lead Edge/Side Edge Registration (ADJ 18.1.1)*
- *IIT Side Registration (ADJ 1.3.2)*
- *DADF Lead-Skew Adjustment (ADJ 56.1.1)*

NOTE: *DADF Side Registration is adjusted using the NVM for every paper width.*

Check

1. Place the Test Chart (499T 00283) such that there is no gap between the chart and the DADF Guide.
2. Make a copy using the following settings in Copy mode. Take this copy as the original.
   - 1 to 1 Sided mode
   - Paper Tray: 'A3'
   - Reduce/Enlarge: '100%'
   - No. of Copies: '2'
3. Mark the output copies as '1' and '2' in the order of their output.
4. Make a Single Fold on the second copy. Check the fold line with the reference line on the Test Chart. (Figure 1)

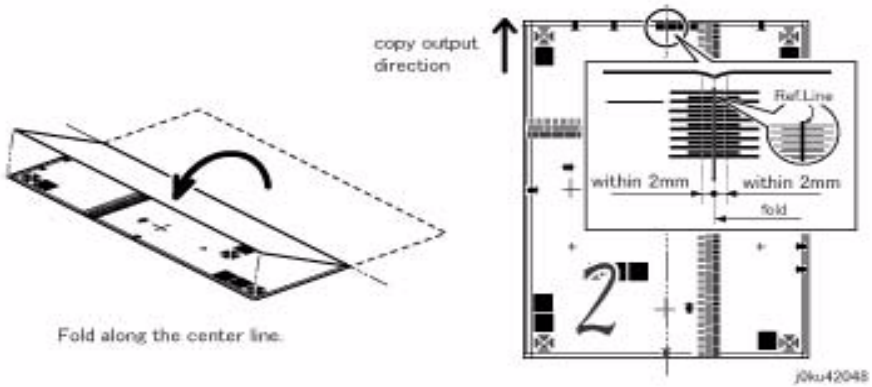


Figure 1 j0ku42048

5. Check that the fold line is within 2.0mm from the reference line.
   If the value is not specified, carry out the following adjustment procedure.
6. Place the Test Chart (499T 00283) on the DADF facing down with the Test Chart fed from the lead edge.
7. Make a copy using the following settings in Copy mode.
   - 2 to 1 Sided mode
   - Paper Tray: 'A3'

- Reduce/Enlarge: '100%'
- No. of Copies: '2'

8. Make a Single Fold on the two copies. Check the fold line with the reference line on the Test Chart.
   (Figure 2)

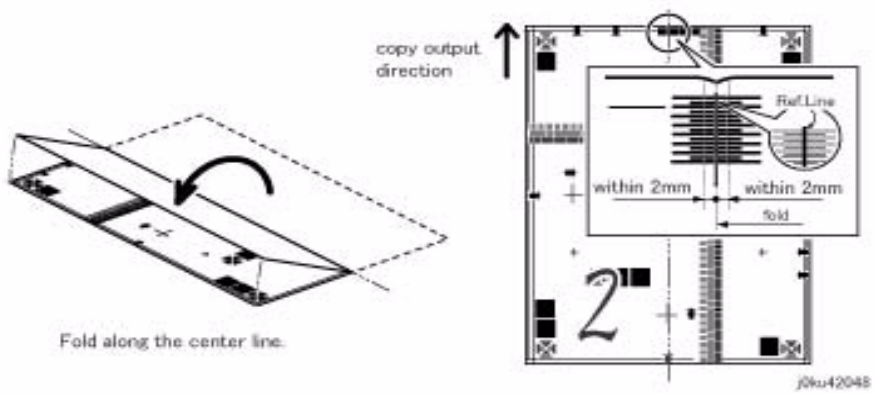


Figure 2 j0ku42048

9. Check that the fold line is within 2.0mm from the reference line.
   If the value is not specified, carry out the following adjustment procedure.

Adjustment

- Side 1 Adjustment
  1. Enter the CE Mode to perform correction for all sizes.
     Enter the value to perform correction for all sizes in the NVM [711-272].

Table 1 Side 1 of 1 Sided or 2 Sided mode

	NVM	Document Width	Document Size
1	711-272	For all sizes	For all sizes
2	715-056	139.7~148mm	A5 SEF, 5.5x8.5' SEF
3	715-058	182~194mm	B5 SEF, 16K SEF
4	715-060	203.2mm	8x10' SEF, 8x10.5' SEF
5	715-062	210mm	A4 SEF, A5 LEF
6	715-064	214.9~215.9mm	Letter SEF, Legal SEF, 5.5x8.5' LEF, 8.46x12.4' SEF, 8.5x13' SEF
7	715-066	254~257mm	B4 SEF, B5 LEF, 8x10' LEF
8	715-068	266.7~267mm	16K LEF, 8K LEF, 8x10.5' LEF
9	715-070	279.4mm	Letter LEF, 11x15' SEF, 11x17' SEF
10	715-072	297mm	A4 LEF, A3 SEF

  2. Enter the value to perform correction for each size in the NVM [715-056 to 072].
  3. If it is not within the specified range in Check Step 5, change the NVM value.
     – By increasing the NVM value, the image moves towards the right.
     (an increment of 1 in NVM = 0.1 mm)
  4. Repeat Check Steps 1 to 5 and Adjustment Steps 1 to 3 until the measurement is within the specified range.

- Side 2 Adjustment
  1. After adjusting for 1 Sided copies, place Side 1 of the Test Chart face down and make copies using the following settings to check the Side Registration for 2 Sided copies.
     – Paper Tray: 'A3'
     – Reduce/Enlarge: '100%'
     – No. of Copies: '2'
     – 2 Sided: 2 -> 1 Sided
  2. Check the Side Regi of the 2 copies with the above-mentioned items in 'Check'.
  3. If adjustment is required, enter the CE Mode to perform correction for all sizes, and then adjust each document size width using the following NVM.
     Enter the value to perform correction for all sizes in the NVM [711-274].

Table 2 Side 2 of 2 Sided mode

	NVM	Document Width	Document Size
1	711-274	For all sizes	For all sizes
2	715-057	139.7~148mm	A5 SEF, 5.5x8.5' SEF
3	715-059	182~194mm	B5 SEF, 16K SEF
4	715-061	203.2mm	8x10' SEF, 8x10.5' SEF
5	715-063	210mm	A4 SEF, A5 LEF
6	715-065	214.9~215.9mm	Letter SEF, Legal SEF, 5.5x8.5' LEF, 8.46x12.4' SEF, 8.5x13' SEF
7	715-067	254~257mm	B4 SEF, B5 LEF, 8x10' LEF
8	715-069	266.7~267mm	16K LEF, 8K LEF, 8x10.5' LEF
9	715-071	279.4mm	Letter LEF, 11x15' SEF, 11x17' SEF
10	715-073	297mm	A4 LEF, A3 SEF

  4. Enter the value to perform correction for each size in the NVM [715-057 to 073].

ADJ 56.1.3 DADF Lead Edge Registration

Purpose

To adjust the original to the proper position (original feed direction) on the Platen.

NOTE: *The following adjustments must be made before carrying out checking and adjustment.*

- *IOT Lead Edge/Side Edge Registration (ADJ 18.1.1)*
- *IIT Lead Registration (ADJ 1.3.1)*
- *DADF Lead-Skew Adjustment (ADJ 56.1.1)*

NOTE: *If there is a black line at the Tail Edge for non-standard sizes after Regi adjustment of the Lead Edge for Side 1 and Side 2, adjust the Tail Edge using the NVM [711-142] (Side 1) and NVM [711-143] (Side 2).*

[1 Sided mode]

Check

1. Place the Test Chart (499T 00283) such that there is no gap between the chart and the DADF Guide.
2. Make a copy using the following settings in Copy mode.
   - Color Mode: 'Black'
   - Paper Tray: 'A3'
   - Reduce/Enlarge: '100%'
   - No. of Copies: '2'
   - 1 to 1 Sided mode
3. Check that the distance between the Lead Edge and the reference value in the second copy is 10 +/-1.5 mm.

   If it is not within the specified range, adjust to the specified range using the following procedure.

   (Figure 1)

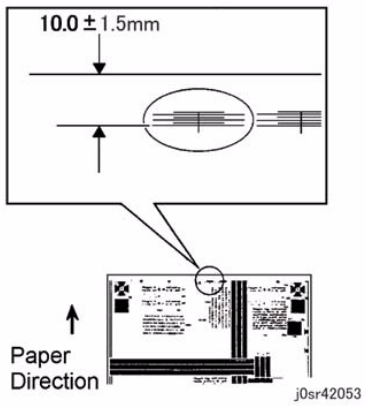


Figure 1 j0sr42053

Adjustment

1. Input the NVM [711-140].
2. If the specified value is
   - 11.5 mm or higher, increase the NVM value.
   - 8.5 mm or lower, decrease the NVM value.

   (an increment of 1 in NVM = 0.1 mm)
3. Repeat the procedure until the value is within the specified range (10 +/-1.5 mm).

   As there will be differences in the Regi according to the ratio, adjust the following NVM.

Table 1

NVM	Basic Scan Speed [mm/s]	Reduce / Enlarge
NVM [711-002]	165.0	100.0%
NVM [711-004]	82.5	Other than 100.0%

[2 Sided Mode]

Check

1. Place the Test Chart (499T 00283) on the DADF with Side 1 facing down with the Test Chart fed from the tail edge.
2. Make a copy in the following mode:
   - Color Mode: 'Black'
   - Paper Tray: 'A3'
   - Reduce/Enlarge: '100%'
   - No. of Copies: '2'
   - Mode: '2 to 1 Sided'
3. Check that the distance between the Lead Edge and the reference value in the second copy is 10 +/-1.9 mm.

   If it is not within the specified range, adjust to the specified range using the following procedure.

   (Figure 2)

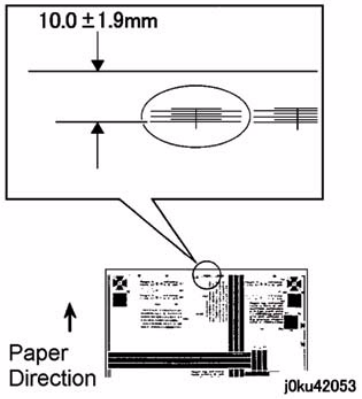


Figure 2 j0ku42053

Adjustment

1. Input the NVM [711-141].
2. Adjust to the specified range (10 +/-1.9 mm).
   If the distance between the Lead Edge and the reference value is
   - 12.0 mm or higher, increase the NVM value.
   - 8.0 mm or lower, decrease the NVM value.

   (NVM1Step=0.1mm)
3. Repeat the procedure until the value is within the specified range (10 +/-1.9 mm).
   As there will be differences in the Regi according to the ratio, adjust the following NVM.

Table 2

NVM	Basic Scan Speed [mm/s]	Reduce / Enlarge
NVM [711-022]	165.0	100.0%
NVM [711-024]	82.5	Other than 100.0%

5 Parts List

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5.1.1 How to Use the Parts List

Chapter 5 Parts List contains information on spare parts.

The parts list is used to order replacement parts and enter area codes. To use the parts list correctly, read the description below carefully.

<How to find out parts No needed>

To shorten the time searching for a Parts No., a navigation screen (illustration) is provided to search for the relevant parts in the illustration. When you have already identified a parts to be checked, search for the relevant parts on this screen (illustration) to perform servicing efficiently. For how to use the navigation, refer to '5.1.5 Using Parts Navigation'.

5.1.2 Precautions

- To make the illustration easy to see, hardware such as screws are shown in alphabets. Their shapes are not shown.
- Read notes in the Description column carefully before ordering and replacing parts.
- ISC followed by part name in the DESCRIPTION column represents Important Information Stored Component that stores important customer information. To replace and discard an ISC, follow the procedure for it described in chapter 4.
- The area codes are shown on plates each. The area codes (such as toner and Current Adjustment values) which cannot be shown as parts on plates are listed on the list of area codes at the end of this chapter.

5.1.3 Plate Composition

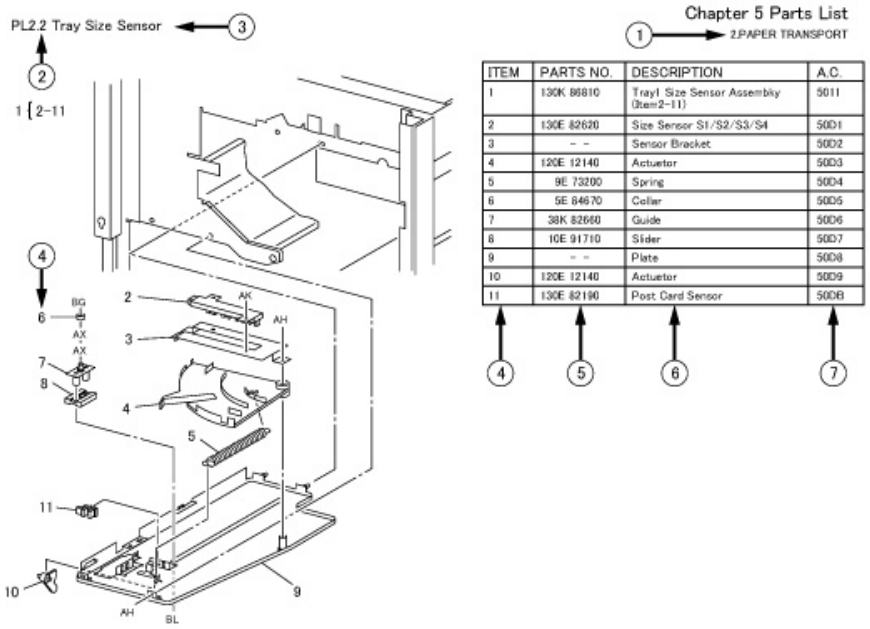


Figure 1 j0mf50001

Table 1

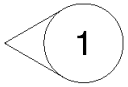
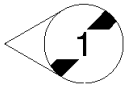
	Section Name	Chapter 5 Section Name
(1)	Sub System Name	the name of the subsystem
(2)	PLATE NO.	Parts List Reference No. shown in each chapter
(3)	PLATE NAME	Title name of the illustration, which shows the mechanism of the sub system
(4)	ITEM	Matches the number in the illustration.
(5)	PART NO.	The number to be used for ordering parts and filling in the service report.
(6)	DESCRIPTION	Provides the part name, V(MOD) Code and notes, etc.
(7)	AREA CODE	The code to be entered in the failure column of the service report.

5.1.4 Terminology and Symbols

Table 1

Terminology and Symbols	Description
Figure 1 5002	Informs you that the adjustment procedure for the part is described in Chapter 4 Repair and Adjustment.
Figure 2 5001	Informs you that the removal, installation and replacement procedures for the part are described in Chapter 4 Repair and Adjustment.
Figure 3 5003	Informs you that the removal, installation, replacement and adjustment procedures for the part are described in Chapter 4 Repair and Adjustment.
3 {4-10	This is indicated on the upper left or upper right of the illustration to show the item represents the assembly including the part. The example shows Item 3 is the assembly of Item 4 through 10.
(1/4PCS)	Informs you that four identical parts are installed but that only one of them is shown in the illustration.
- -	This symbol in the PART NO. column shows the part is not managed as a spare part.
(P/O Item 5)	This symbol in the DESCRIPTION column shows the part is not managed as a single piece of spare part, but as a part of the assembly. The example shows the part is a part of Assembly Item 5.
(New) (Old)	This term in the DESCRIPTION column shows the new part is interchangeable with the old one. Unless otherwise specified or there are no particular reasons, order the old part.
(Alternate)	This term in the DESCRIPTION column shows either one of the parts can be used.
Figure 4 5005	This symbol shows the whole area of the framed illustration is modified by the number in the circle. The area has the modified configuration.

Table 1

Terminology and Symbols	Description
Figure 5 5006	This symbol shows the whole area of the framed illustration has not been modified by the number in the circle. The area still has the previous configuration.
 **Figure 6 4001**	The Item pointed to by this symbol in the illustration is modified by the number in the circle. The item has the modified configuration.
 **Figure 7 4002**	The Item pointed to by this symbol in the illustration has not been modified by the number in the circle. The item still has the previous configuration.
with 5V	This symbol in the DESCRIPTION column shows the part is modified by the number. The part has the modified configuration.
(w/o 5V)	This symbol in the DESCRIPTION column shows the part has not been modified by the number. The part still has the previous configuration.
(ISC) MCU/ESS PWB	ISC followed by part name in the DESCRIPTION column represents Important Information Stored Component that stores important customer information. To replace and discard an ISC, follow the procedure for it described in chapter 4.

5.1.5 Using Parts Navigation

This section describes how to use the Navigation screen (illustrated)

The Navigation screen is divided into two layers, under which there is another layer of PLs.

- The first (top) layer
  - Navi 1.1(Processor + Option)

    The whole processor including DADF and Finisher is illustrated each for good understanding. Find the module which includes the desired part and click on Navi 2.X or PL shown at the end of the call out. Navi 2.X shows there is a more detailed illustration of the module. Otherwise, you will be directly linked to the applicable PL.
- The second layer
  - Navi 2.1 to 2.5

    The module found in Navi 1.1 is divided into more modules, which link to the related PLs. The screen here uses PLXX to show all the parts in the detailed module. Click on the applicable item, and you will see the illustration of the applicable PL. Find the desired part in the PL illustration to learn the part's item no. After that, obtain the appropriate part no. from the list.

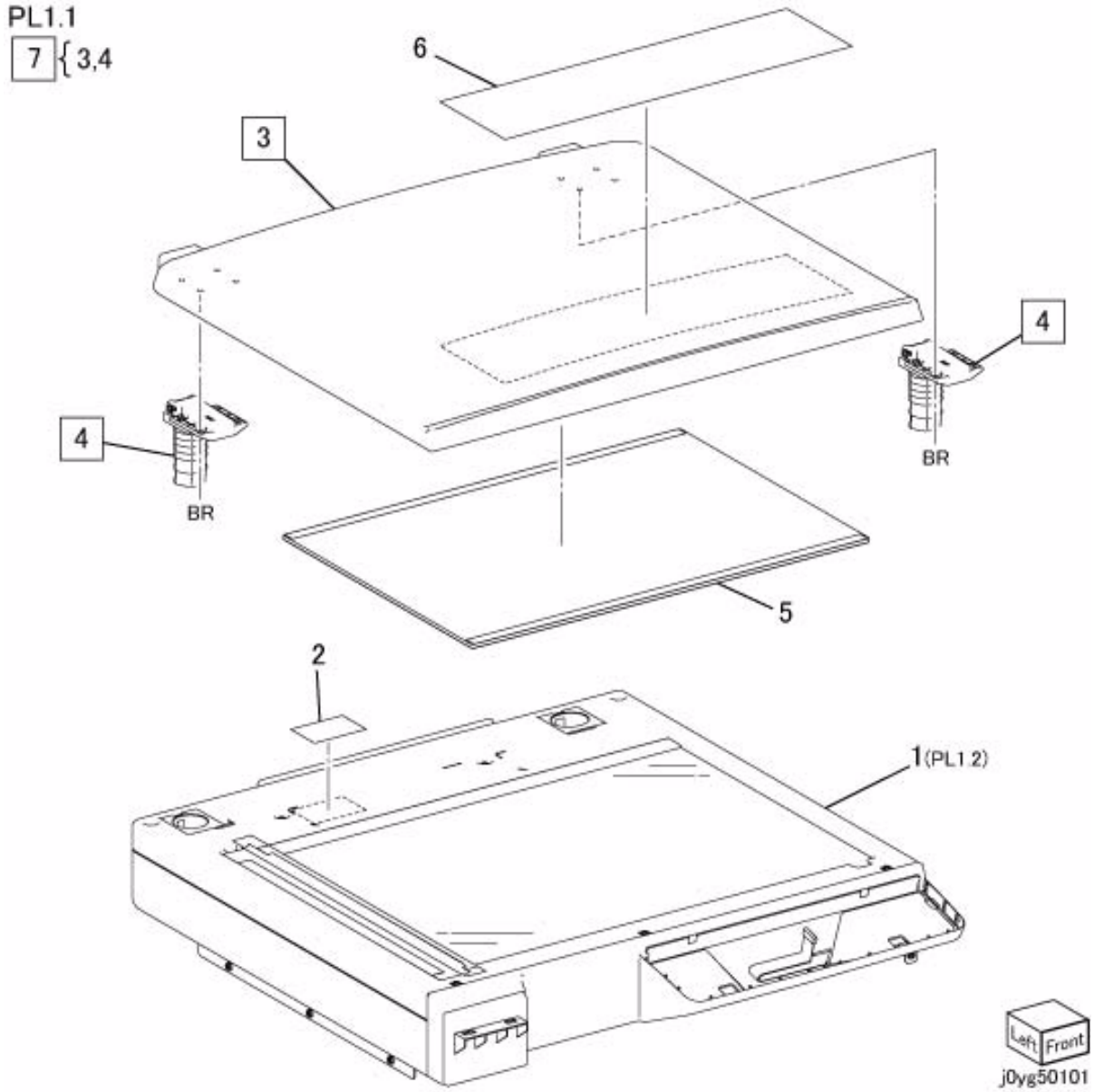
    On E-DOC, clicking on the item no. makes the List screen displayed. Then the appropriate part no. can be found.
- The third (bottom) layer has PLXXs.

  <Returning from the lower layers to the higher layer>

  Clicking on Navi 2.X or PLXX on the upper left of the illustration makes you return to Navi 1.1 for Processor parts.

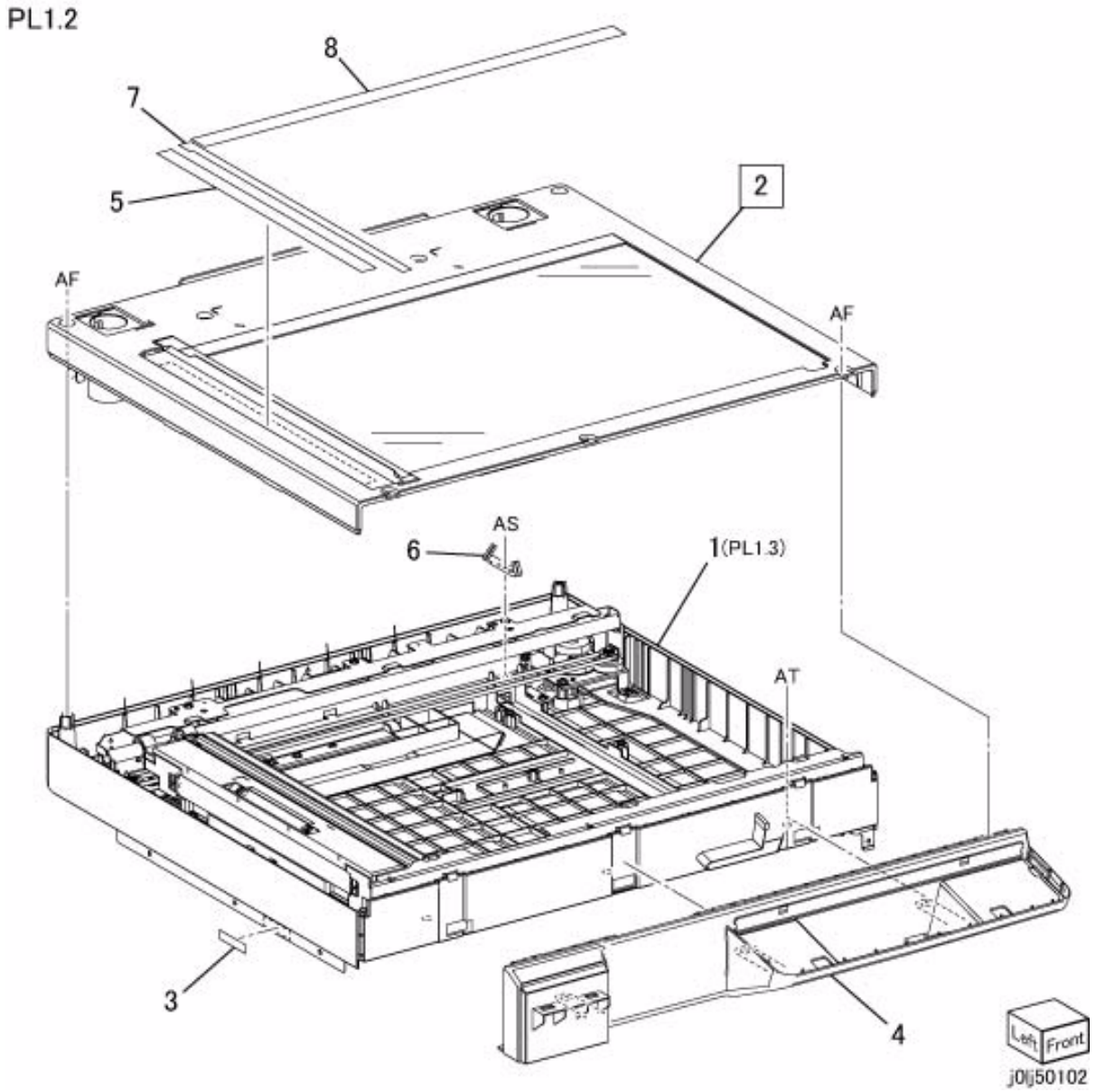
PL 1.1 Platen Cover

Item	Parts No	Description	A.C.
1	–	IIT (PL 1.2)	11AA
2	898E 68450	ID Label	11B1
3	848E 87121	Platen Cover (REP 99.1.1)2001	
4	036K 92150	Counter Balance (REP 99.1.1)2005	
5	004K 03410	Platen Cushion	2003
6	–	Code Label	11B2
7	848K 69520	Platen Cover (Item 3,4) (REP 99.1.1)2001	



PL 1.2 Top Cover (with Platen Glass),Front Cover

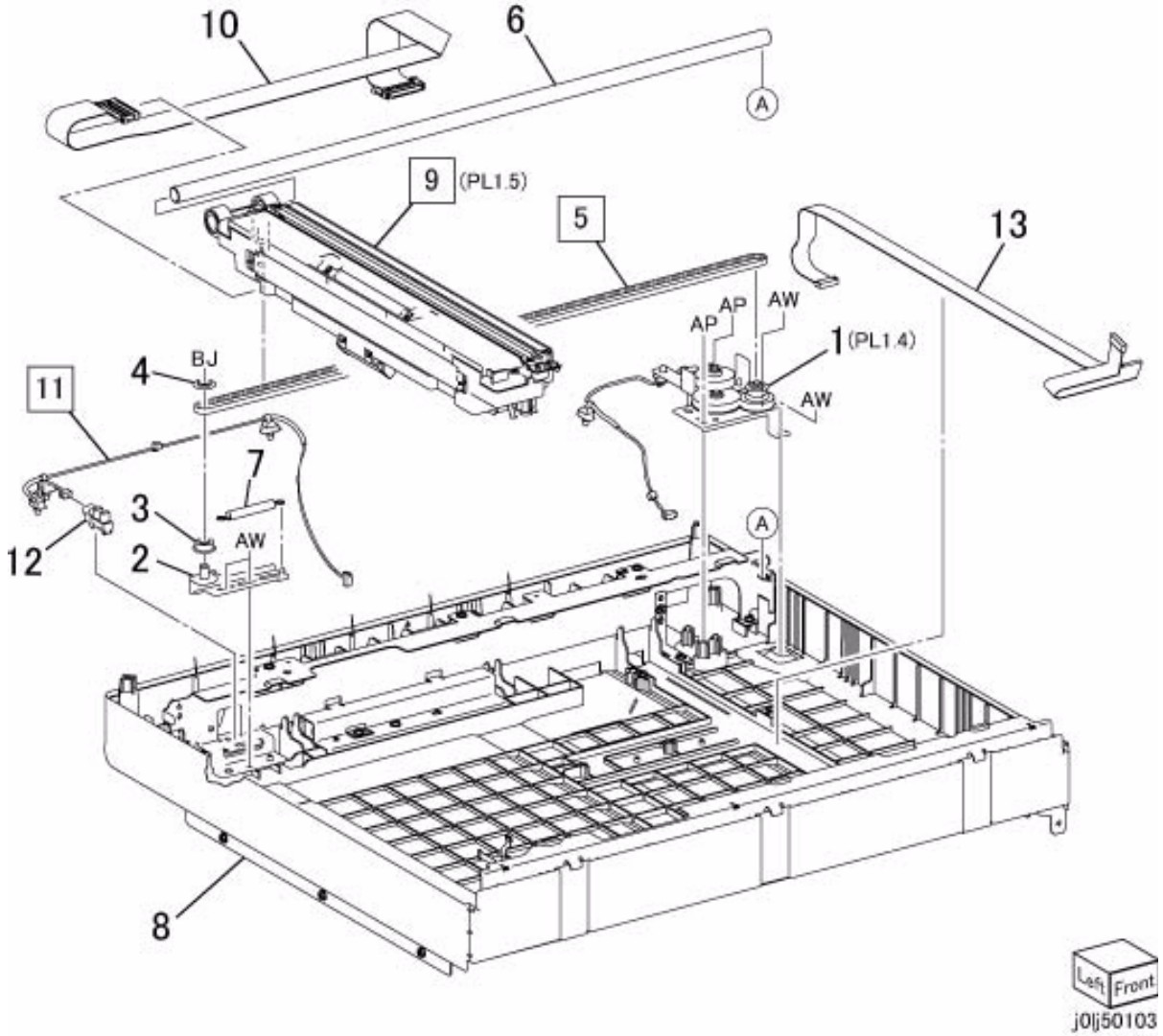
Item	Parts No	Description	A.C.
1	–	IIT Base Frame (PL 1.3)	11C1
2	848K 68890	Top Cover (with Platen Glass) (REP 1.2.1, REP 99.1.1)1021	
3	–	Data Plate	11C2
4	–	IIT Front Cover	11C3
5	–	CVT Plate	11C4
6	868E 80610	Conductor	11C5
7	–	Lead Regi. Label	11C6
8	–	Side Regi. Label	11C7



PL 1.3 IIT Base Frame Component

Item	Parts No	Description	A.C.
1	–	Carriage Drive and Motor (PL 1.4)	11D1
2	049K 17900	Pulley Bracket	11D2
3	020E 49550	Pulley	11D3
4	005E 33440	Flange	11D4
5	023E 27860	IIT Carriage Belt (REP 1.3.2)	11D5
6	–	Shaft	11D6
7	809E 58300	Spring	11D7
8	–	IIT Base Frame	11D8
9	848K 68874	IIT Carriage (PL 1.5) (REP 1.3.1)	11D9
10	117K 47661	CCD Cable	11DB
11	952K 03781	Sensor Wire Harness (REP 99.1.1)	11DC
12	930W 00123	IIT Registration Sensor	11DD
13	117K 47680	UI Cable	11DE

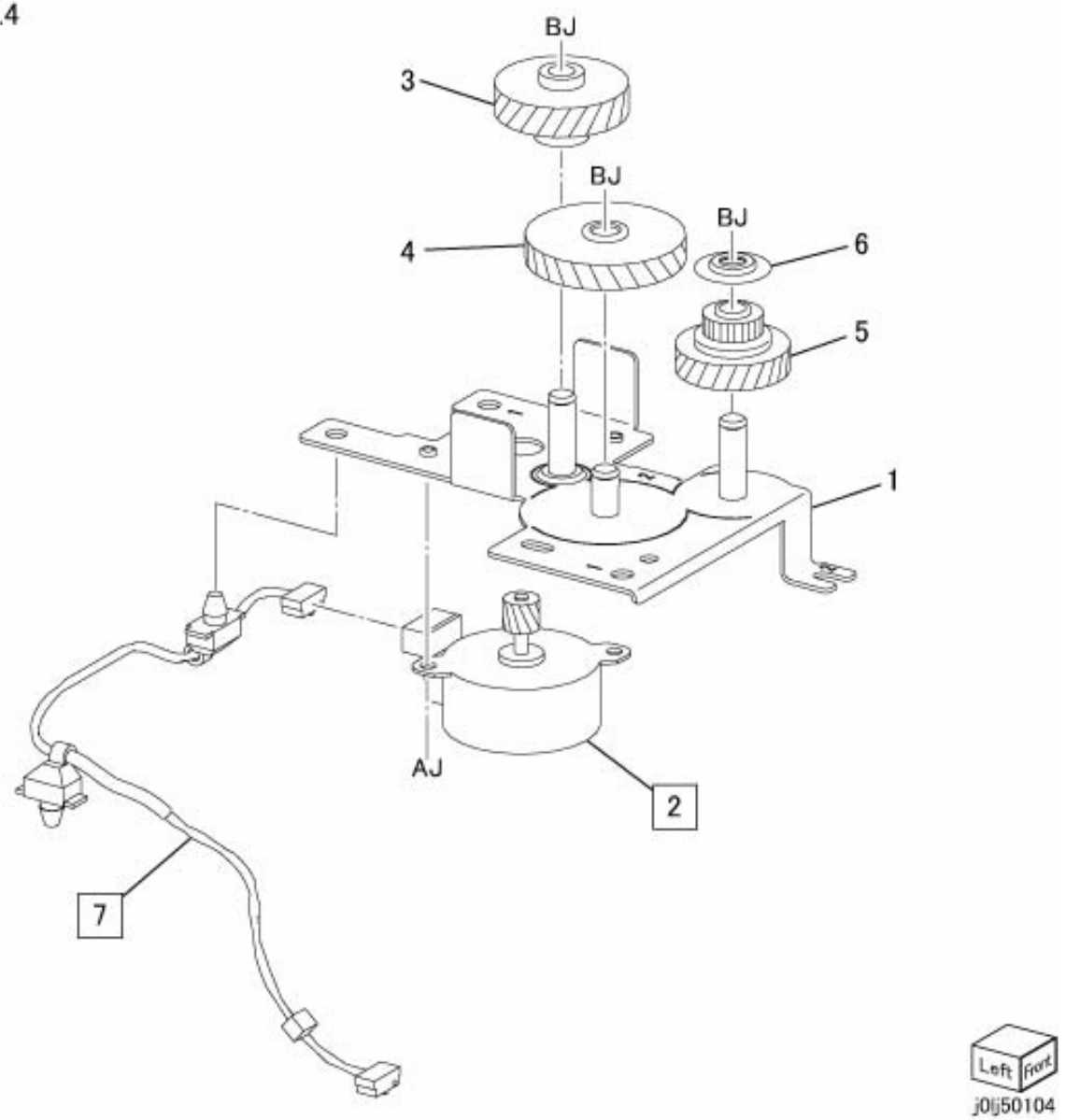
PL1.3



PL 1.4 Carriage Motor

Item	Parts No	Description	A.C.
1	–	Drive Bracket	11E1
2	127K 66721	Carriage Motor (REP 1.4.1, REP 99.1.1)1041	
3	807E 40871	Helical Gear	11E2
4	807E 40880	Helical Gear	11E3
5	807E 40890	Gear Pulley	11E4
6	005E 33441	Flange	11E5
7	952K 03771	Motor Wire Harness (REP 99.1.1) 11E6	

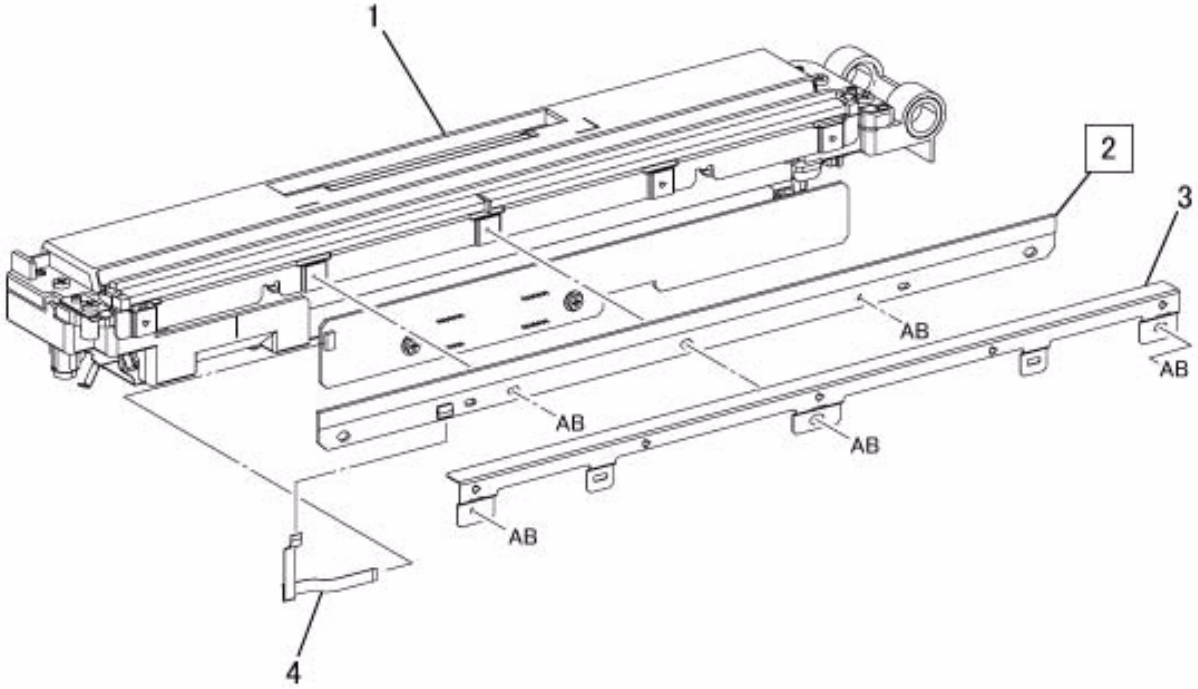
PL1.4



PL 1.5 IIT Carriage

Item	Parts No	Description	A.C.
1	–	Lens Housing	11F1
2	960K 64290	LED Lamp PWB (REP 1.5.1)	11F2
3	–	LED Bracket	11F3
4	117K 47740	LED Cable	11F4

PL1.5



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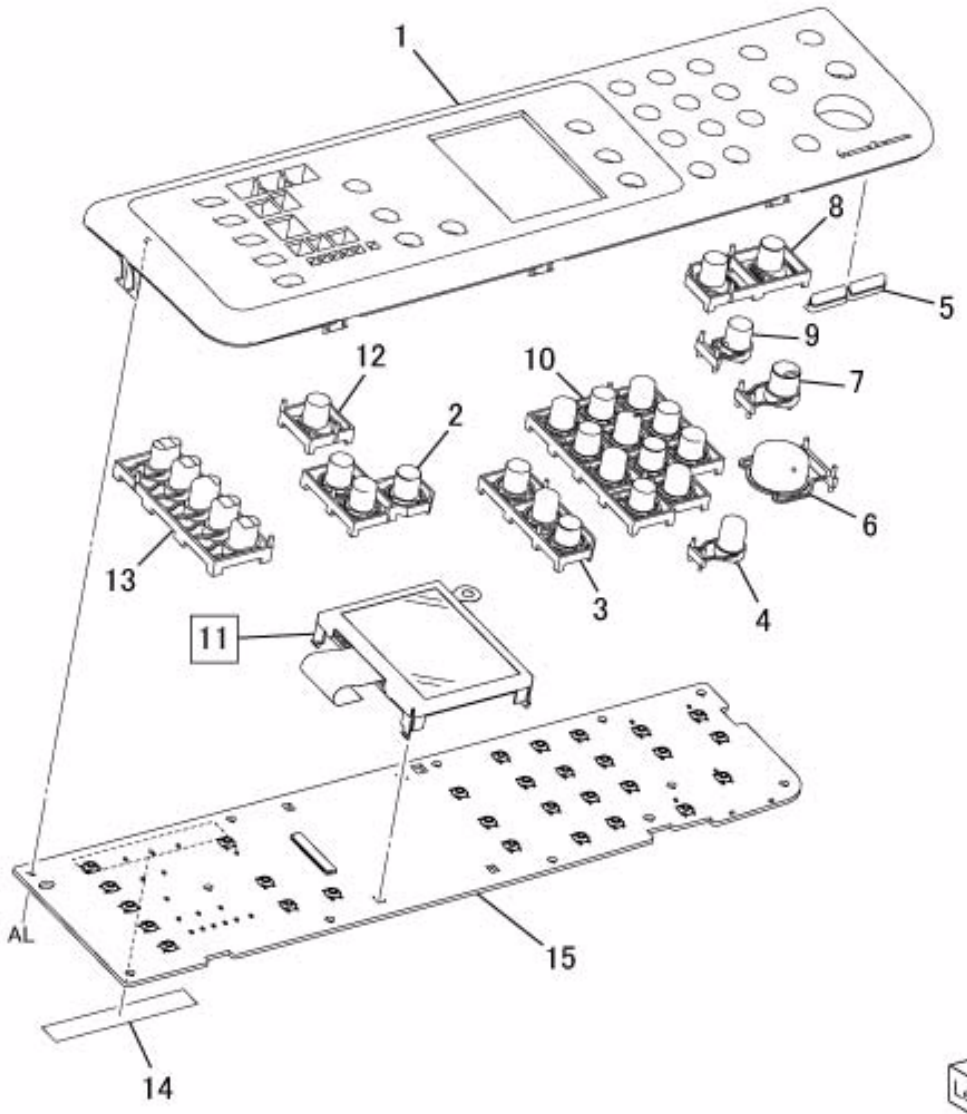
PL 1.6 Control Panel

Item	Parts No	Description	A.C.
1	848K 76080	Control Panel	75B1
2	868E 80430	Middle B Key	75B2
3	868E 80440	Middle C Key	75B3
4	803E 15311	Info Stop Key	75B4
5	868E 81080	LED Lens	75B5
6	803E 15300	Start Key	75B6
7	803E 13260	Stop Key	75B7
8	868E 80461	Right A Key	75B8
9	803E 13270	Reset Key	75B9
10	868E 80450	Ten Key	75BB
11	123E 91650	LCD Display (REP 1.6.1)	75BC
12	803E 13280	ID Key	75BD
13	868E 80420	Middle A Key	75BE
14	–	UI Label	75BF
15	960K 62200	UI PWB	75BG

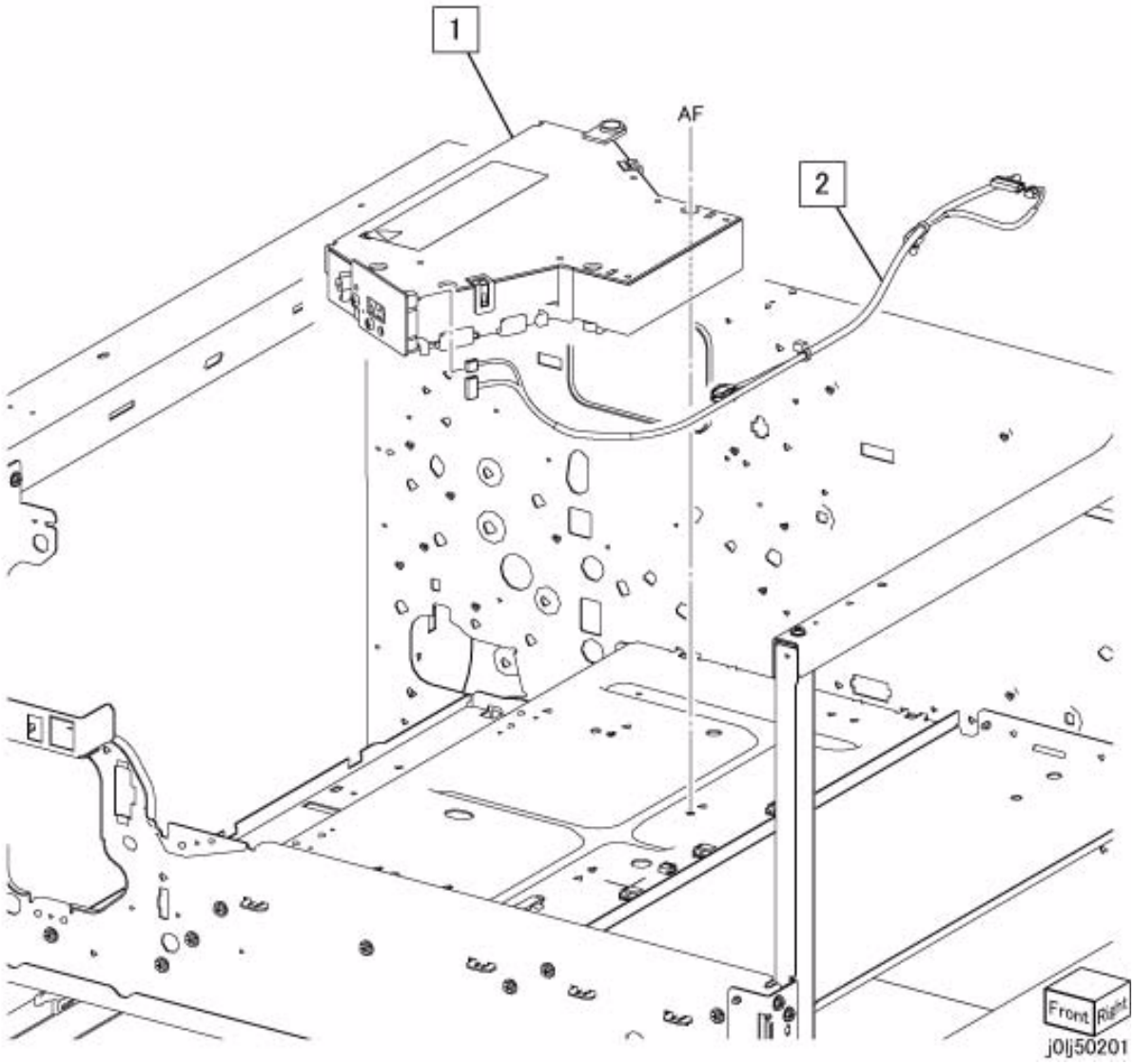
PL1.6



PL 2.1 ROS

Item	Parts No	Description	A.C.
1	062K 24840	ROS Assembly (REP 2.1.1, REP 99.1.1)1310	
2	952K 01240	ROS Wire Harness (REP 99.1.1) 13B1	

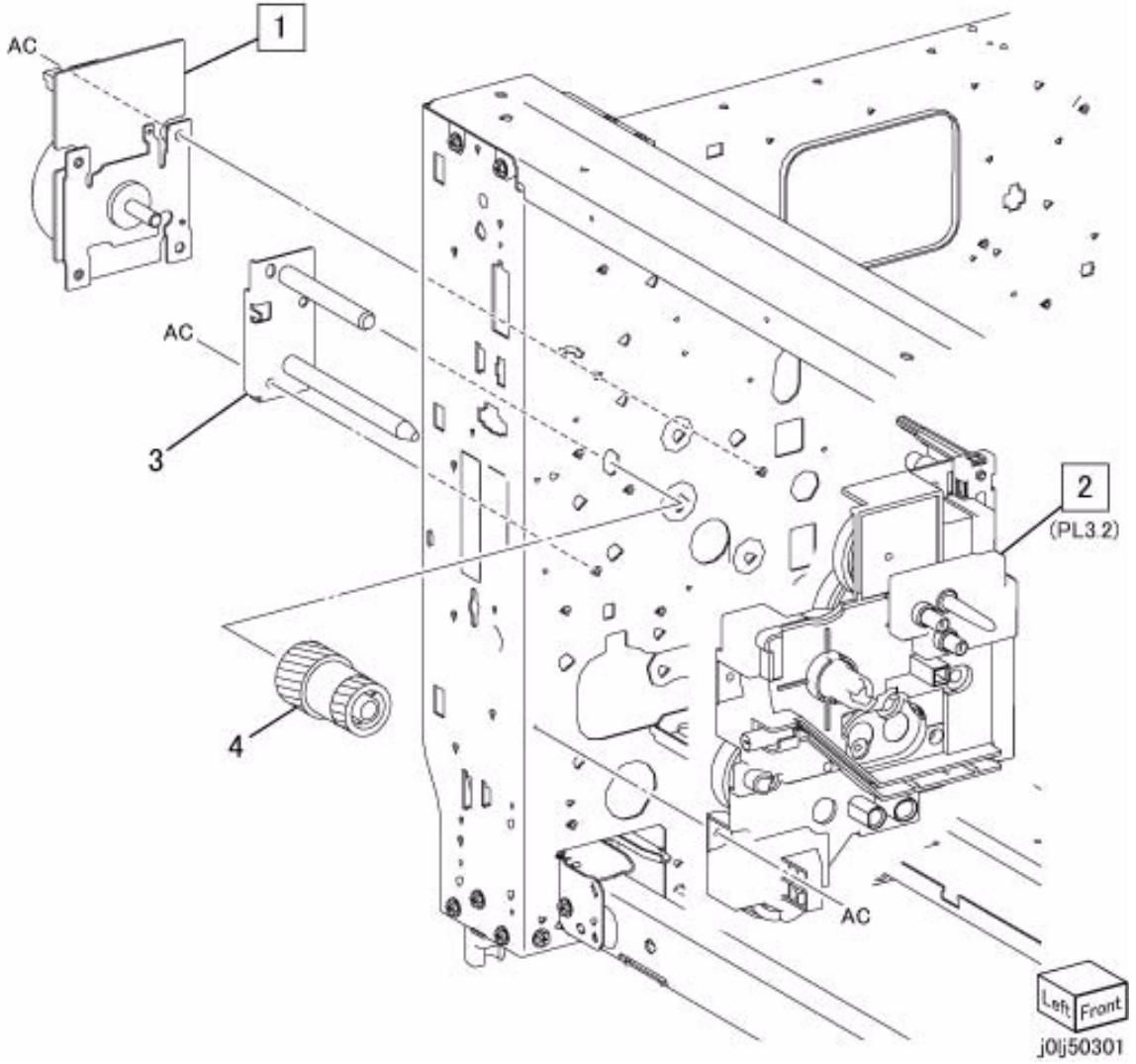
PL2.1



PL 3.1 Main Drive Motor

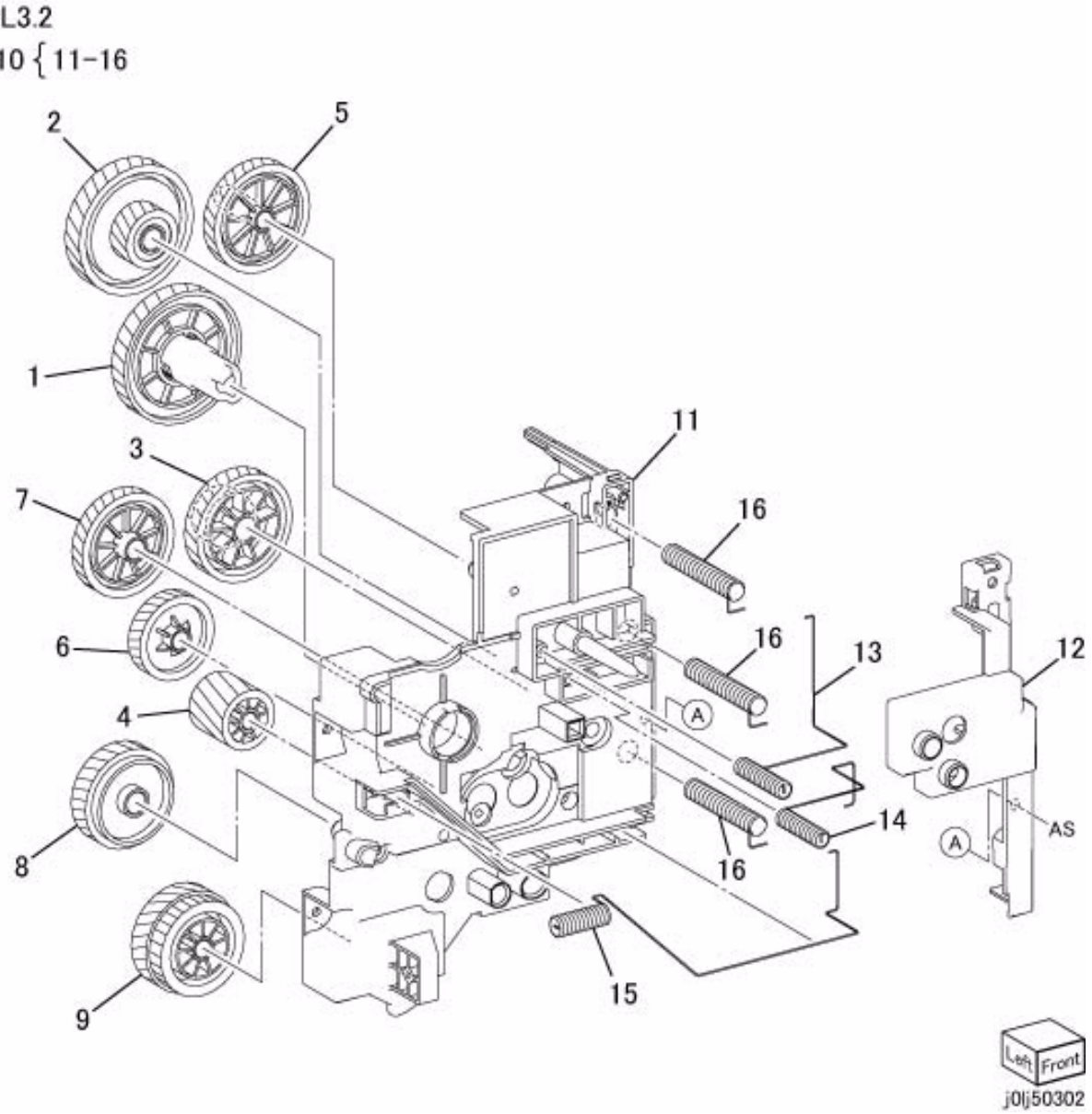
Item	Parts No	Description	A.C.
1	127K 66260	Main Drive Motor (Alternate) (REP 3.1.1, REP 99.1.1)3010	
–	127K 66290	Main Drive Motor (Alternate) (REP 3.1.1, REP 99.1.1)3010	
2	007K 18870	Main Drive Housing (PL 3.2) (REP 3.1.2)30B1	
3	049K 17710	Stud Bracket	30B2
4	807E 39260	Helical Gear	30B3

PL3.1



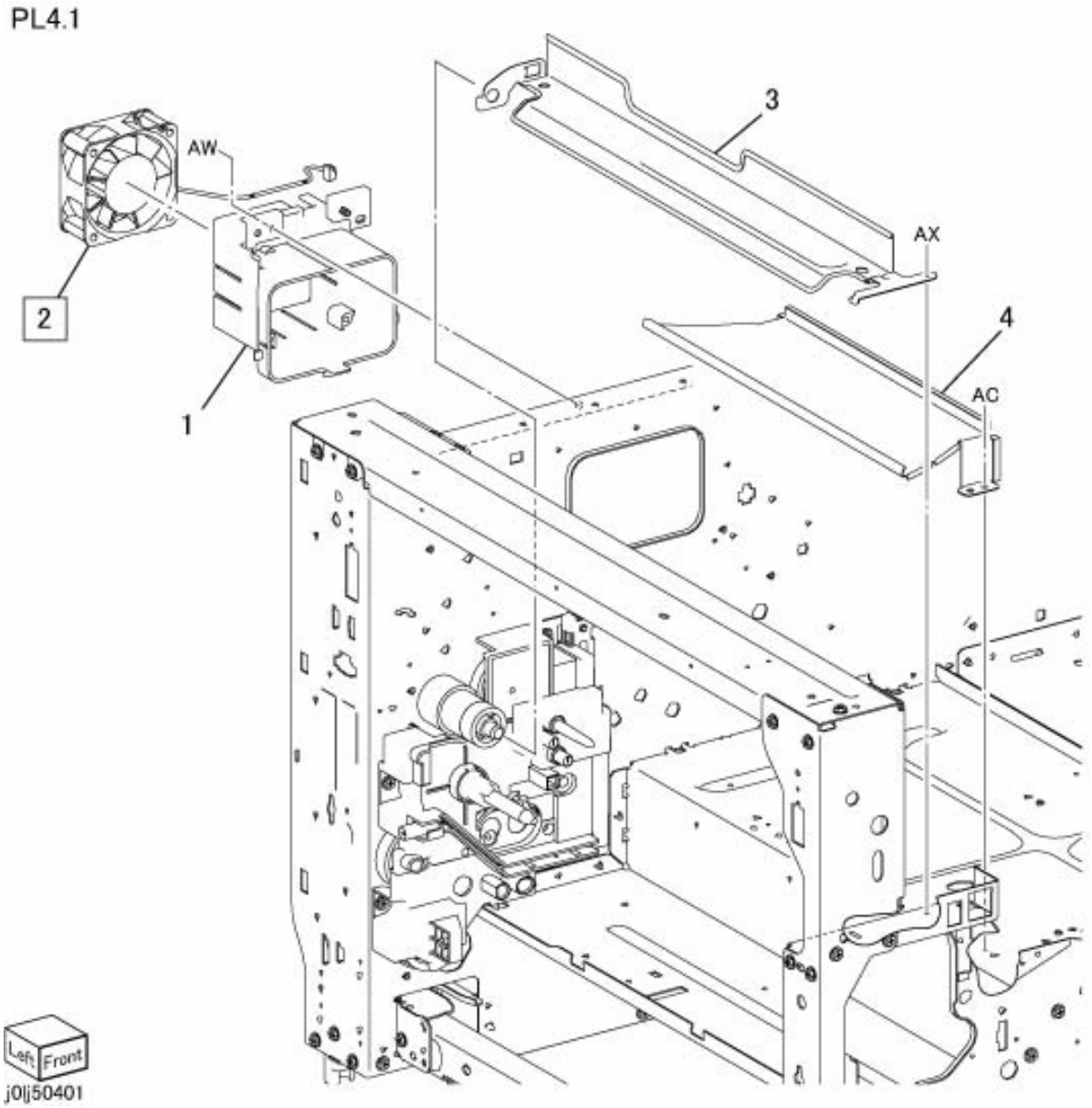
PL 3.2 Main Drive Housing

Item	Parts No	Description	A.C.
1	005K 83610	Drum Coupling and Gear	30C1
2	807E 39180	Helical Gear (76/33T) (Identification display : X1)	30C2
3	807E 39200	Helical Gear (63/18T) (Identification display : P1)	30C3
4	807E 39230	Helical Gear (25T) (Identification display : P4)	30C4
5	807E 39250	Helical Gear (63T) (Identification display : F1)	30C5
6	807E 39220	Helical Gear (36T) (Identification display : P3)	30C6
7	807E 39210	Helical Gear (45T) (Identification display : P2)	30C7
8	807E 39240	Helical Gear (43T) (Identification display : P5)	30C8
9	807E 39580	Helical Gear (44/27T) (Identification display : P6)	30C9
10	848K 67530	Main Drive Housing (Item 11-16)	30CB
11	–	Main Drive Housing (P/O Item 10)	30CC
12	848E 84830	Conductor Cover	30CD
13	130E 16130	BCR Conductor	30CE
14	130E 16140	Deve. Conductor	30CF
15	130E 16150	BTR Conductor	30CG
16	130E 16160	HV Conductor	30CH



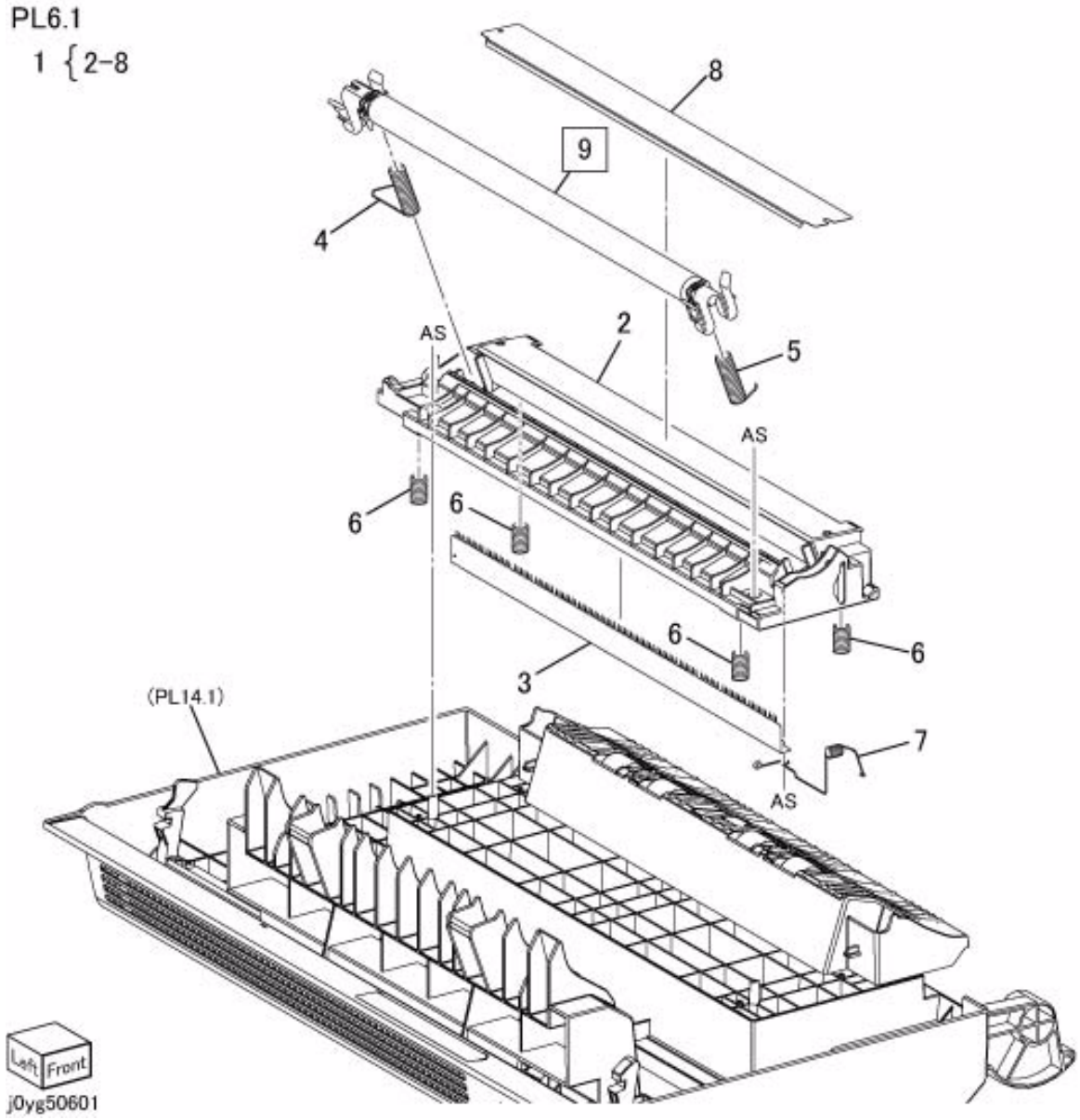
PL 4.1 NOHAD

Item	Parts No	Description	A.C.
1	054E 50270	NOHAD Duct	33B1
2	127E 86170	NOHAD Fan (REP 4.1.1)	3301
3	–	Fusing Unit Plate	33B2
4	–	Laser Housing	33B3



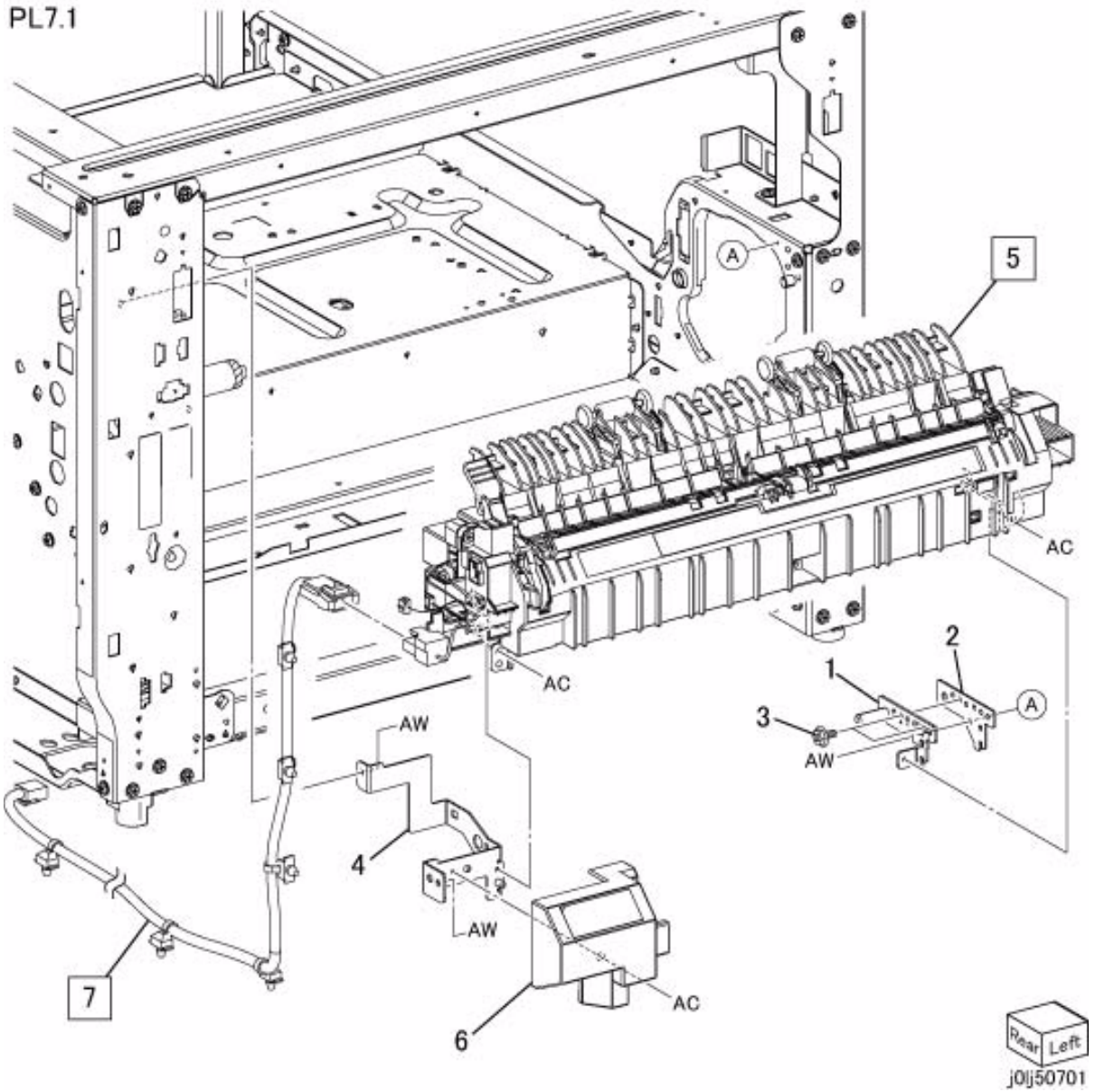
PL 6.1 Transfer

Item	Parts No	Description	A.C.
1	054K 48390	BTR Chute (Item 2-8)	41B1
2	–	BTR Chute (P/O Item 1)	41B2
3	–	DTS Eliminator (P/O Item 1)	41B3
4	809E 99860	BTR Spring (Rear)	41B4
5	809E 99870	BTR Spring (Front)	41B5
6	–	Float Spring (P/O Item 1)	41B6
7	–	DTS Conductor (P/O Item 1)	41B7
8	–	Film Chute (P/O Item 1)	41B8
9	059K 79560	BTR Roll (REP 6.1.1)	4101



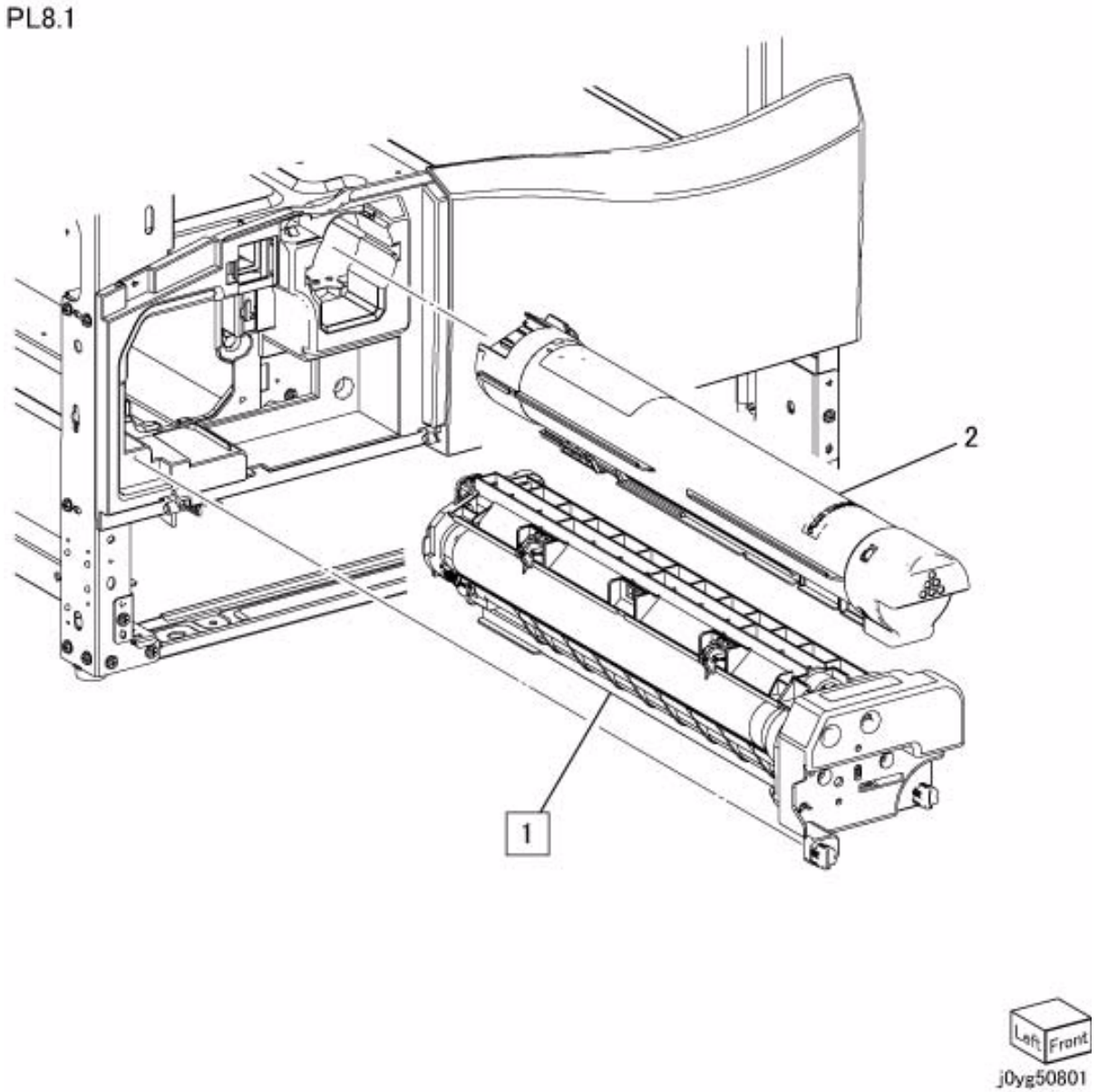
PL 7.1 Fusing Unit

Item	Parts No	Description	A.C.
1	–	Fusing Unit Stud Plate	43B1
2	–	Adjust Plate	43B2
3	–	Stud Screw	43B3
4	–	Fusing Unit Rear Bracket	43B4
5	126K 30553	220V-Fusing Unit (REP 7.1.1, REP 99.1.1)	43AA
–	126K 31730	120V-Fusing Unit (REP 7.1.1, REP 99.1.1)	43AA
6	848E 83410	Connector Cover	43B5
7	952K 01220	220V-Fusing Unit Wire Harness (REP 99.1.1)	43B6
–	962K 69060	120V-Fusing Unit Wire Harness (REP 99.1.1)	43B6



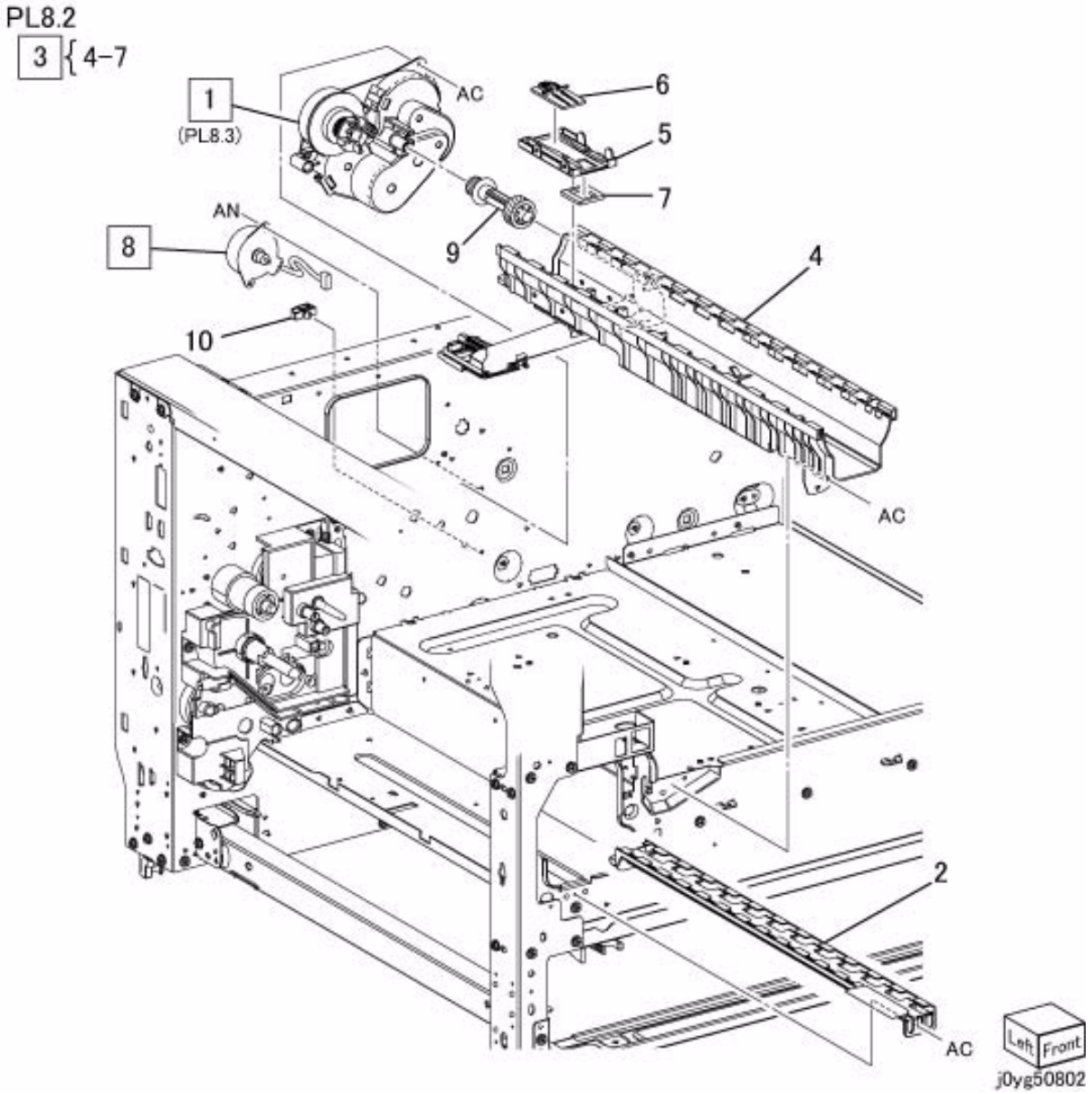
PL 8.1 Drum Cartridge,Toner Cartridge

Item	Parts No	Description	A.C.
1	013R 00670	Drum Cartridge (REP 8.1.1)	4510
2	006R 01573	Toner Cartridge	4011



PL 8.2 Toner System

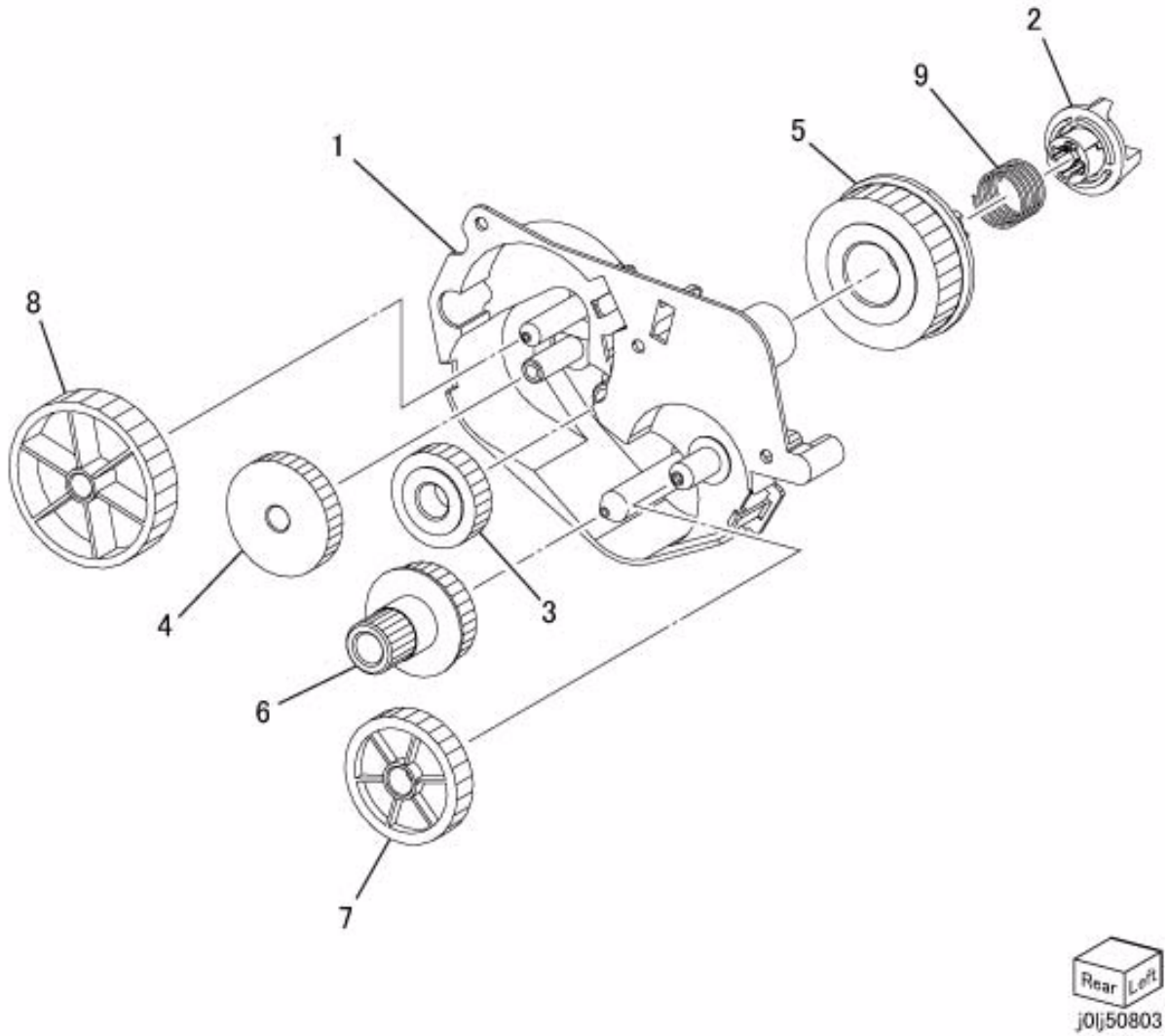
Item	Parts No	Description	A.C.
1	007K 18750	Dispense Drive (PL 8.3) (REP 8.2.2)45C1	
2	032K 08100	Drum Cartridge Guide	45C2
3	094K 93270	Cartridge Guide (Item 4-7) (REP 8.2.1)4020	
4	032K 08080	Cartridge Guide	45C3
5	032E 35502	Shutter Guide	45C4
6	055E 58451	Dispenser Shutter	45C5
7	–	Guide Seal (P/O Item 3)	45C6
8	127K 66870	Toner Dispense Motor(REP 99.1.1) 45C7	
9	807E 39410	Gear (21/21T)	45C8
10	–	Clamp	45C9



PL 8.3 Dispense Drive

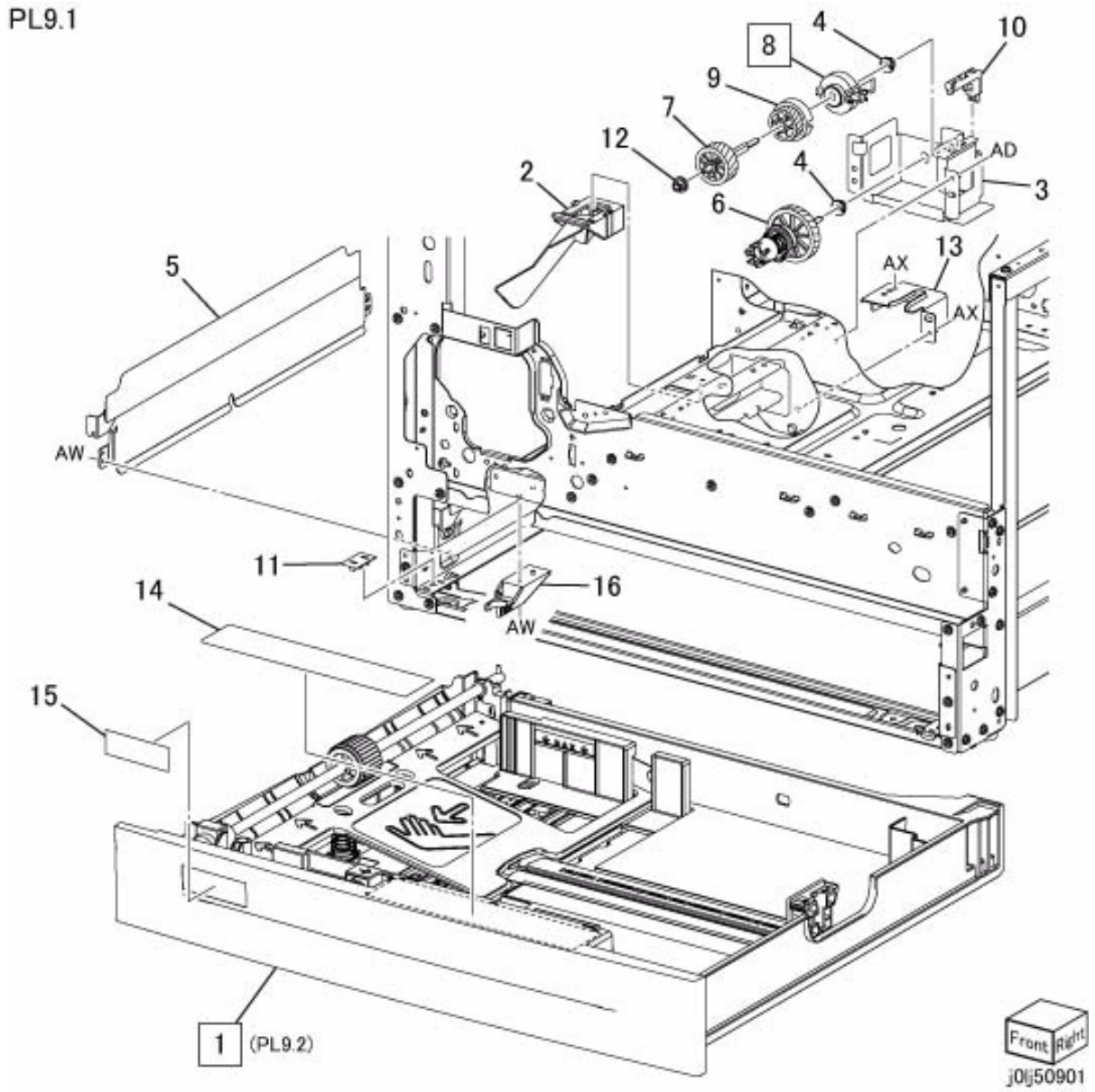
Item	Parts No	Description	A.C.
1	–	Dispense Drive Housing	45D1
2	005E 25160	Dispenser Coupling	45D2
3	–	Gear (45T)	45D3
4	–	Gear (55/19T)	45D4
5	807E 31531	Gear (54T)	45D5
6	–	Gear (47/17T)	45D6
7	–	Gear (45T)	45D7
8	–	Gear (96/20T)	45D8
9	809E 79130	Spring	45D9

PL8.3



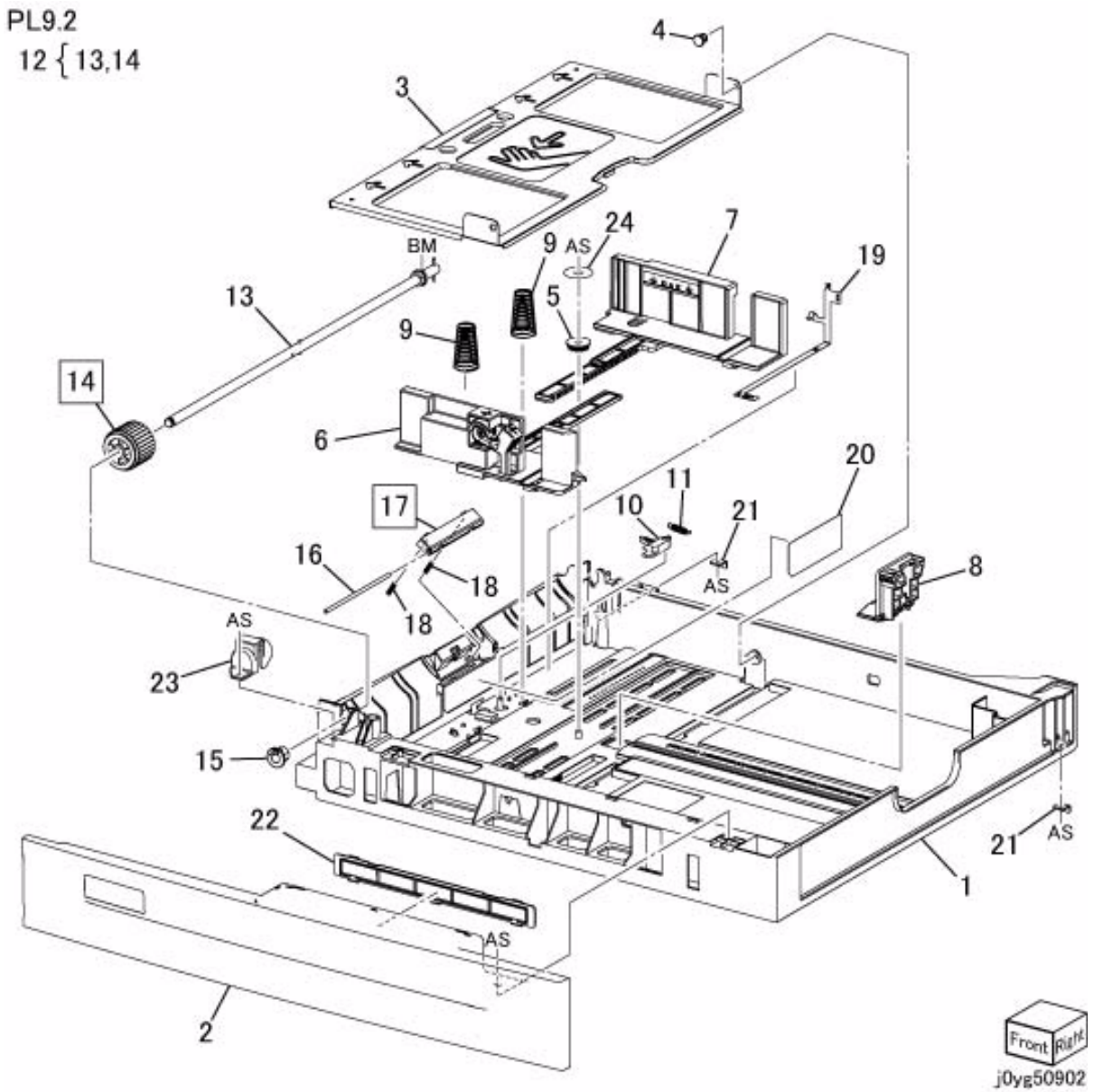
PL 9.1 Tray 1,Tray Drive

Item	Parts No	Description	A.C.
1	050K 69380	Tray 1 (PL 9.2) (REP 9.1.2)	5010
2	802K 63710	Tray 1 No Paper Sensor	5013
3	–	Drive Bracket	50B1
4	013E 41230	Bearing	50B2
5	054K 48460	L/H Chute	50B3
6	005K 83551	Tray 1 Coupling and Gear	50B4
7	006K 89940	Shaft and Gear	50B5
8	121K 52340	Tray 1 Feed Clutch (REP 9.1.1, REP 99.1.1)	50B6
9	807E 40920	Helical Gear (28T)	50B7
10	032E 40350	Harness Guide	50B8
11	014E 45350	Spacer	50B9
12	013E 41230	Bearing	50BB
13	–	Tray Support Bracket	50BC
14	–	Instruction Label	50BD
15	–	Label (No.1)	50BE
16	003E 60952	Tray Front Stopper	50BF



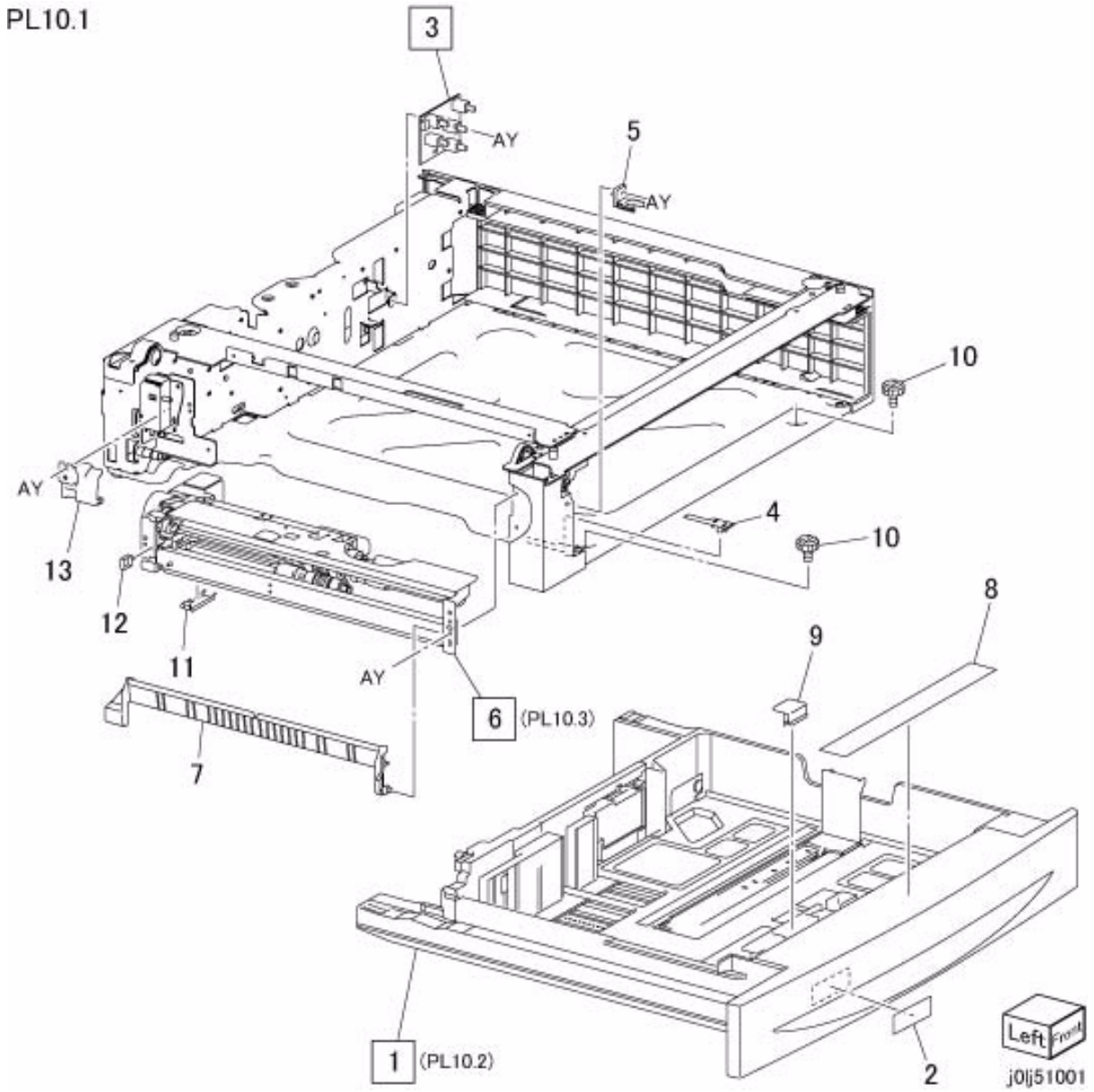
PL 9.2 Tray 1 Component

Item	Parts No	Description	A.C.
1	–	Tray Housing	50C1
2	848E 84351	Tray Cover	50C2
3	815K 09820	Bottom Plate	50C3
4	029E 32810	Pivot	50C4
5	807E 02270	Pinion Gear	50C5
6	038K 21331	Side Front Guide	50C6
7	038K 21340	Side Rear Guide	50C7
8	038E 27123	End Guide	50C8
9	809E 54160	Spring	50C9
10	003E 60941	Stopper	50CB
11	809E 54170	Spring	50CC
12	059K 33051	Tray 1Feed Roll and Shaft (Item 13,14)50CD	
13	–	Shaft (P/O Item 12)	50CE
14	059K 32773	Tray 1Feed Roll (REP 9.2.1)5032	
15	013E 25881	Bearing	50CF
16	006E 79021	Retard Shaft	50CG
17	019K 09420	Tray 1Retard Pad (REP 9.2.1)5033	
18	809E 27650	Spring	50CH
19	849E 24550	Ground Plate	50CJ
20	–	Paper Guide	50CK
21	803E 15701	Stopper	50CL
22	848E 85990	Inner Cover	50CM
23	–	Bearing Cover	50CN
24	–	Spacer	50CP



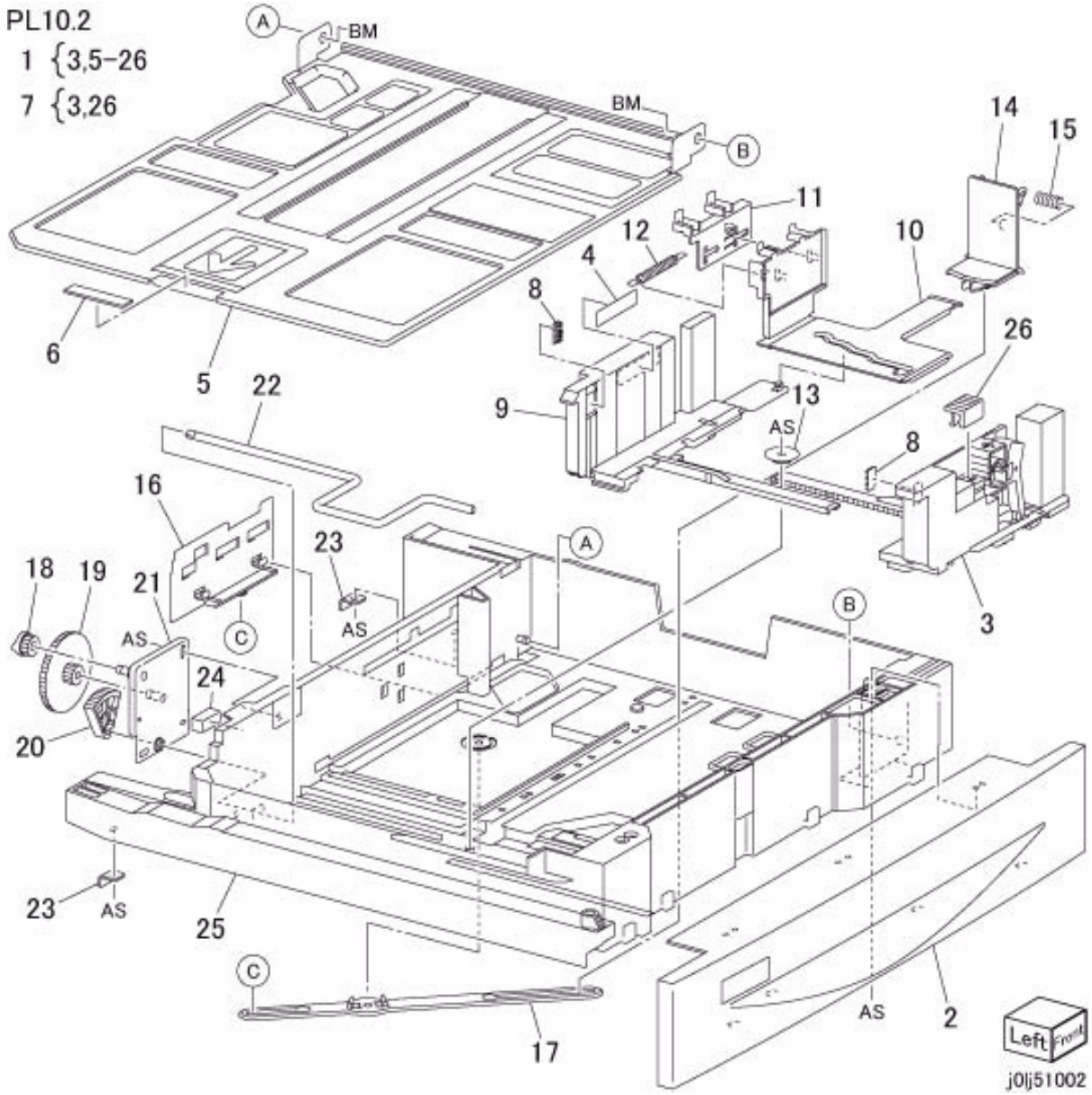
PL 10.1 Tray 2 ,Feeder

Item	Parts No	Description	A.C.
1	050K 64422	Tray 2 (PL 10.2)(REP 99.1.1)	50D1
2	–	Label (No.2)	50D2
3	110K 11680	Tray 2 Paper Size Switch(REP 99.1.1)	50D3
4	014E 51110	Tray Spacer	50D4
5	003E 61510	Tray Stopper	50D5
6	059K 79620	Tray 2 Feeder (PL 10.3) (REP 10.1.1, REP 99.1.1)	5040
7	054K 27520	Feed Out Chute	50D6
8	–	Label (Instruction)	50D7
9	014E 59990	Slide Lock (Alternate)	50D8
–	014E 56640	Slide Lock (Alternate)	50D8
10	826E 07210	Docking Screw	50D9
11	–	Cover	50DB
12	–	Holder	50DC
13	–	Feeder Connector Cover	50DD



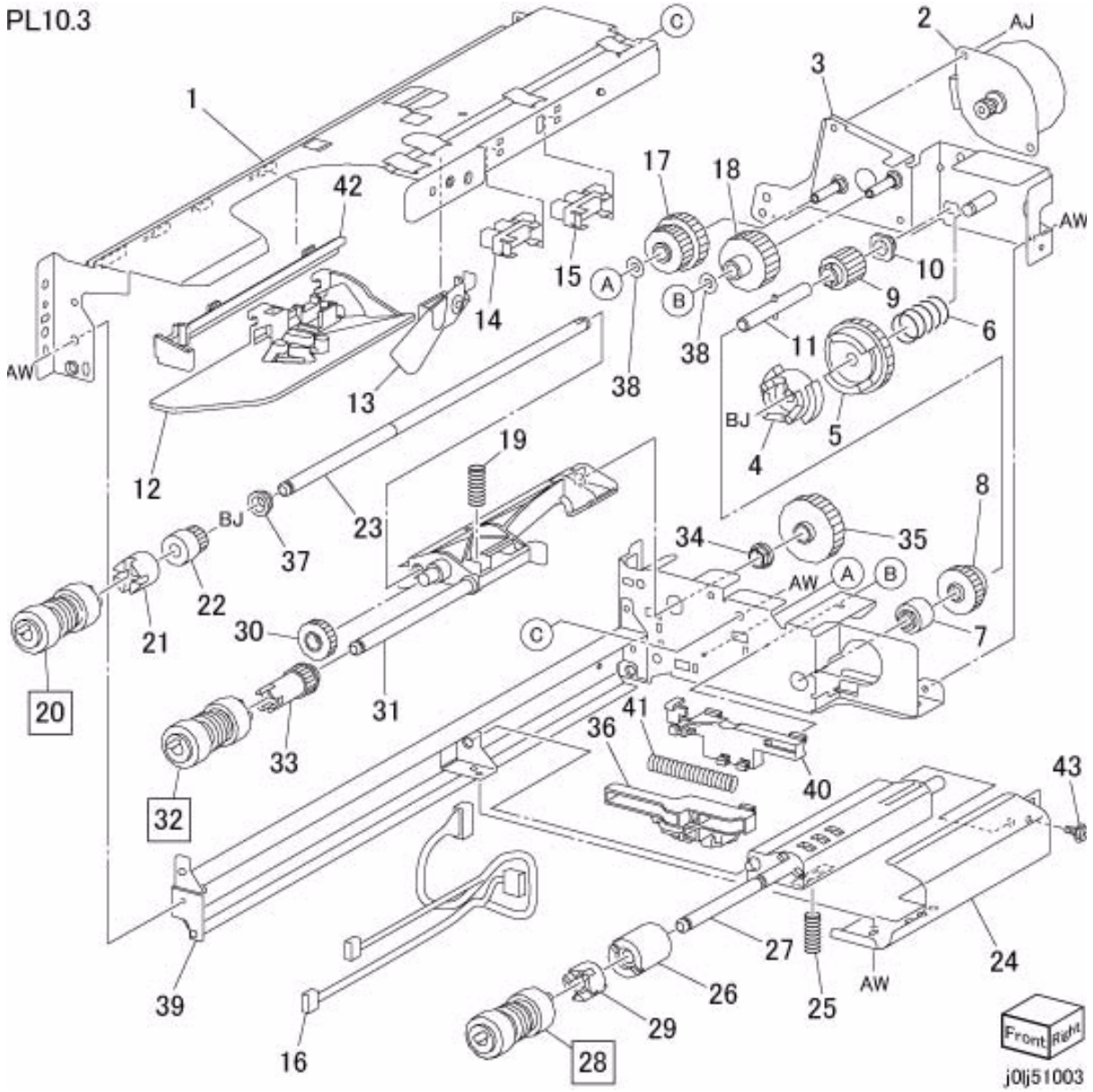
PL 10.2 Tray 2 Component

Item	Parts No	Description	A.C.
1	–	Tray 2 (Item 3,5-26)	50E1
2	802E 85381	Tray Cover	50E2
3	–	Front Side Guide (P/O Item 7)	50E3
4	893E 09490	Label (Max)	50E4
5	849E 06322	Bottom Plate	50E5
6	019K 07150	Bottom Pad	50E6
7	038K 87113	Front Side Guide Assembly (Item 3, 26)	50E7
8	019E 71680	Tray Pad	50E8
9	038E 26550	Rear Side Guide	50E9
10	120E 22040	Side Guide Actuator	50EB
11	120E 22081	Guide Actuator	50EC
12	809E 41880	Spring	50ED
13	807E 13521	Pinion Gear	50EE
14	038E 26533	End Guide	50EF
15	809E 47091	Spring	50EG
16	120E 22051	End Guide Actuator	50EH
17	012E 11090	Link	50EJ
18	-	Coupling Gear (13T)	50EK
19	-	Gear (13T/60T)	50EL
20	-	Sector Gear	50EM
21	–	Bracket	50EN
22	–	Lift Up Shaft	50EP
23	–	Stopper	50EQ
24	–	Seal	50ER
25	–	Tray	50ES
26	–	Slide Lock (P/O Item 7)	50ET
27	604K20541	Gear Kit (Contains 1 each of items 18, 19, 20)	



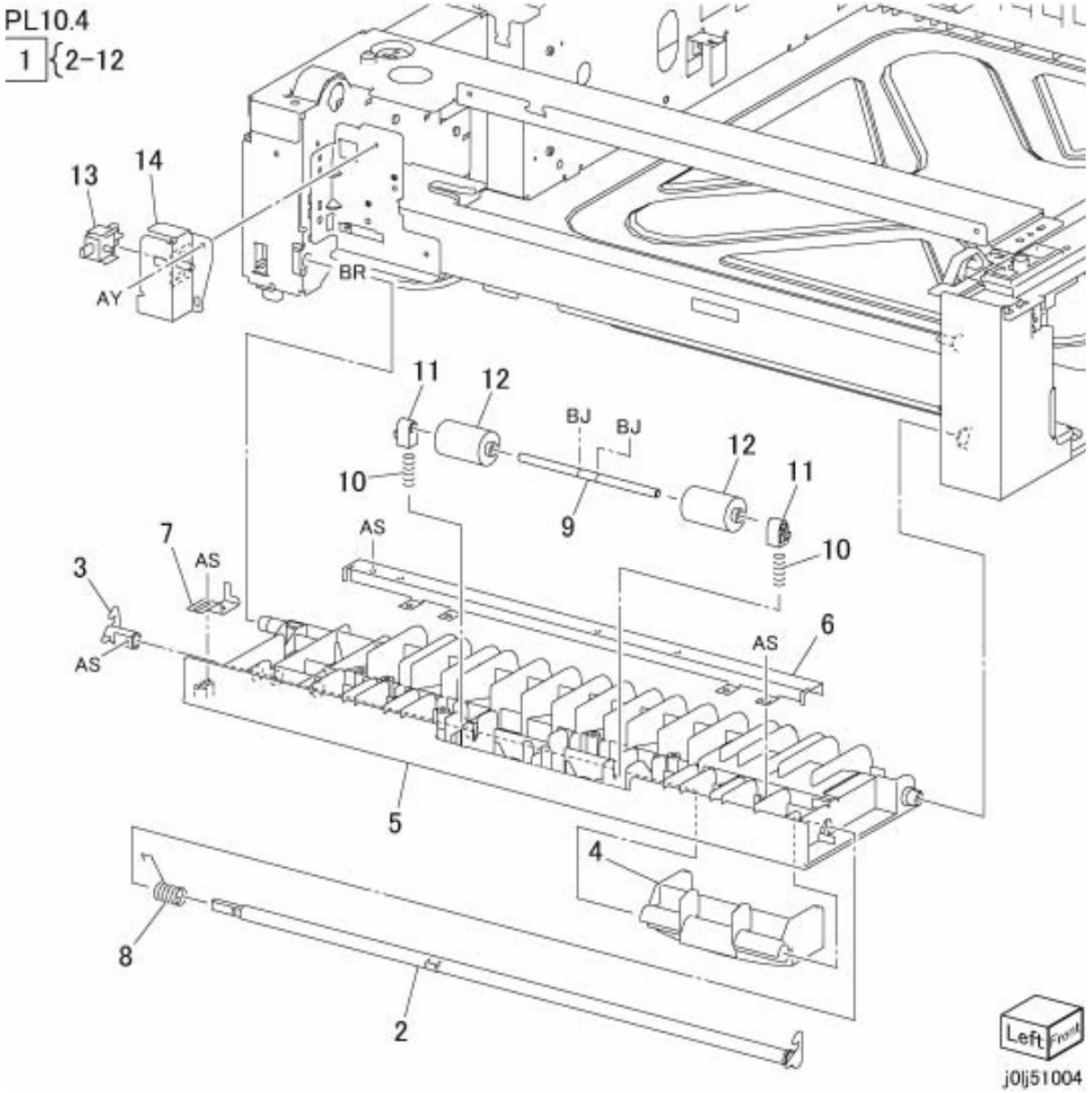
PL 10.3 Tray 2 Feeder

Item	Parts No	Description	A.C.
1	–	Upper Frame	50G1
2	127K 38171	Tray 2 Feed/Lift Up Motor	5091
3	–	Bracket	50G2
4	014E 44770	Spacer	50G3
5	807E 00390	Gear (31T)	50G4
6	809E 50531	Spring	50G5
7	005K 83081	Oneway Clutch	50G6
8	007K 85730	Oneway Gear	50G7
9	807E 00800	Gear (13T)	50G8
10	013E 26530	Bearing	50G9
11	–	Shaft	50GB
12	054E 23461	Front Chute	50GC
13	120E 22481	Actuator	50GD
14	–	Tray 2 Nudger Level Sensor	50GE
15	–	Tray 2 No Paper Sensor	50GF
16	962K 19692	Wire Harness	50GG
17	–	Gear (28T/21T)	50GH
18	007E 78900	Gear (29T)	50GJ
19	809E 51070	Spring	50GK
20	-	Tray 2 Feed Roll (REP 10.3.1)	5042
21	005K 05890	Oneway Clutch	50GL
22	005K 06760	Oneway Gear (22T)	50GM
23	–	Shaft	50GN
24	054E 23170	Chute	50GP
25	809E 42531	Spring	50GQ
26	005K 07010	Friction Clutch (Alternate)	50GR
–	005K 81880	Friction Clutch (Alternate)	50GR
27	–	Support Assembly	50GS
28	-	Tray 2 Retard Roll (REP 10.3.1)	5043
29	014E 45030	Spacer	50GT
30	007E 79380	Gear (33T)	50GV
31	–	Support Assembly	50GW
32	-	Tray 2 Nudger Roll (REP 10.3.1)	50GX
33	807E 00070	Gear (25T)	50H1
34	413W 11660	Bearing	50H2
35	807E 00410	Gear (34T)	50H3
36	011E 14771	Lever	50H4
37	013E 92890	Bearing	50H5
38	028E 94160	Washer	50H6
39	–	Lower Frame	50H7
40	019E 56680	Holder	50H8
41	809E 51080	Spring	50H9
42	–	Rail	50HB
43	–	Screw	50HC
44	604K20360	Roll KIt (Contains 3 each of items 20, 28, 32)	



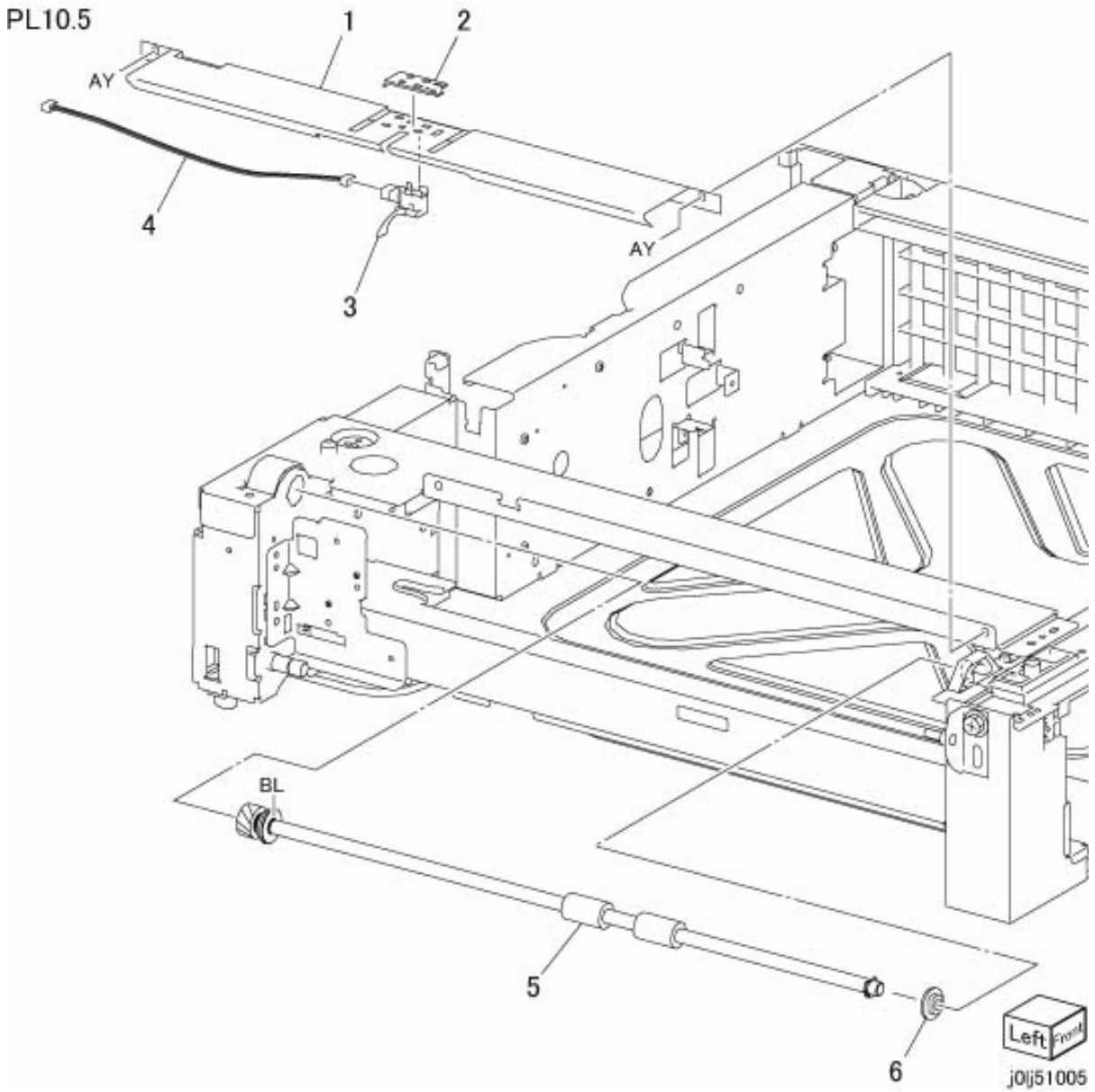
PL 10.4 Left Cover

Item	Parts No	Description	A.C.
1	802K 57025	Left Cover Assembly (Item 2-12)(REP 99.1.1)50J1	
2	003E 59630	Latch	50J2
3	003E 59640	Hook	50J3
4	011E 14481	Handle	50J4
5	–	Left Cover (P/O Item 1)	50J5
6	054E 23421	Chute	50J6
7	120E 22240	Actuator	50J7
8	809E 54501	Spring	50J8
9	–	Shaft (P/O Item 1)	50J9
10	809E 54590	Spring	50JB
11	013E 26100	Bearing	50JC
12	059E 99241	Pinch Roll	5045
13	110E 12220	STM Left Cover Switch	50JD
14	030K 75511	Bracket Assembly	50JE



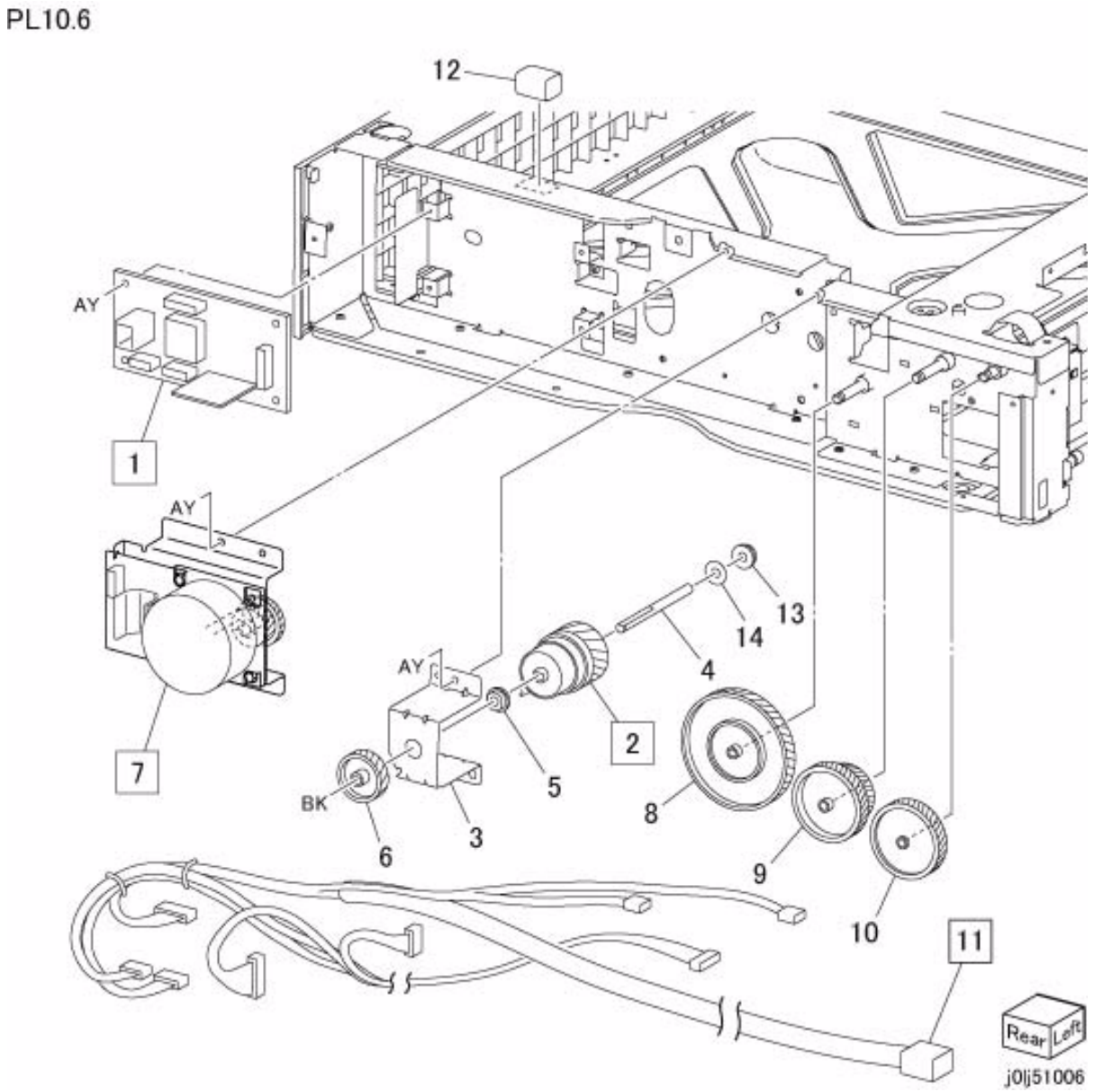
PL 10.5 Takeaway Roll

Item	Parts No	Description	A.C.
1	–	Chute	50K1
2	802E 54672	Cover	50K2
3	130K 64121	Feed Out Sensor 2	50K3
4	952K 08150	Wire Harness	50K4
5	059K 26251	Takeaway Roll	5045
6	413W 11860	Bearing	50K5



PL 10.6 Electrical

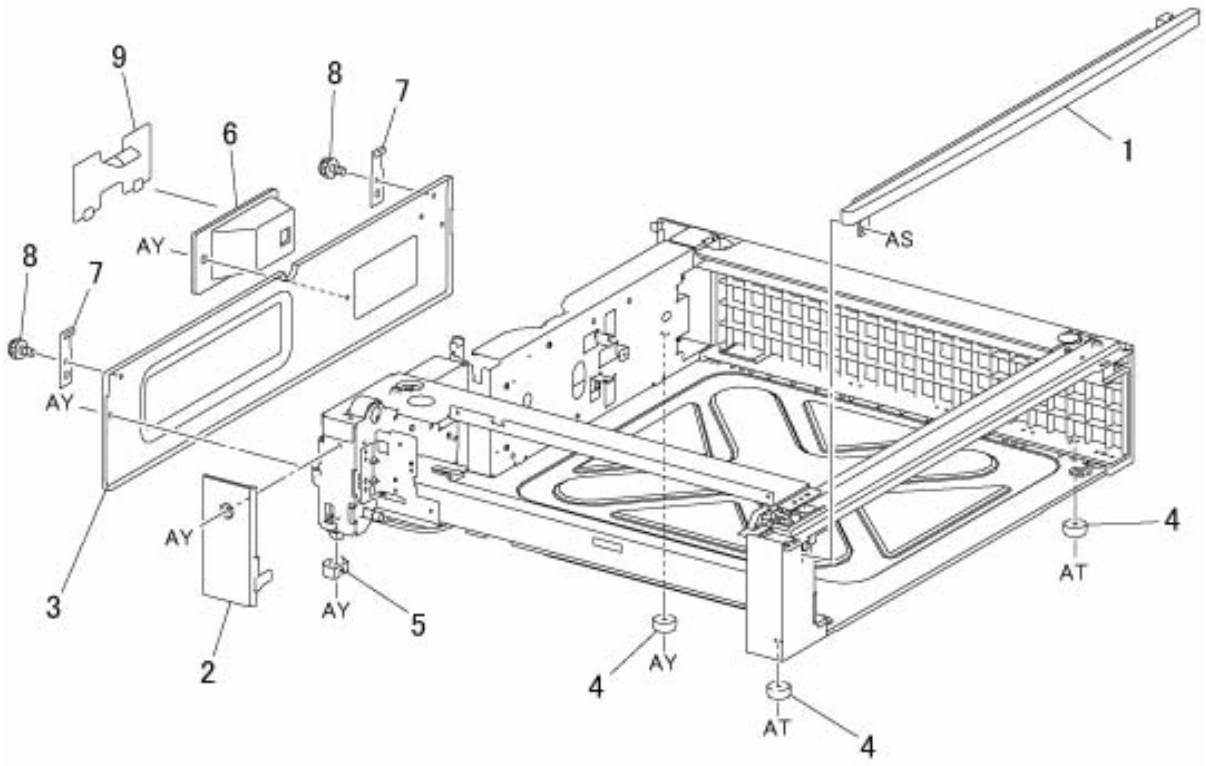
Item	Parts No	Description	A.C.
1	960K 62110	STM PWB (REP 10.6.1, REP 99.1.1)50L1	
2	121K 31530	STM Takeaway Roll Clutch(REP 99.1.1)50L2	
3	–	Bracket	50L3
4	006E 78490	Shaft	50L4
5	413W 77359	Bearing	50L5
6	007E 78260	Gear	50L6
7	007K 18460	STM Takeaway Motor (REP 10.6.2, REP 99.1.1)50L7	
8	007E 79830	Gear	50L8
9	007E 79840	Gear	50L9
10	007E 79850	Gear	50LB
11	952K 03070	Wire Harness(REP 99.1.1)50LC	
12	–	Gasket	50LD
13	413W 11860	Bearing	50LE
14	252W 29450	Nylon Washer(8) (t1)	50LF



PL 10.7 Cover

Item	Parts No	Description	A.C.
1	802E 54731	Top Cover	50M1
2	802E 56590	Left Cover	50M2
3	802E 56601	Rear Cover	50M3
4	–	Foot	50M4
5	–	Foot (Rear Left)	50M5
6	–	Cover	50M6
7	849E 34880	Docking Bracket	50M7
8	826E 07210	Docking Screw	50M8
9	032E 38920	Cap	50M9

PL10.7



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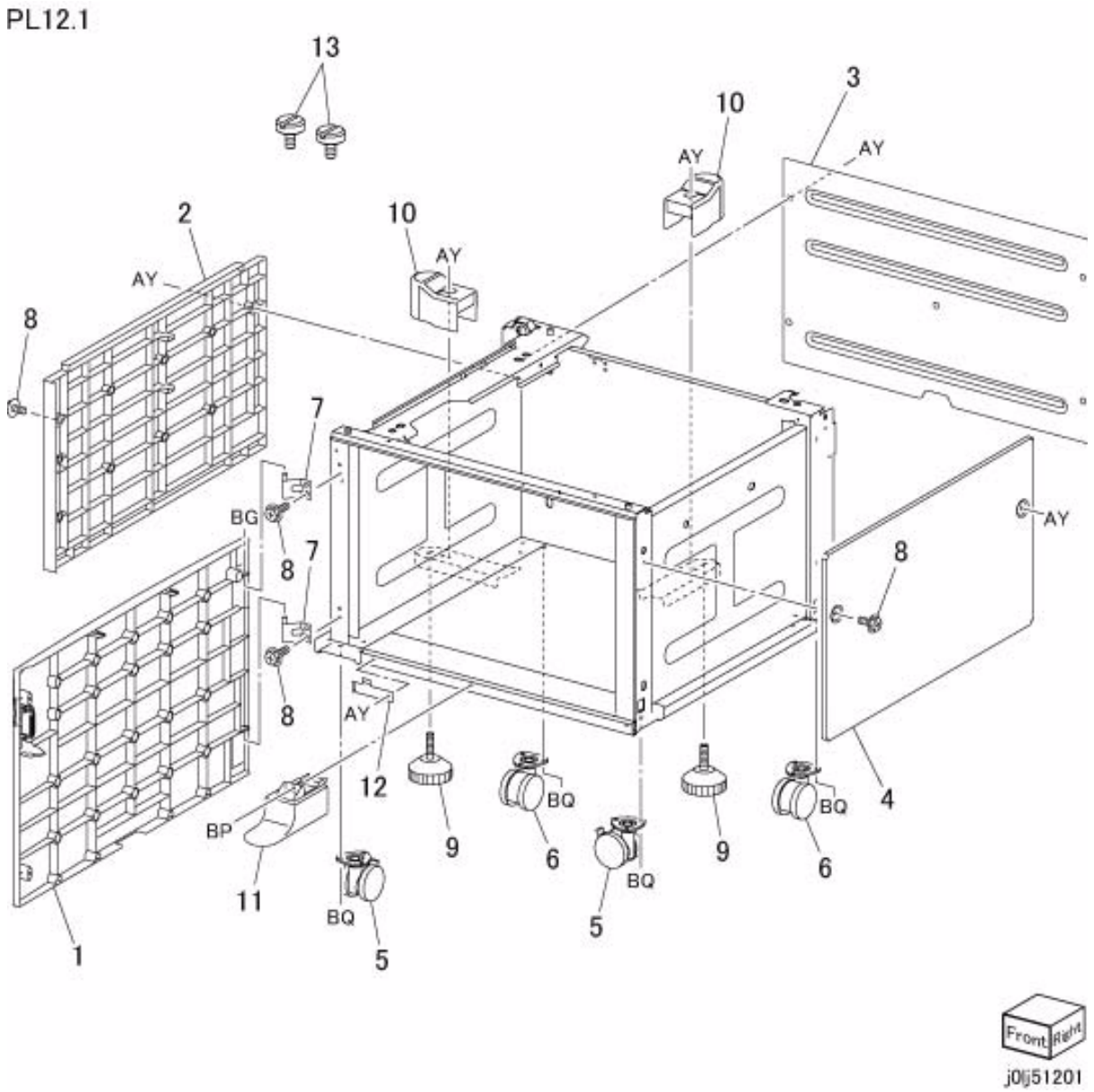
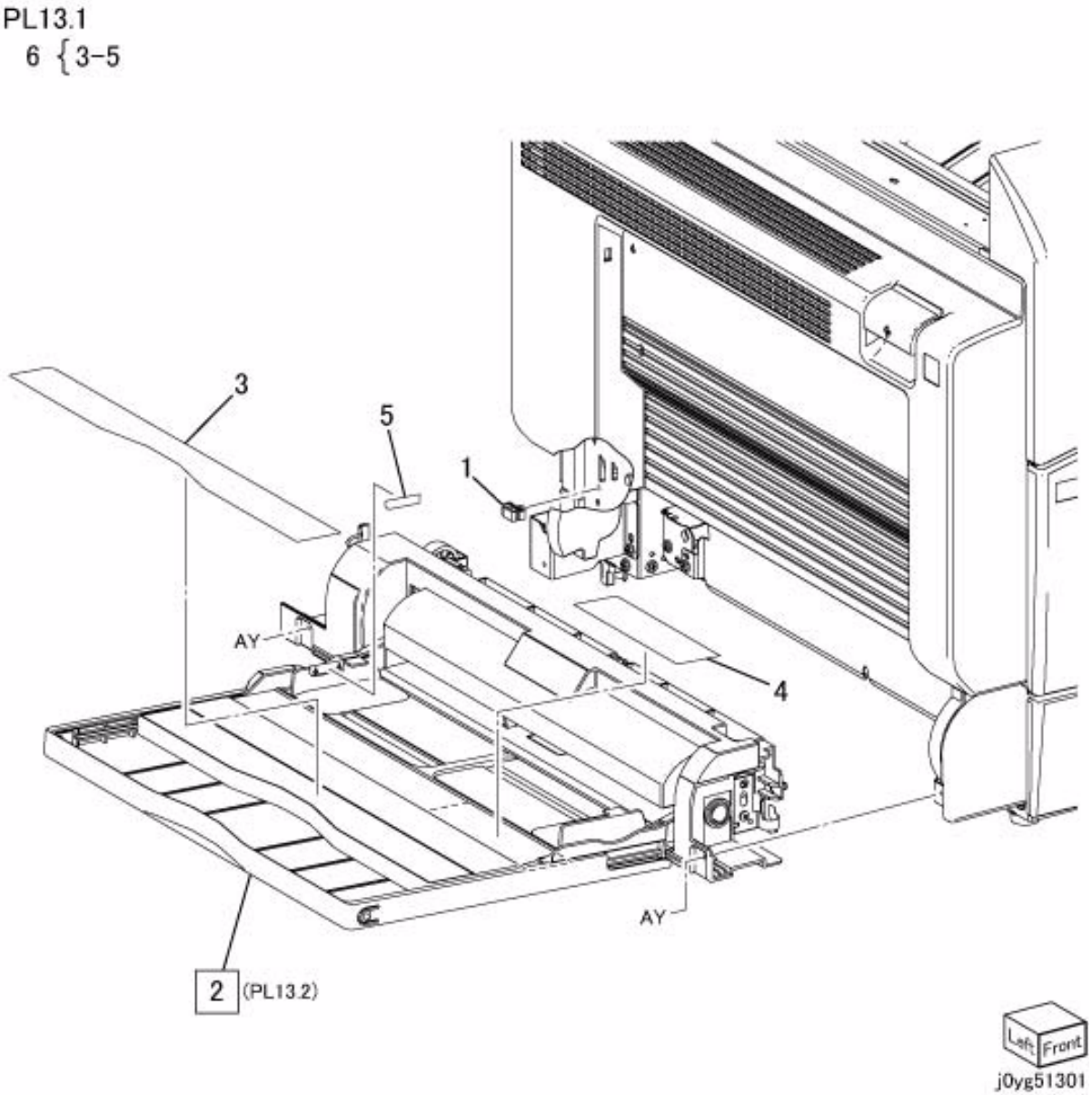
PL 12.1 Stand

Item	Parts No	Description	A.C.
1	–	Front Cover	50N1
2	–	Left Cover	50N2
3	–	Rear Cover	50N3
4	–	Right Cover	50N4
5	–	Caster (S)	50N5
6	–	Caster	50N6
7	–	Hinge	50N7
8	–	Screw	50N8
9	–	Foot	50N9
10	–	Foot Cover	50NB
11	–	Stopper	50NC
12	–	Pipe Cover	50ND
13	–	Docking Screw	50NE



PL 13.1 MSI

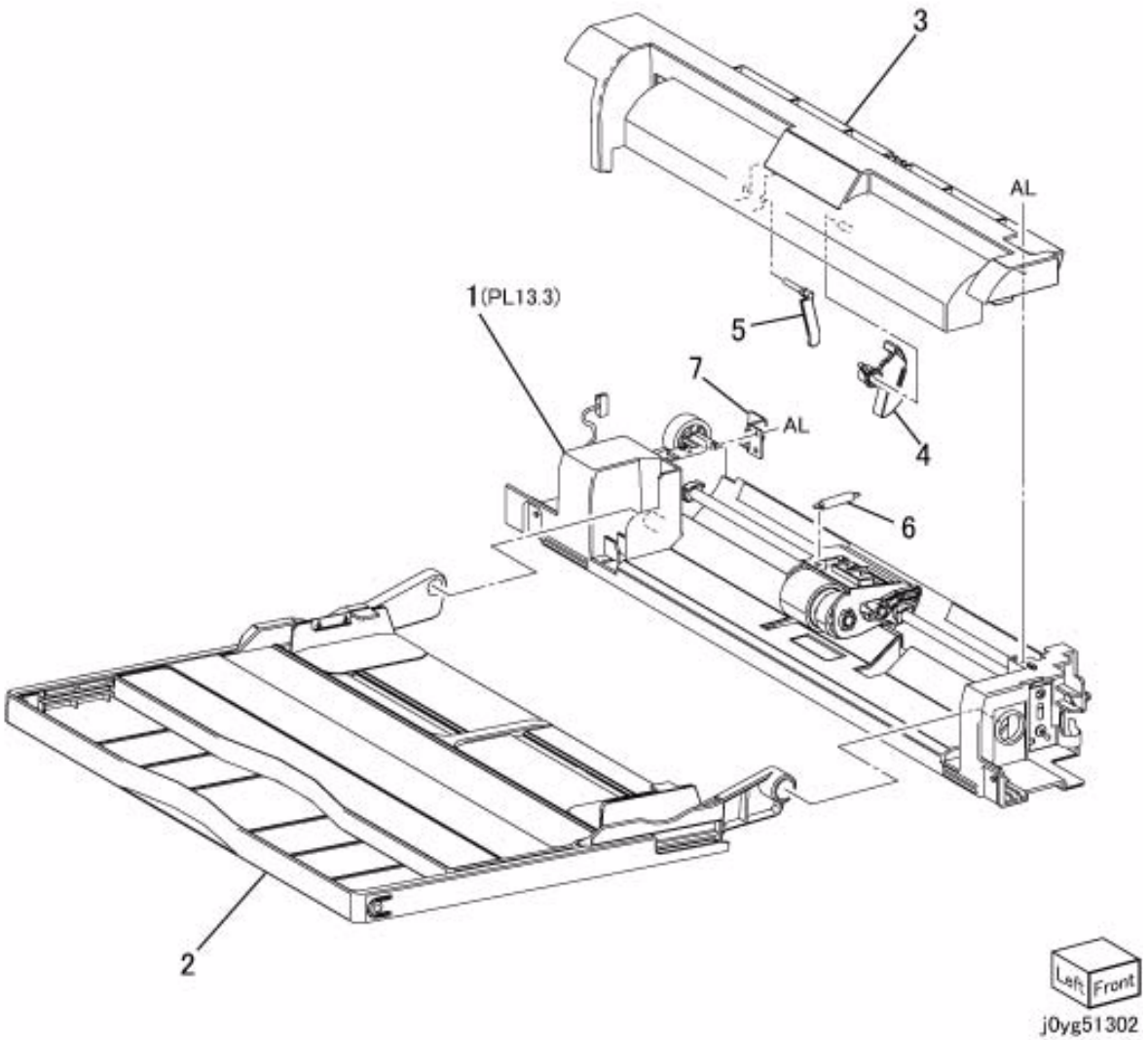
Item	Parts No	Description	A.C.
1	–	Clamp	51B1
2	059K 75570	MSI (PL 13.2) (REP 13.1.1)	51AA
3	–	Instruction Label (P/O Item 6)	51B2
4	–	Size Label (P/O Item 6)	51B3
5	–	Max Label (P/O Item 6)	51B4
6	604K 80730	MSI Label Kit (Item 3-5)	51B5



PL 13.2 MSI Component

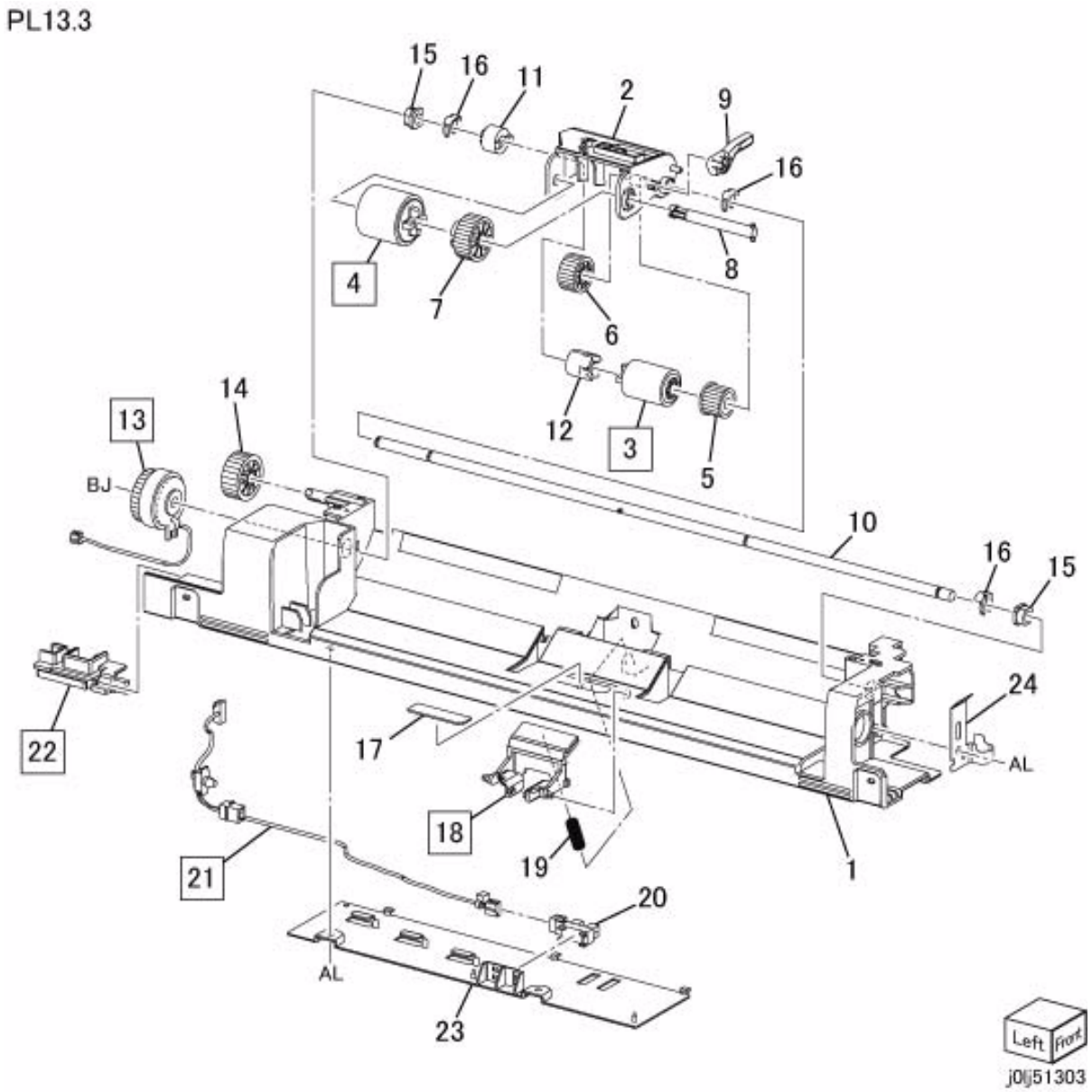
Item	Parts No	Description	A.C.
1	059K 75580	MSI Lower Feeder (PL 13.3)	51C1
2	050K 69580	MSI Tray	5110
3	801E 22262	MSI Top Cover	51C2
4	803E 13171	Paper Stopper	51C3
5	120E 34130	No Paper Actuator	51C4
6	899E 01350	Spring	51C5
7	848E 87781	Gear Cover	51C6

PL13.2



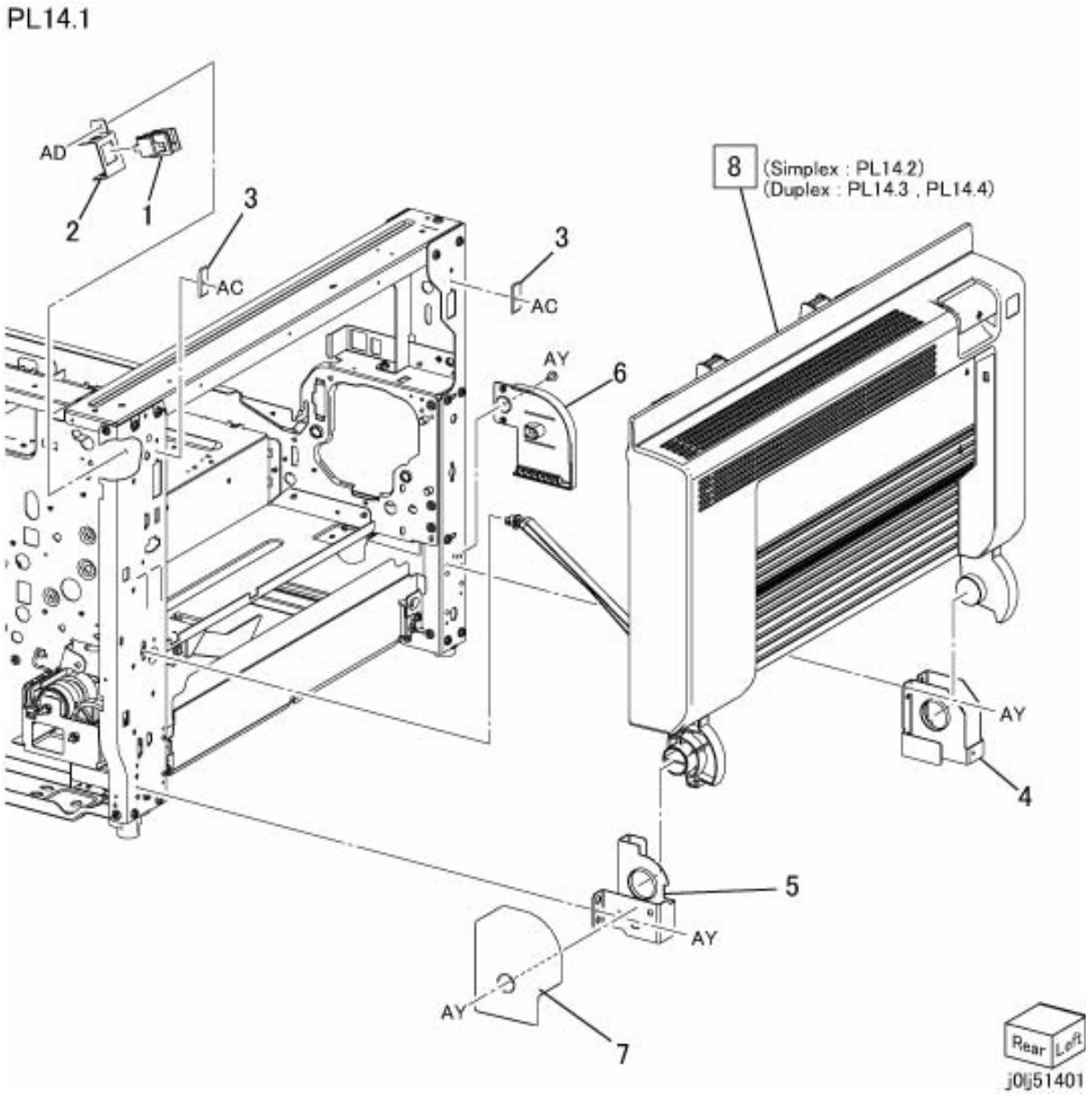
PL 13.3 MSI Lower Feeder

Item	Parts No	Description	A.C.
1	–	MSI Lower Frame	51D1
2	019E 84002	Nudger Holder	51D2
3	022K 77450	MSI Feed Roll (REP 13.3.1)	5132
4	022K 77460	MSI Nudger Roll (REP 13.3.1)	5131
5	007K 18660	Oneway Clutch Gear (30T)	51D3
6	807E 39610	Gear (33T)	51D4
7	807E 39600	Gear (46T)	51D5
8	806E 37300	Shaft	51D6
9	803E 13180	Stopper Paper Lock	51D7
10	–	Shaft	51D8
11	005K 83510	Friction Clutch	51D9
12	005K 83520	Oneway Clutch	51DB
13	121K 52220	MSI Feed Clutch(REP 99.1.1)	5136
14	807E 39620	Gear (18T)	51DC
15	413W 11660	Bearing	51DD
16	–	KL-Clip	51DE
17	019E 84010	Bottom Pad	51DF
18	019K 12820	MSI Retard Pad (REP 13.3.2)	5233
19	899E 01340	Spring	51DG
20	930W 00123	MSI No Paper Sensor	51DH
21	962K 68851	MSI Wire Harness(REP 99.1.1)	51DJ
22	848E 85862	Connector Cover(REP 99.1.1)	51DK
23	848E 85940	MSI Lower Cover	51DL
24	815E 77090	Ground Plate	51DM



PL 14.1 Simplex/Duplex L/H Cover

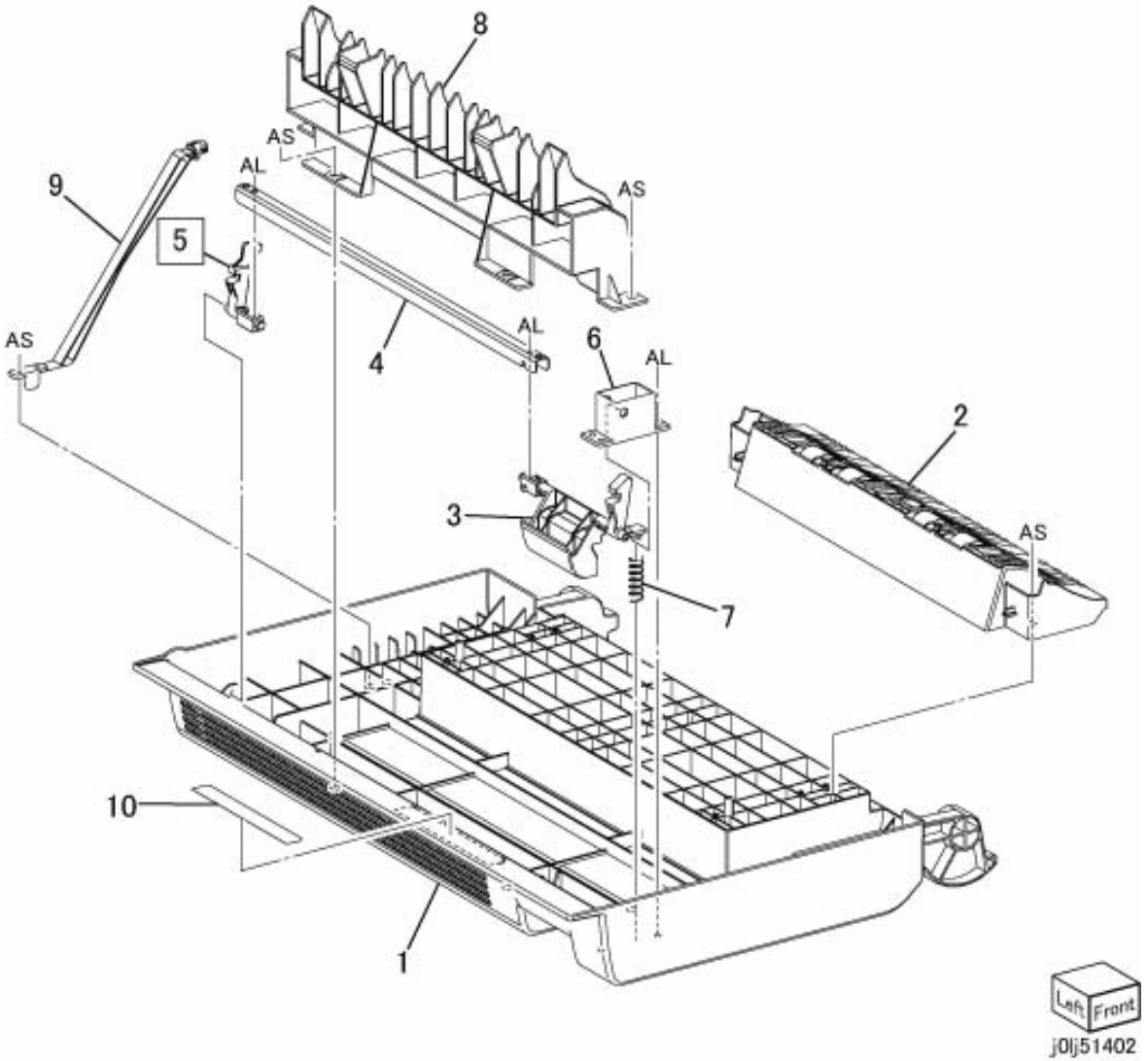
Item	Parts No	Description	A.C.
1	110E 94770	L/H Cover Interlock Switch	52B1
2	868E 77060	Switch Bracket	52B2
3	032E 40060	Latch Guide	52B3
4	–	Front Hinge	52B4
5	–	Rear Hinge	52B5
6	848E 83270	Hinge Front Cover	52B6
7	848E 83290	Hinge Rear Cover	52B7
8	848K 64890	Simplex L/H Cover (PL 14.2) (REP 14.1.1)	52AA
–	848K 68300	Duplex L/H Cover (PL 14.3, PL 14.4) (REP 14.1.1)	52AA



PL 14.2 Simplex L/H Cover

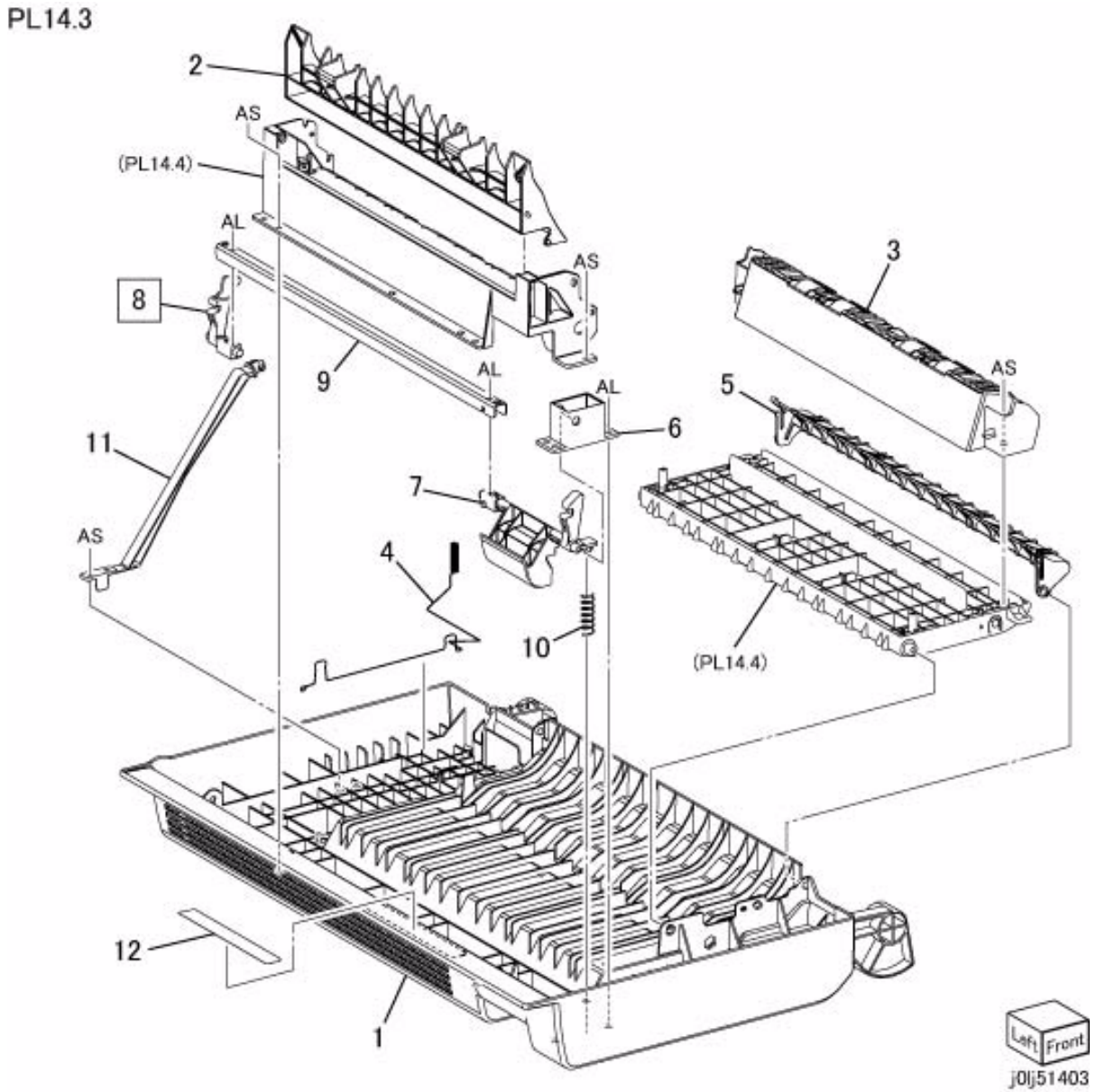
Item	Parts No	Description	A.C.
1	–	L/H Cover	52C1
2	054K 48270	Registration Pinch Chute	52C2
3	011E 26670	Front Latch Lever	52C3
4	815E 75070	Latch Plate	52C4
5	011E 26691	Rear Latch Lever(REP 99.1.1) 52C5	
6	868E 78150	Front Latch Support	52C6
7	809E 99540	Spring	52C7
8	054E 49700	L/H Cover Upper Chute	52C8
9	868E 77080	L/H Cover Support	52C9
10	898E 45921	Caution Label	52CB

PL14.2



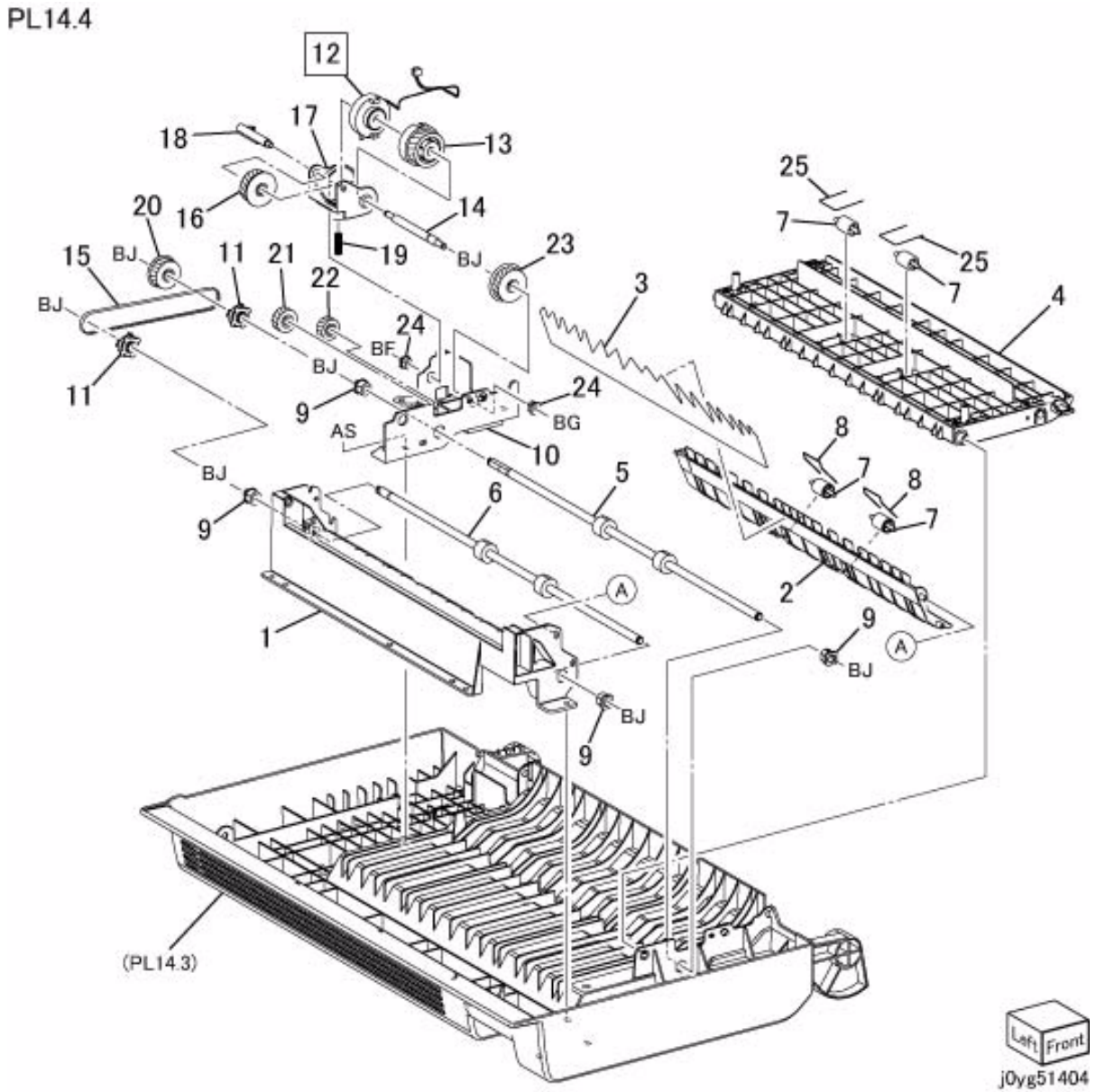
PL 14.3 Duplex L/H Cover-Chute,Latch

Item	Parts No	Description	A.C.
1	–	L/H Cover	52D1
2	054E 50031	Duplex In Chute	52D2
3	054K 48500	Registration Pinch Chute	52D3
4	062E 16500	Conductor	52D4
5	054E 49741	L/H Cover Lower Chute	52D5
6	868E 78150	Front Latch Support	52D6
7	011E 26670	Front Latch Lever	52D7
8	011E 26691	Rear Latch Lever(REP 99.1.1)	52D8
9	815E 75070	Latch Plate	52D9
10	809E 99540	Spring	52DB
11	868E 77080	L/H Cover Support	52DC
12	898E 45921	Caution Label	52DD



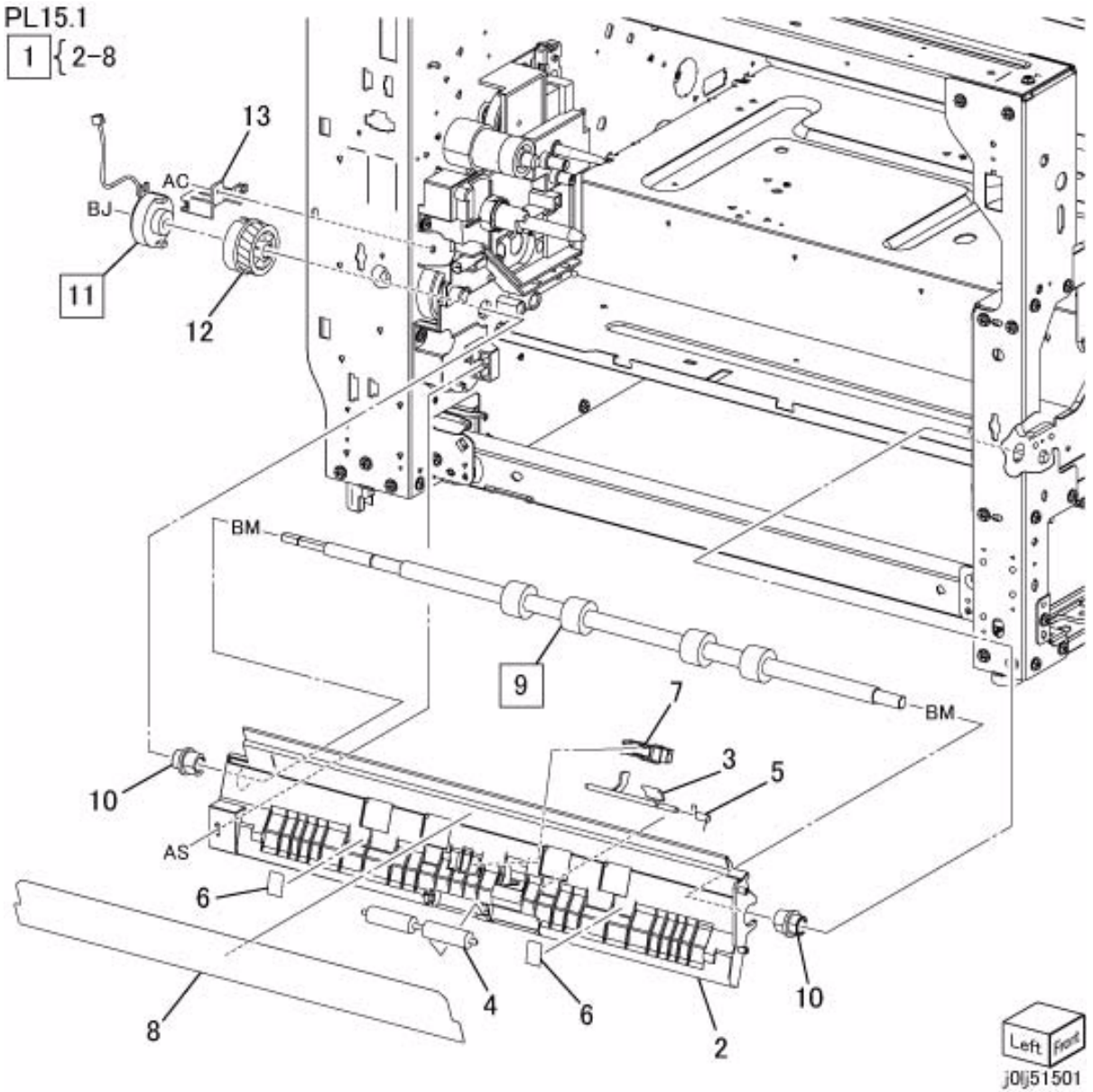
PL 14.4 Duplex L/H Cover-Roll,Gear

Item	Parts No	Description	A.C.
1	054E 49711	L/H Cover Upper Chute	52E1
2	–	L/H Cover Upper Lower Chute	52E2
3	038E 27201	Paper Guid	52E3
4	–	Duplex Inner Chute	52E4
5	059K 74950	Duplex Roll 1	52E5
6	059K 74960	Duplex Roll 2	52E6
7	059E 04010	Pinch Roll	5235
8	809E 75530	Spring	52E7
9	013E 40060	Bearing	52E8
10	–	Gear Bracket	52E9
11	020E 45140	Pulley	52EB
12	121K 52130	Duplex Clutch(REP 99.1.1)	5252
13	807E 40930	Helical Gear	52EC
14	–	Duplex Clutch Shaft	52ED
15	023E 27800	Belt	5253
16	807E 39430	Swing Helical Gear (27T)	52EE
17	868E 77401	Swing Bracket	52EF
18	806E 37111	Swing Shaft	52EG
19	809E 99740	Spring	52EH
20	–	Helical Gear (24T)	52EJ
21	–	Helical Gear (19T)	52EK
22	–	Helical Gear (17T)	52EL
23	–	Helical Gear (28T)	52EM
24	413W 11460	Bearing	52EN
25	809E 75530	Spring	52EP



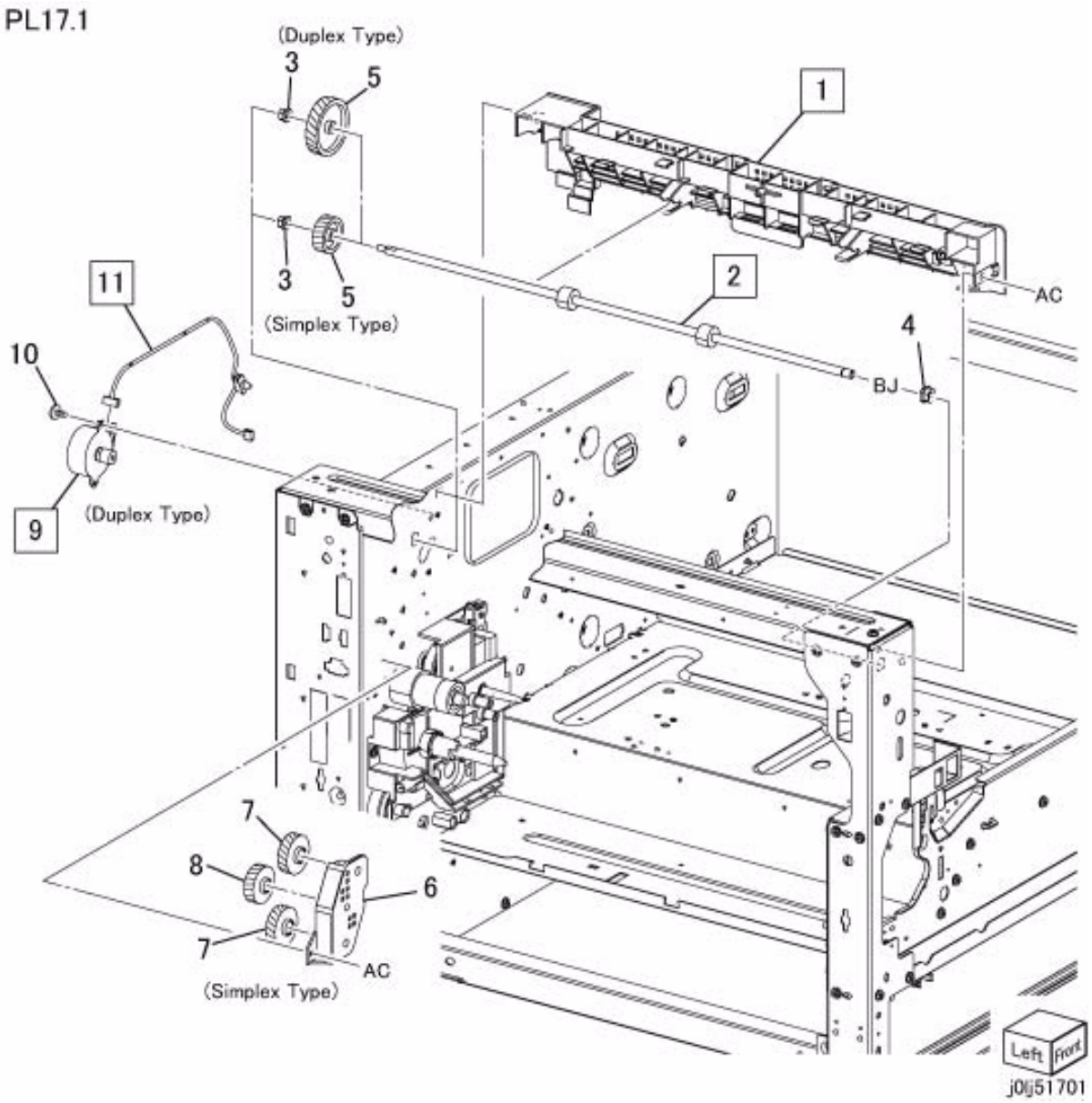
PL 15.1 Registration

Item	Parts No	Description	A.C.
1	059K 74900	Registration Chute (Item 2-8) (REP 15.1.1)5310	
2	–	Registration Chute (P/O Item 1) 5315	
3	120E 34050	Actuator	53B1
4	059E 98590	Idler Roll	53B2
5	809E 99570	Spring	53B3
6	–	Paper Guide (P/O Item 1)	53B4
7	930W 00123	Registration Sensor	5314
8	–	Film Chute (P/O Item 1)	53B5
9	059K 74891	Registration Roll (REP 15.1.2)5313	
10	013E 40990	Bearing	53B6
11	121K 52340	Registration Clutch (REP 99.1.1) 53B7	
12	807E 40940	Helical Gear	53B8
13	032E 41320	Harness Guide	53B9



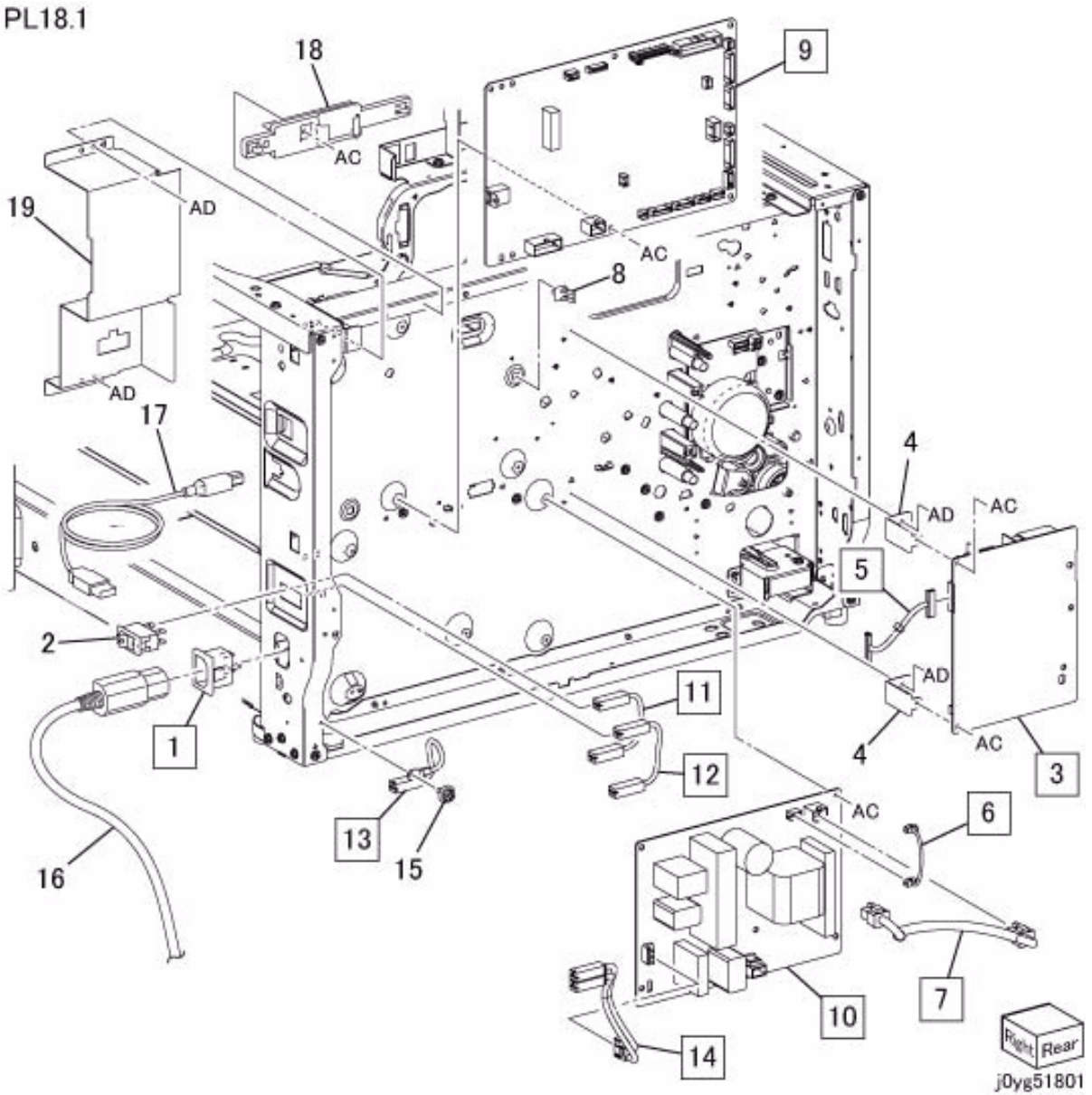
PL 17.1 Simplex/Duplex Exit

Item	Parts No	Description	A.C.
1	848K 68380	Exit Cover (REP 17.1.1)	54B1
2	059K 74910	Exit Roll (REP 17.1.2)	5411
3	413W 14460	Bearing (d:4mm)	54B2
4	413W 11660	Bearing (d:6mm)	54B3
5	807E 39150	Helical Gear (Duplex)	54B4
–	807E 39120	Helical Gear (Simplex)	54B4
6	848E 83330	Gear Housing	54B5
7	807E 39130	Helical Gear (43T)	54B6
8	807E 39140	Helical Gear (41T)	54B7
9	127K 66210	Inverter Motor (REP 99.1.1)	5251
10	–	Bind Head Screw	54B8
11	952K 01160	Motor Wire Harness(REP 99.1.1)	54B9



PL 18.1 Electrical

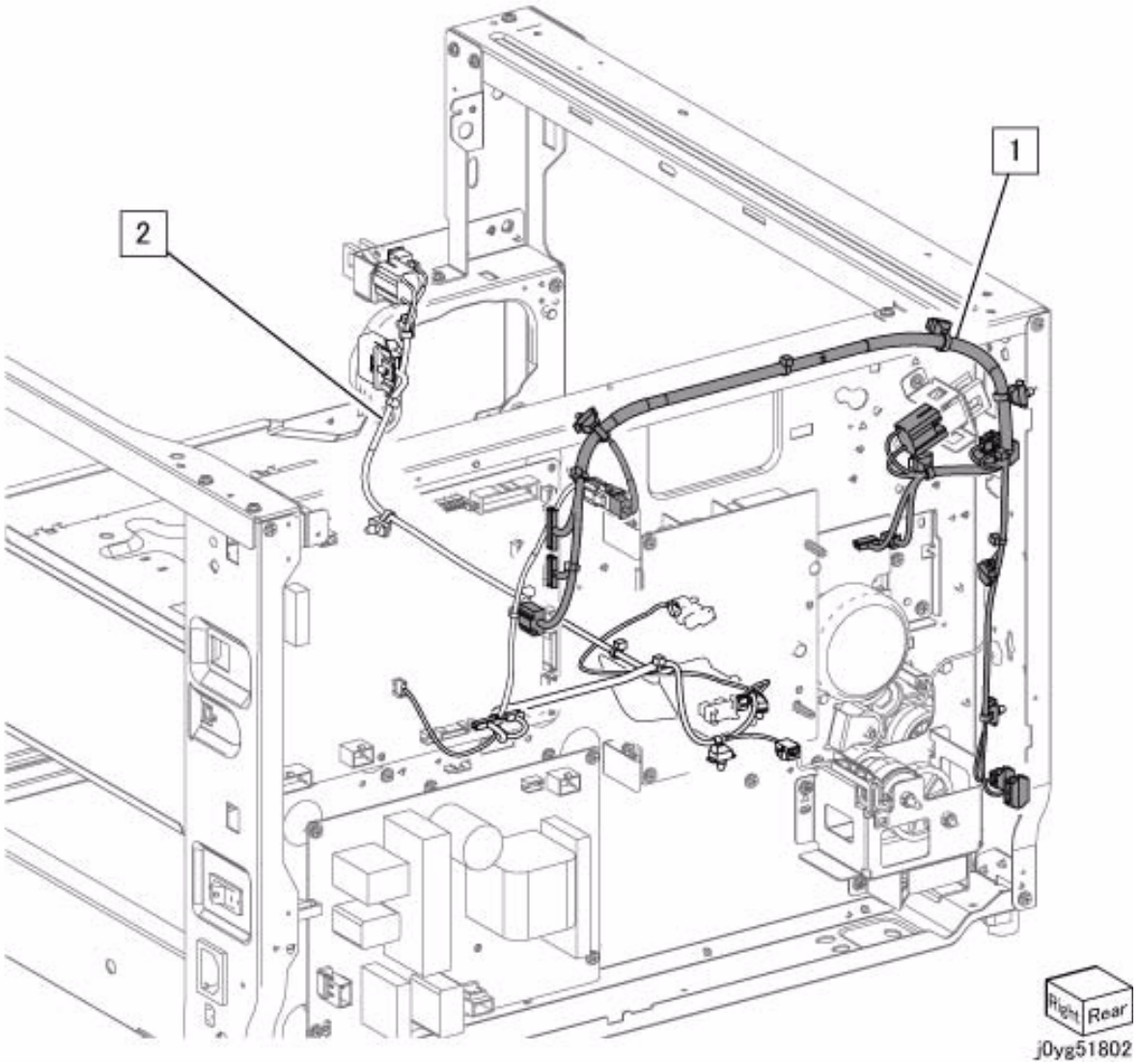
Item	Parts No	Description	A.C.
1	913W 02321	AC Inlet (REP 99.1.1)	72B1
2	910W 00703	Main Power Switch	72B2
3	105E 20470	HVPS (REP 18.1.2, REP 99.1.1)	7320
4	–	HVPS Bracket	72B3
5	952K 01140	HVPS Wire Harness(REP 99.1.1)	72B4
6	952K 01190	LVPS Wire Harness (Signal) (REP 99.1.1)	72B5
7	952K 01200	LVPS Wire Harness (Power) (REP 99.1.1)	72B6
8	120E 34060	PWB Support	72B7
9	960K 67870	ESS/MCU PWB (REP 18.1.1, REP 99.1.1)	7610
10	105E 20480	220V-LVPS (REP 18.1.3)	7310
–	105E 21070	120V-LVPS (REP 18.1.3)	7310
11	117K 47570	220V-Inlet Wire Harness (Connector Color : Black) (REP 99.1.1)	72B8
–	117K 47810	120V-Inlet Wire Harness (Connector Color : Black) (REP 99.1.1)	72B8
12	117K 47580	220V-Inlet Wire Harness (Connector Color : White) (REP 99.1.1)	72B9
–	117K 47820	120V-Inlet Wire Harness (Connector Color : White) (REP 99.1.1)	72B9
13	117K 47611	220V-Ground Wire (REP 99.1.1)	72BB
–	117K 47830	120V-Ground Wire (REP 99.1.1)	72BB
14	952K 01230	220V-Power Switch Wire Harness (REP 99.1.1)	72BC
–	962K 69080	120V-Power Switch Wire Harness (REP 99.1.1)	72BC
15	–	Screw	72BD
16	–	Power Cord (220V)	7122
–	–	Power Cord (120V)	7122
17	–	USB Cable	72BE
18	–	IIT Cable Spacer	72BF
19	101K 66581	Connector Bracket	72BG



PL 18.2 Wire Harness

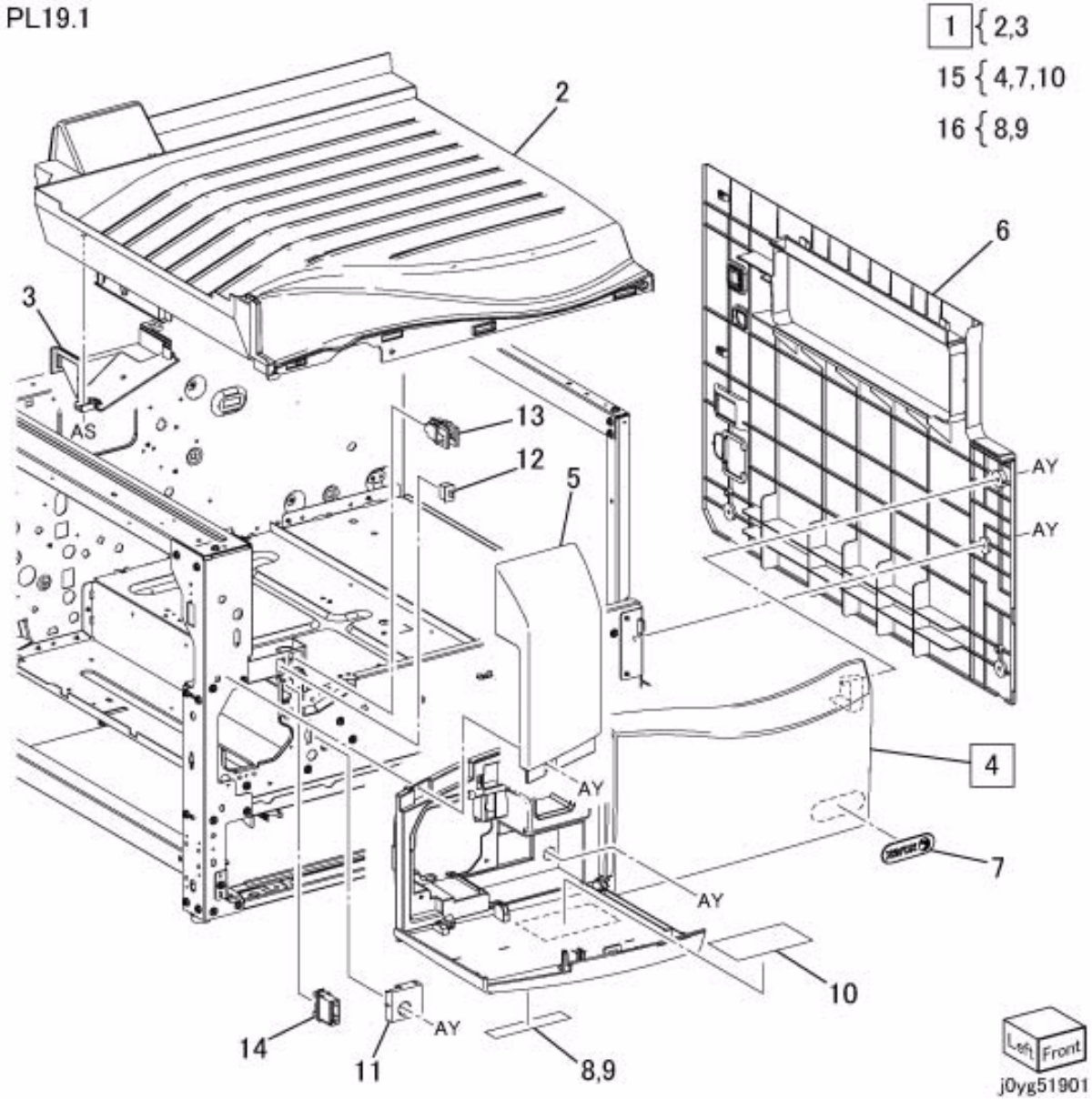
Item	Parts No	Description	A.C.
1	962K 69090	Wire Harness (REP 99.1.1)	71B1
2	962K 69100	Wire Harness (REP 99.1.1)	71B2

PL18.2



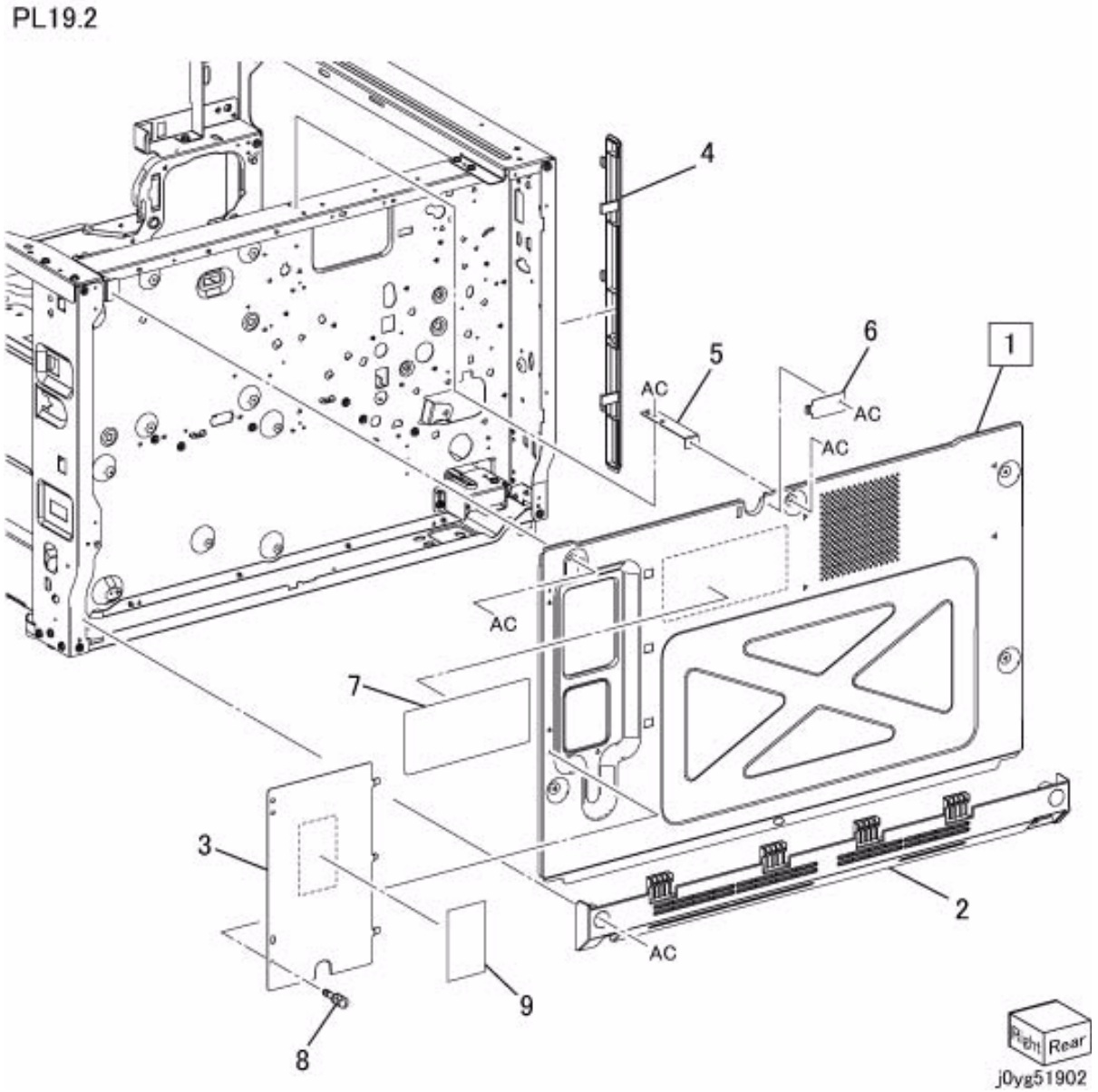
PL 19.1 Cover-Front,Top,Right

Item	Parts No	Description	A.C.
1	848K 68290	Top Cover (Item 2,3) (REP 19.1.2) 60AA	
2	–	Top Cover (P/O Item 1)	60AA
3	054E 50280	Duct	32B1
4	–	Front Cover (P/O Item 15) (REP 19.1.1)	32B2
5	848E 84570	Fusing Unit Cover	32B3
6	848E 84611	Right Cover	32B4
7	–	Logo Plate (P/O Item 15)	32B5
8	–	Name Plate (WorkCentre 5021) (P/O Item 16)	32B6
9	–	Name Plate (WorkCentre 5019) (P/O Item 16)	32B7
10	–	CRU Instruction Label (P/O Item 15)	32B8
11	848E 85850	Connector Blank Cover	32B9
12	110E 12981	Front Cover Switch	7121
13	110E 94770	Front Cover Interlock Switch	32BB
14	113E 47530	Drawer Connector	32BC
15	848K 76560	Front Cover Kit (Item 4,7,10)	32BD
16	604K 80740	Name Plate Kit (Item 8,9)	32BE



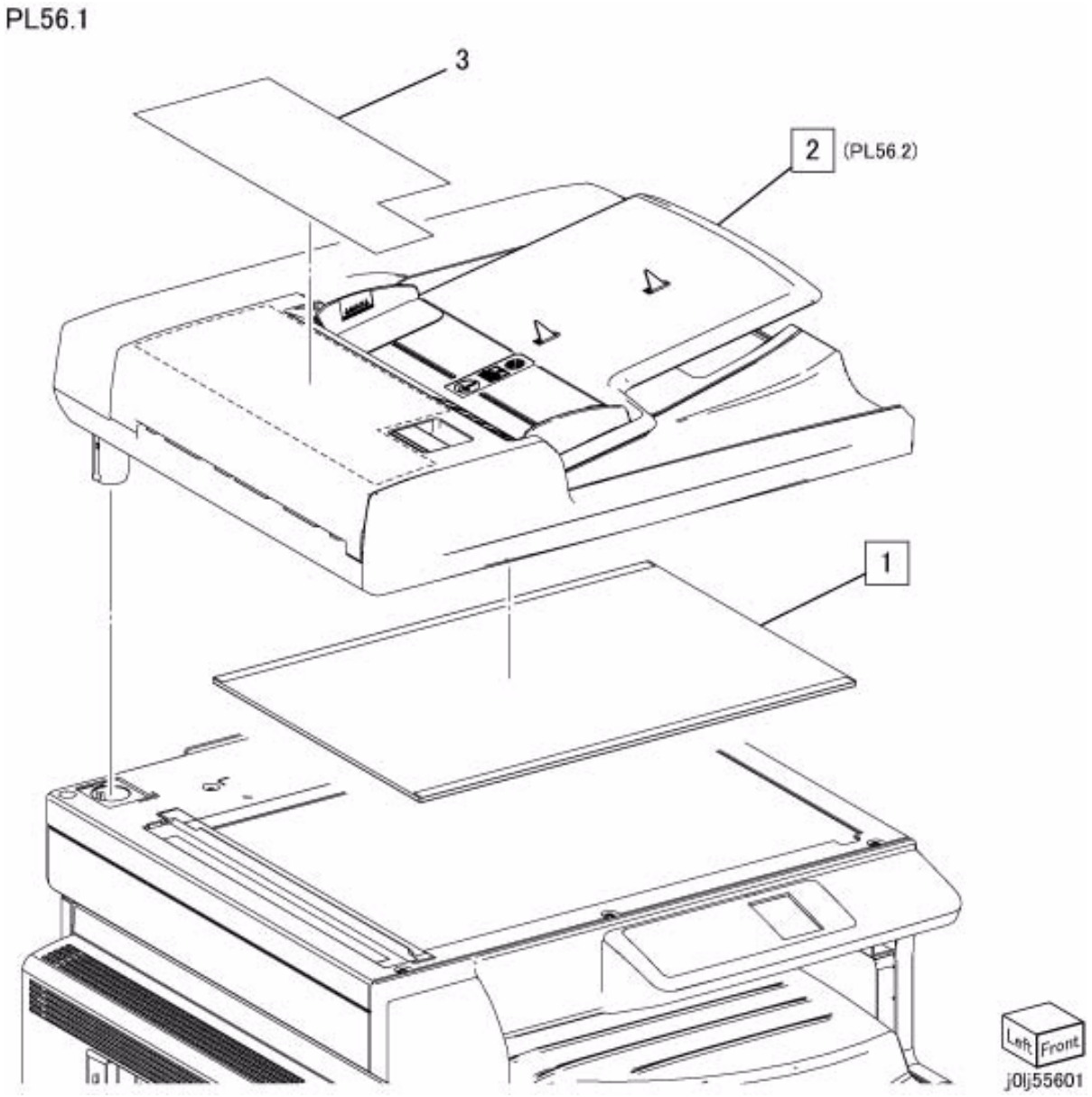
PL 19.2 Cover-Rear,Left Rear

Item	Parts No	Description	A.C.
1	–	Rear Cover (REP 19.2.1)	32C1
2	848E 84630	Rear Lower Cover	32C2
3	–	STM Connector Cover	32C3
4	848E 87321	Left Rear Cover	32C4
5	868E 69740	Bracket	32C5
6	–	Blind Cover	32C6
7	–	Data Plate	32C7
8	–	Thumbscrew	32C8
9	–	STM Caution Label	32C9



PL 56.1 DADF Accessory

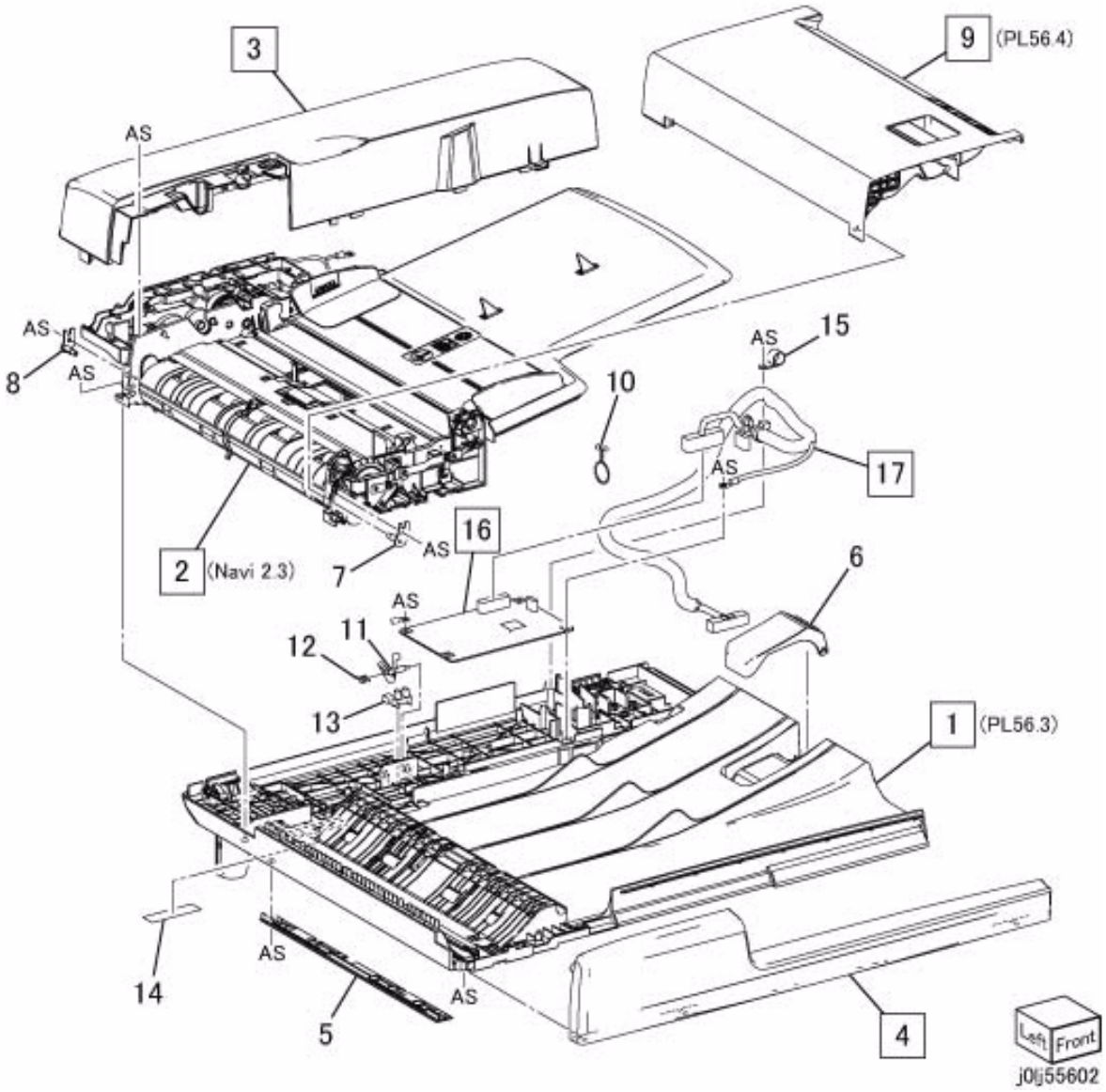
Item	Parts No	Description	A.C.
1	004K 03410	DADF Platen Cushion (REP 56.1.2)	22B1
2	059K 75711	DADF (PL 56.2) (REP 56.1.1)	22AA
3	–	Label	22B2



PL 56.2 DADF Component

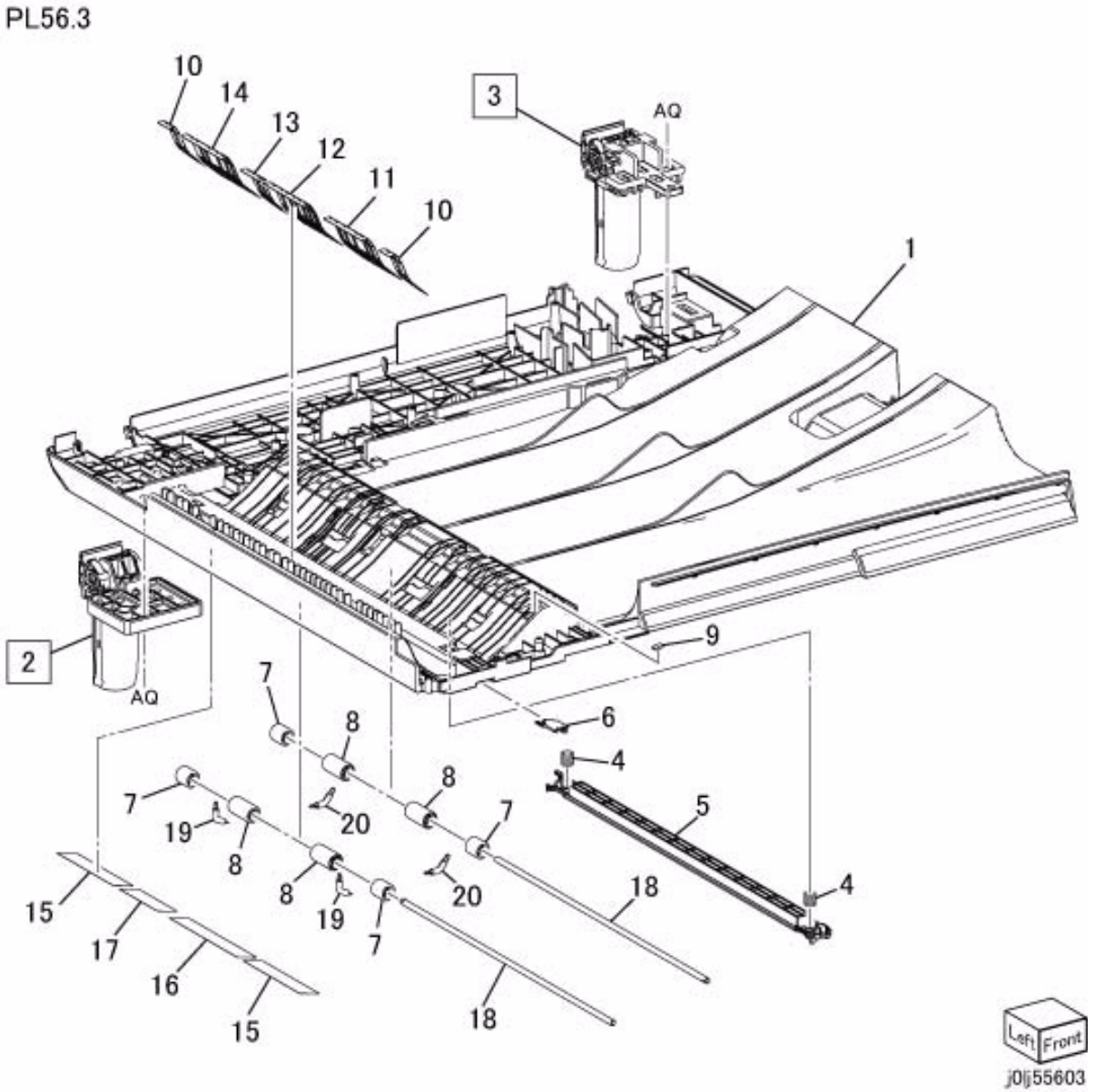
Item	Parts No	Description	A.C.
1	–	DADF Base Frame (PL 56.3)(REP 99.1.1)	22C1
2	059K 75730	DADF Feeder Assembly (Navi 2.3) (REP 56.2.5, REP 99.1.1)	22C2
3	848E 86411	DADF Rear Cover (REP 56.2.2)	22C3
4	848E 86430	DADF Front Cover (REP 56.2.1)	22C4
5	848E 86450	Registration Pinch Cover	22C5
6	803E 13310	Tray Stopper	22C6
7	068K 67551	Hinge Bracket (Front)	22C7
8	049K 17810	Hinge Bracket (Rear)	22C8
9	059K 75750	Upper Feeder (PL 56.4) (REP 56.2.4)	22C9
10	–	Clamp	22CB
11	120E 34270	Actuator	22CC
12	809E 50792	Spring	22CD
13	930W 00121	DADF Open Sensor	22CE
14	–	Data Plate	22CF
15	–	Clamp	22CG
16	960K 62441	DADF PWB (REP 56.2.3, REP 99.1.1)	22CH
17	952K 03540	DADF I/F Wire Harness(REP 99.1.1)	22CJ

PL56.2



PL 56.3 DADF Base Frame

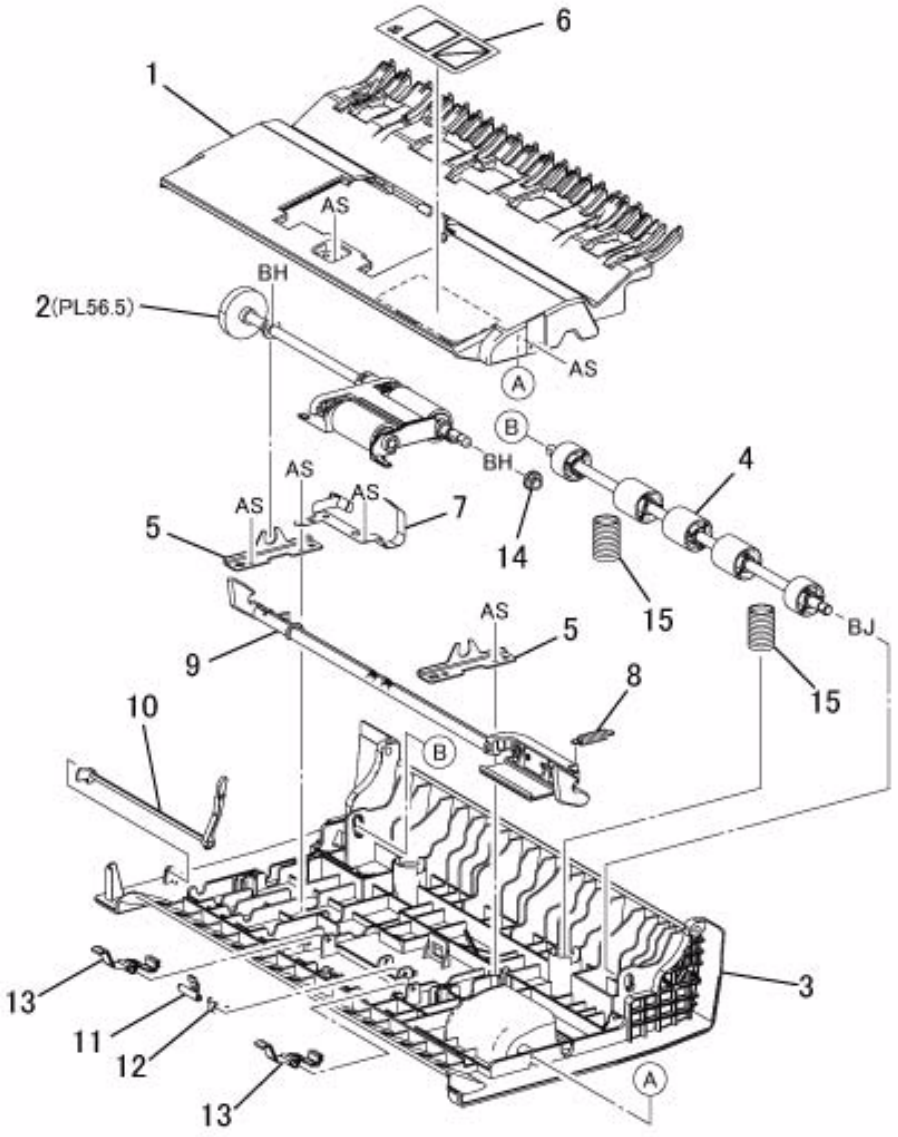
Item	Parts No	Description	A.C.
1	–	DADF Base Frame	22D1
2	036K 92141	Left Counter Balance (REP 56.3.1, REP 99.1.1)	22D2
3	036K 92130	Right Counter Balance (REP 56.3.2, REP 99.1.1)	22D3
4	809E 86290	CVT Spring	22D4
5	–	CVT Chute	22D5
6	803E 13340	CVT Stopper	22D6
7	059E 98711	Registration Pinch Roll (Short)	22D7
8	059E 98701	Registration Pinch Roll (Long)	22D8
9	–	Gate Pad	22D9
10	035K 85280	Seal (Chute 1)	22DB
11	035K 85290	Seal (Chute 2)	22DC
12	035K 85320	Seal (Chute 3)	22DD
13	035K 85330	Seal (Chute 4)	22DE
14	035K 85341	Seal (Chute 5)	22DF
15	035K 85380	Seal (B1)	22DG
16	035K 85390	Seal (B2)	22DH
17	035K 85400	Seal (B3)	22DJ
18	–	Shaft	22DK
19	899E 01591	Spring (Hook:C,O)	22DL
20	899E 01911	Spring (Hook:C,C)	22DM



PL 56.4 Upper Feeder

Item	Parts No	Description	A.C.
1	054E 50182	Upper Feeder Chute	22E1
2	059K 75770	Feed Roll Nudger Roll Assembly (PL 56.5)	22E2
3	–	Upper Feeder Cover	22E3
4	059K 75760	Takeaway Pinch Roll	22E4
5	–	Bracket	22E5
6	897E 24000	Jam Label	22E6
7	815E 76300	Ground Plate	22E7
8	809E 50720	Spring	22E8
9	011K 04260	Handle Lever	22E9
10	120E 34242	Actuator (Document Set)	22EB
11	120E 34250	Stopper Actuator	22EC
12	899E 01541	Spring	22ED
13	012E 18310	Set Link	22EE
14	413W 85459	Bearing	22EF
15	899E 01550	Spring	22EG

PL56.4



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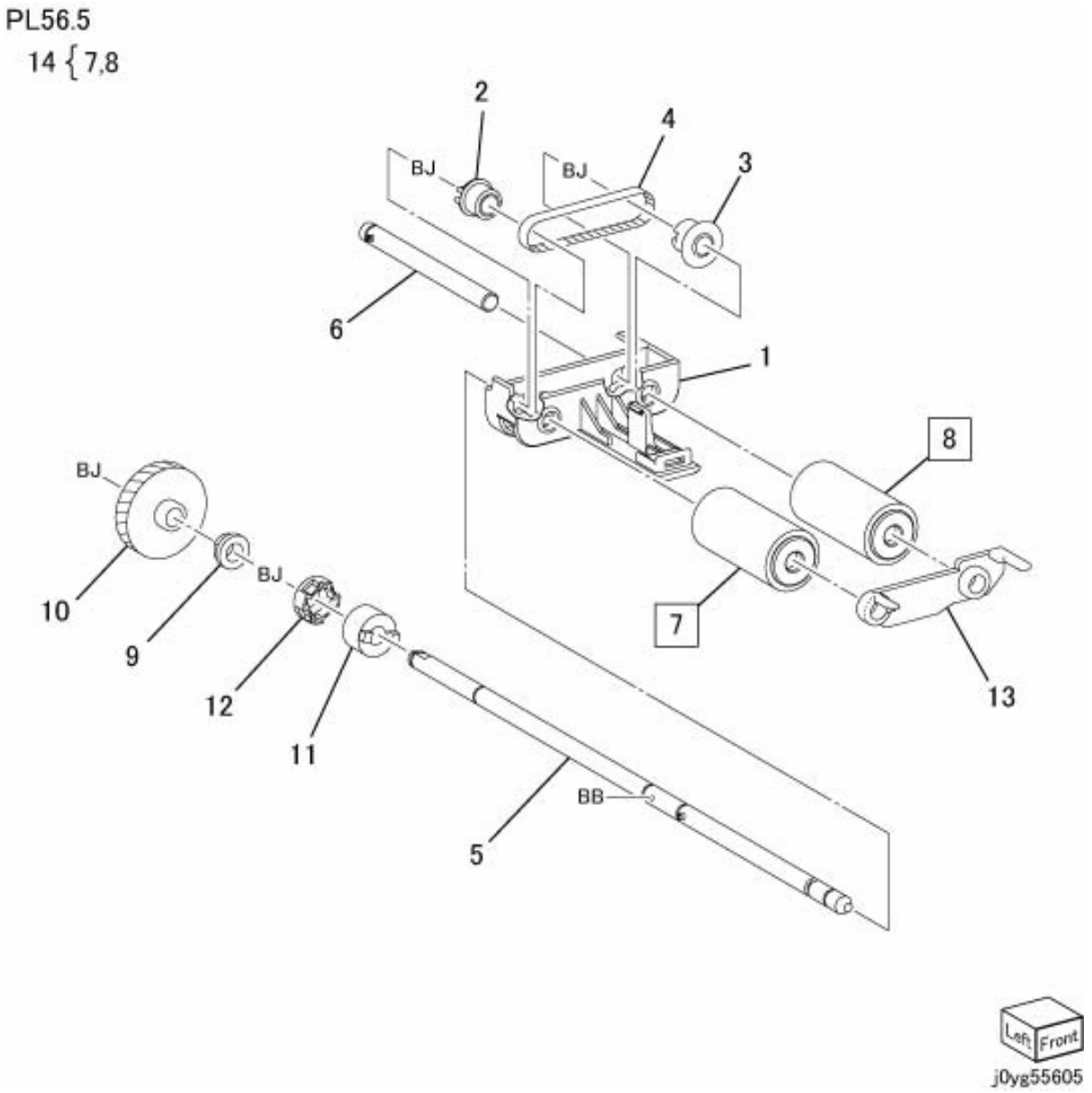
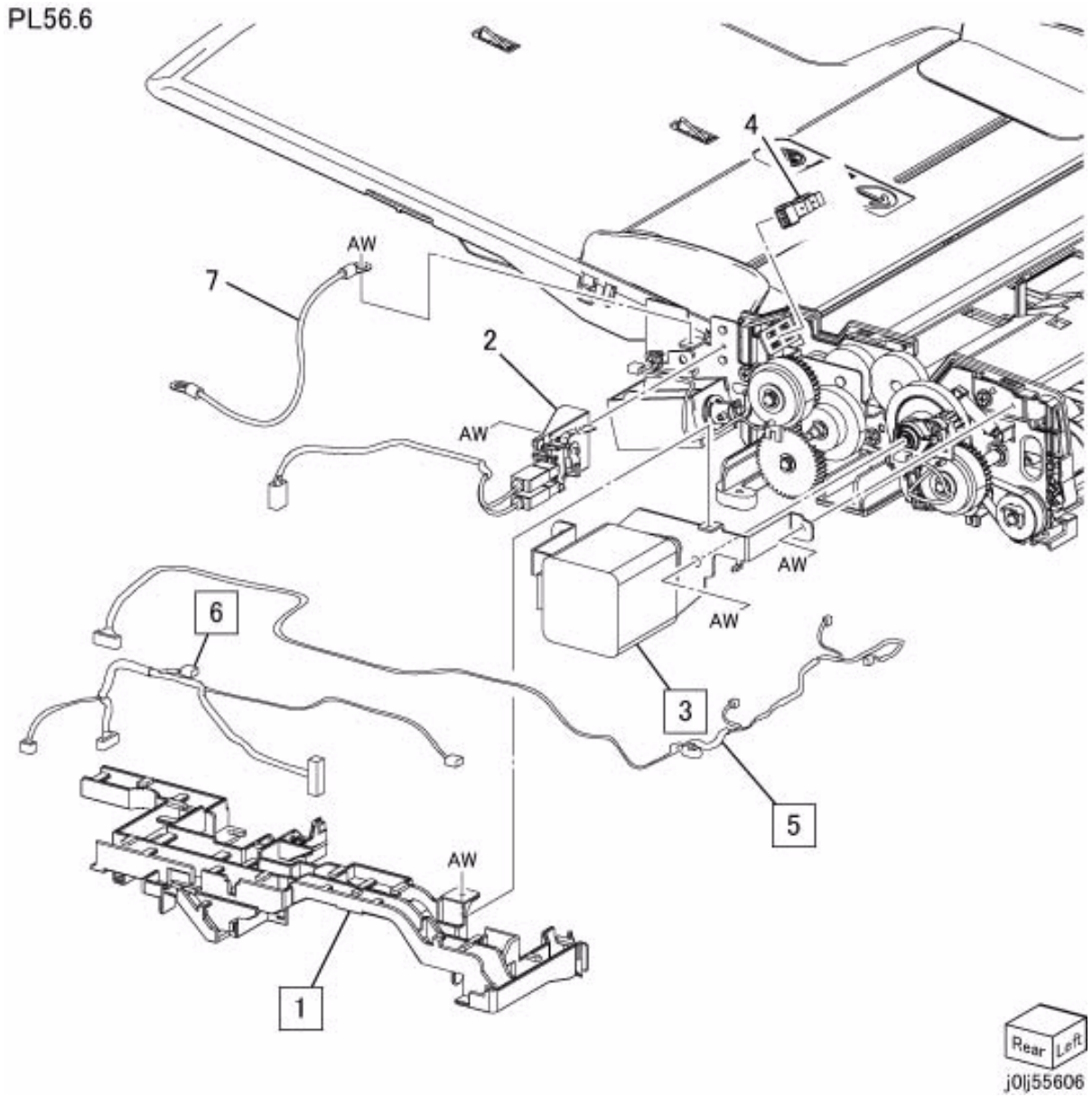
PL 56.5 Feed Roll Nudger Roll Assembly

Item	Parts No	Description	A.C.
1	–	Housing	22F1
2	–	Pulley (Feed)	22F2
3	–	Pulley (Nudger)	22F3
4	423W 05354	Belt	22F4
5	–	Shaft (Feed)	22F5
6	–	Shaft (Nudger)	22F6
7	–	DADF Feed Roll (P/O Item 14) (REP 56.5.1)22F7	
8	–	DADF Nudger Roll (P/O Item 14) (REP 56.5.1)22F8	
9	413W 85459	Bearing	22F9
10	807E 40760	Helical Gear	22FB
11	–	Brake	22FC
12	–	Brake Holder	22FD
13	–	Housing	22FE
14	604K 80750	DADF Feed/Nudger Roll Kit (Item 7,8)22FG	



PL 56.6 DADF Feed Motor,Harness Guide

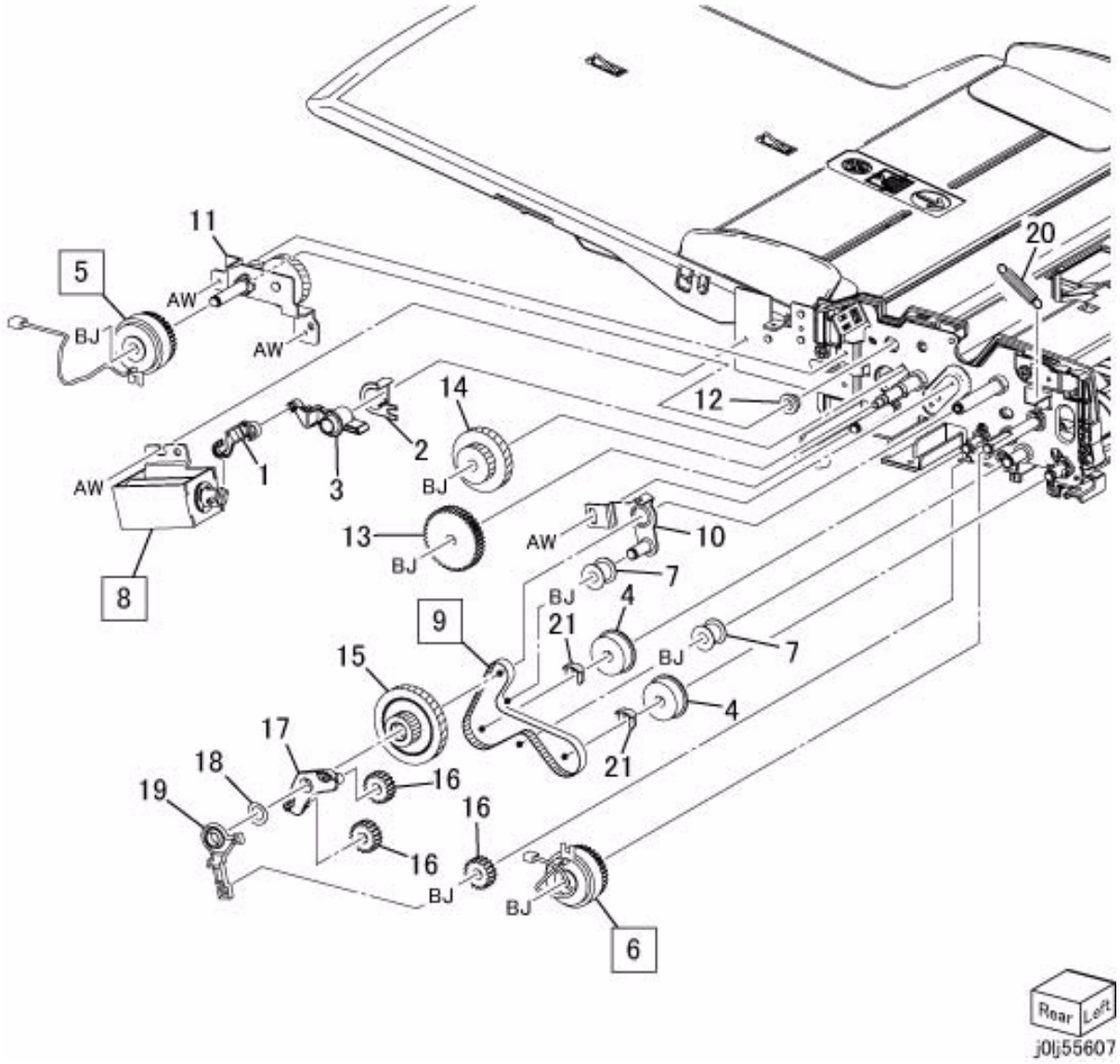
Item	Parts No	Description	A.C.
1	032E 40210	Harness Guide (REP 56.6.1)22G1	
2	110K 17140	DADF Feeder Cover Interlock Switch 22G2	
3	127K 66690	DADF Feed Motor (REP 56.6.2) 22G3	
4	930W 00121	DADF Document Set Sensor 22G4	
5	952K 03531	Wire Harness (Sensor)(REP 99.1.1)22G5	
6	952K 03510	Wire Harness (Motor/Clutch)(REP 99.1.1)22G6	
7	117K 38960	Ground Wire	22G7



PL 56.7 DADF Feeder Rear Frame

Item	Parts No	Description	A.C.
1	012E 18260	Release Link	22H1
2	013E 41200	Set Bearing	22H2
3	012E 18270	Exit Link	22H3
4	020E 46551	Pulley	22H4
5	121K 52310	DADF Feed Clutch (REP 99.1.1) 22H5	
6	121K 52310	DADF Takeaway Clutch (REP 99.1.1)22H6	
7	–	Roll	22H7
8	121K 52470	Exit Nip Release Solenoid (REP 99.1.1)22H8	
9	423W 32055	DADF Drive Belt (REP 56.7.1) 22H9	
10	–	Tension Bracket	22HB
11	049K 18190	Clutch Gear and Bracket	22HC
12	413W 85459	Bearing	22HD
13	807E 40790	Gear (42T)	22HE
14	807E 40800	Gear (40/24T)	22HF
15	807E 40830	Gear Pulley	22HG
16	807E 40840	Gear (19T)	22HH
17	868E 80570	Bracket	22HJ
18	899E 01573	Washer	22HK
19	012E 18290	Link	22HL
20	899E 01581	Spring	22HM
21	–	KL-Clip	22HN

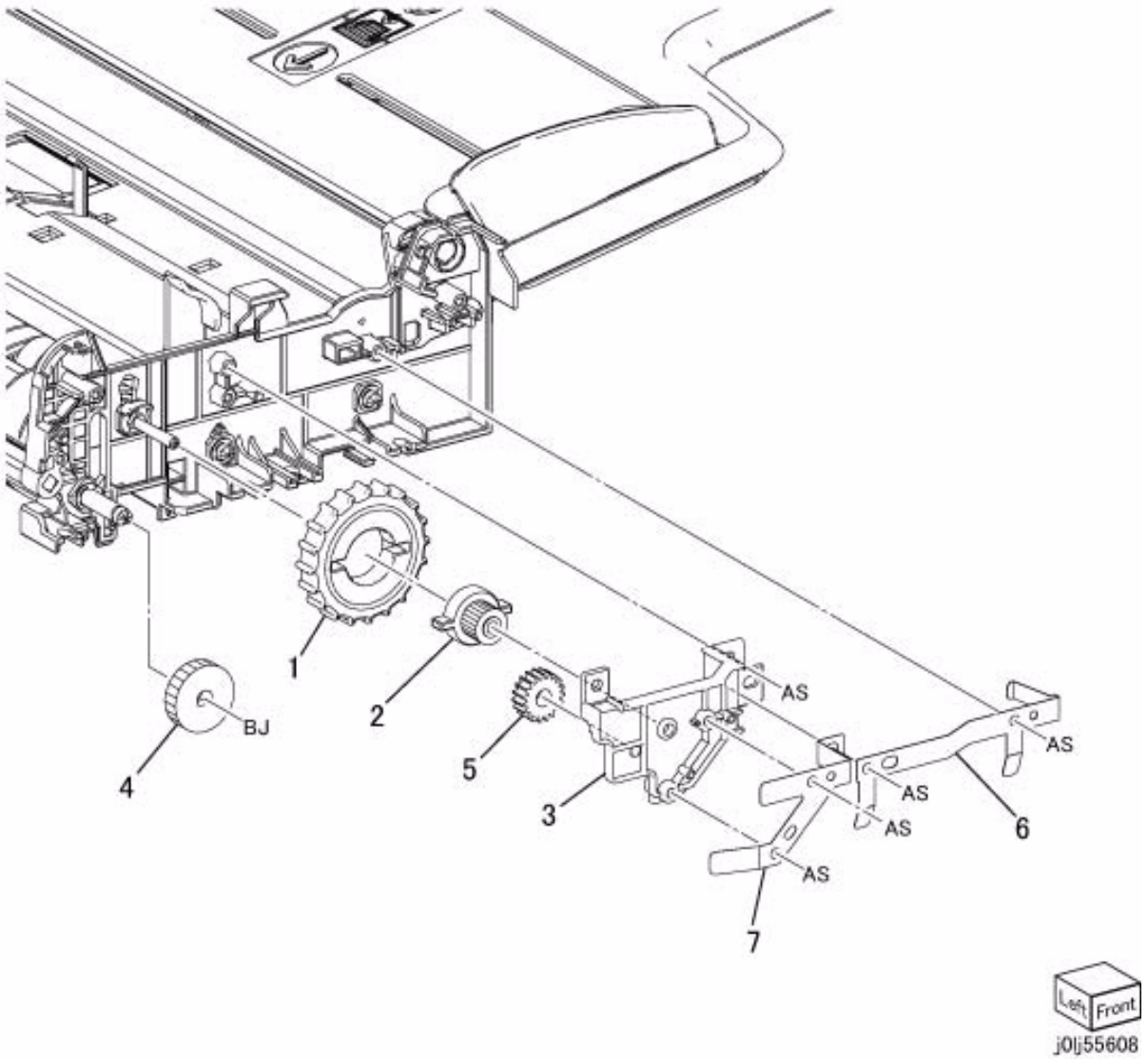
PL56.7



PL 56.8 DADF Feeder Front Frame

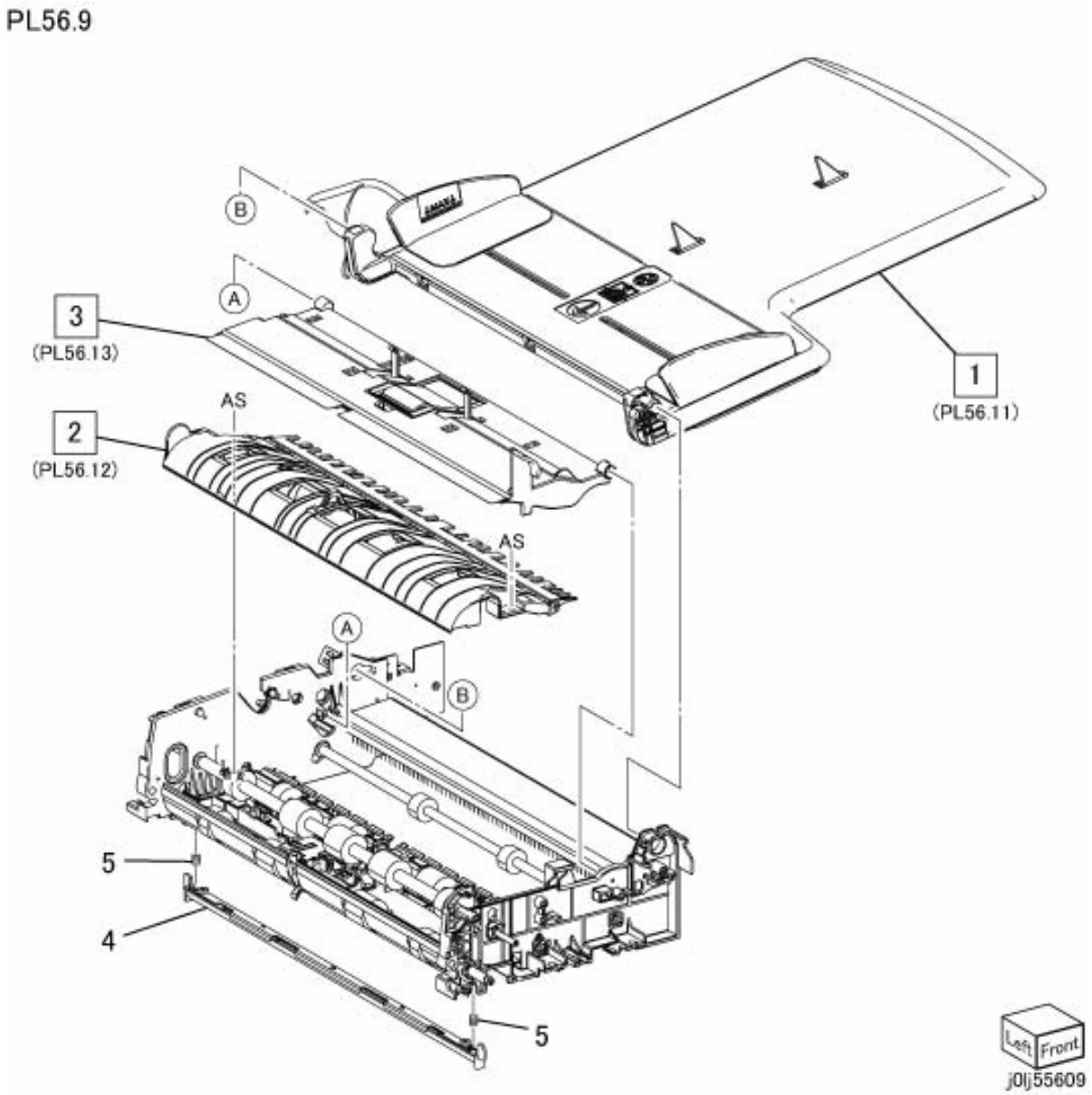
Item	Parts No	Description	A.C.
1	803E 13330	Knob Handle	22J1
2	807E 41000	Gear	22J2
3	868E 80540	Bracket	22J3
4	807E 40780	Gear (27T)	22J4
5	807E 40840	Gear (19T)	22J5
6	815E 76320	Ground Plate	22J6
7	815E 76340	Ground Plate	22J7

PL56.8



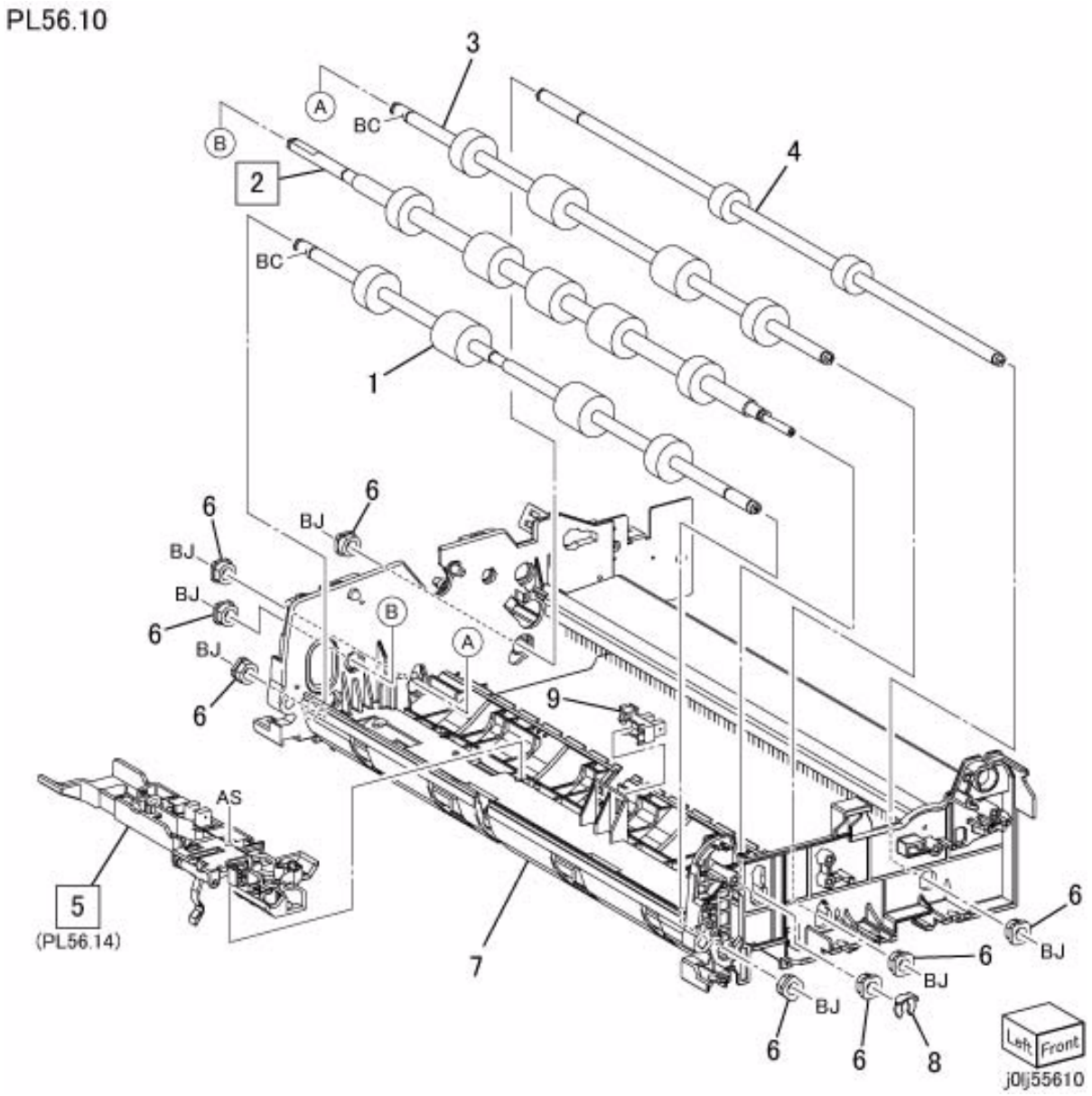
PL 56.9 DADF Tray,Chute

Item	Parts No	Description	A.C.
1	050K 69650	Document Tray (PL 56.11) (REP 56.9.1, REP 99.1.1)	2210
2	054K 48570	Invert Chute (PL 56.12) (REP 56.9.3)	22K1
3	054K 48580	Retard Chute (PL 56.13) (REP 56.9.2)	22K2
4	054K 49150	Floating Chute	22K3
5	–	Spring	22K4



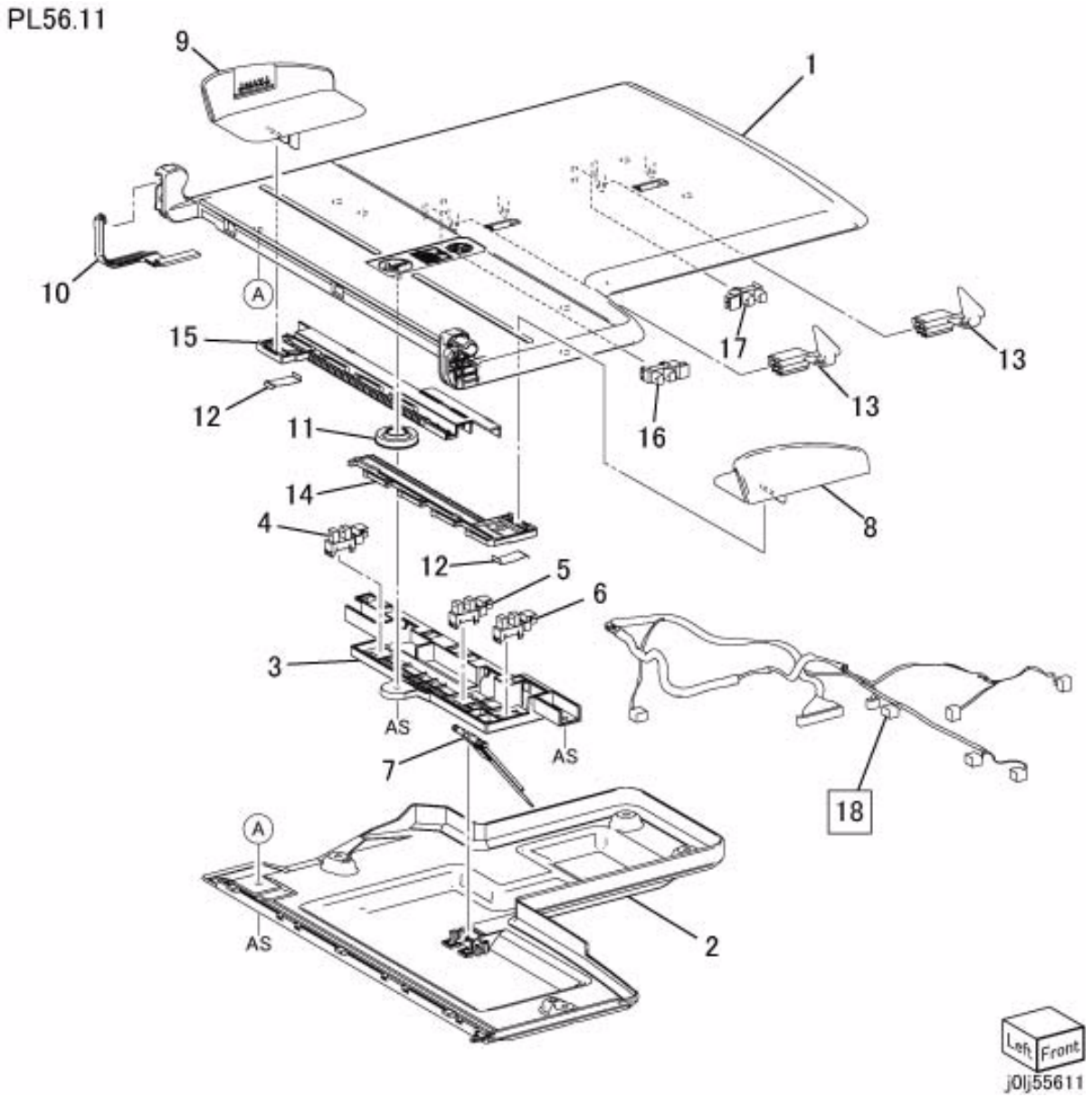
PL 56.10 DADF Roll,Sensor Bracket

Item	Parts No	Description	A.C.
1	059K 75780	DADF Registration Roll	22L1
2	059K 75790	DADF Takeaway Roll (REP 56.10.1)22L2	
3	059K 75800	DADF Out Roll	22L3
4	059K 75810	DADF Exit Roll	22L4
5	049K 17820	Sensor Bracket (PL 56.14) (REP 56.10.2)22L5	
6	413W 11660	Bearing	22L6
7	–	DADF Feeder Frame	22L7
8	–	KL-Clip	22L8
9	930W 00121	DADF Invert Sensor	22L9



PL 56.11 Document Tray

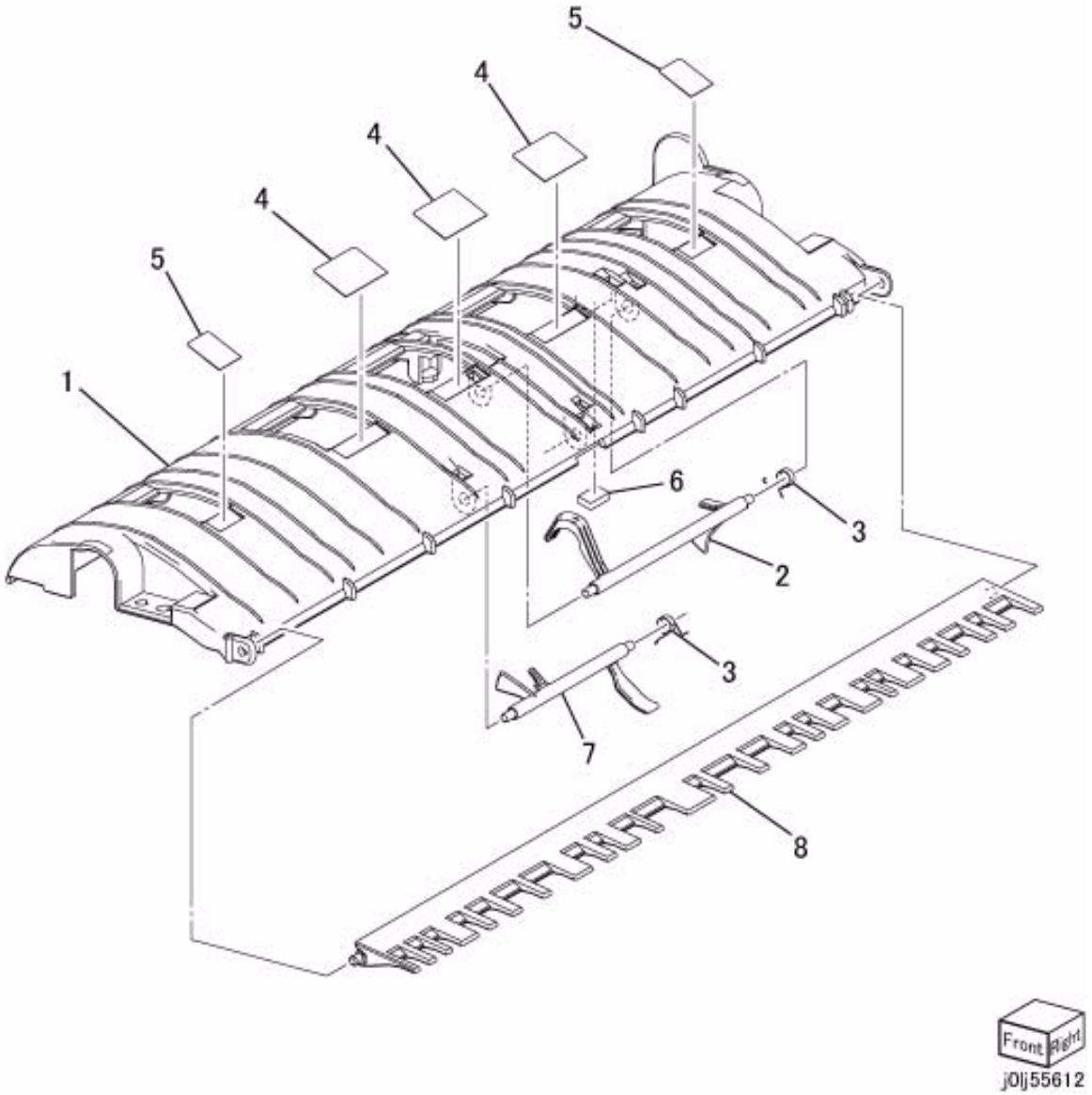
Item	Parts No	Description	A.C.
1	–	Upper Tray	22M1
2	–	Tray Cover	22M2
3	868E 80501	Sensor Bracket	22M3
4	930W 00121	DADF Tray Set Guide Sensor 1	22M4
5	930W 00121	DADF Tray Set Guide Sensor 2	22M5
6	930W 00121	DADF Tray Set Guide Sensor 3	22M6
7	032K 05861	Scatter Guide	22M7
8	038E 42770	Front Side Guide	22M8
9	038E 42750	Rear Side Guide	22M9
10	848E 88020	Harness Cover	22MB
11	807E 30471	Pinion Gear	22MC
12	809E 51860	Rack Spring	22MD
13	120E 34210	Actuator	22ME
14	807E 37830	Rack Gear (Front)	22MF
15	807E 40750	Rack Gear (Rear)	22MG
16	930W 00121	Document Tray Size Sensor 1	22MH
17	930W 00121	Document Tray Size Sensor 2	22MJ
18	952K 03520	Tray Wire Harness(REP 99.1.1)	22MK



PL 56.12 Invert Chute

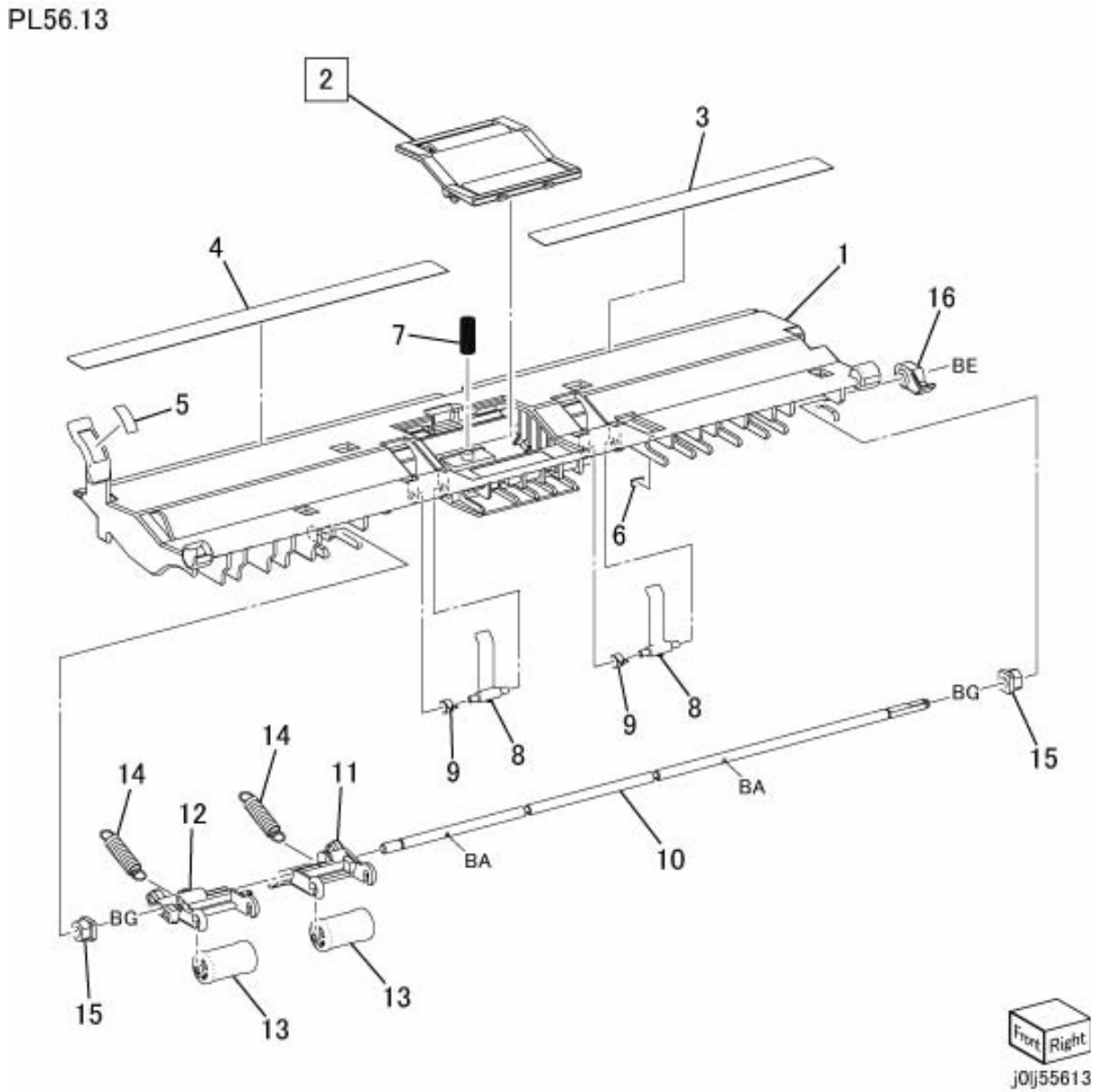
Item	Parts No	Description	A.C.
1	–	Invert Chute	22N1
2	120E 34220	Actuator (Pre Regi.)	22N2
3	809E 50792	Spring	22N3
4	035K 82730	Seal (Long)	22N4
5	035K 82740	Seal (Short)	22N5
6	–	Pad	22N6
7	120E 34230	Actuator (Invert)	22N7
8	050E 25313	Invert Gate	22N8

PL56.12



PL 56.13 Retard Chute

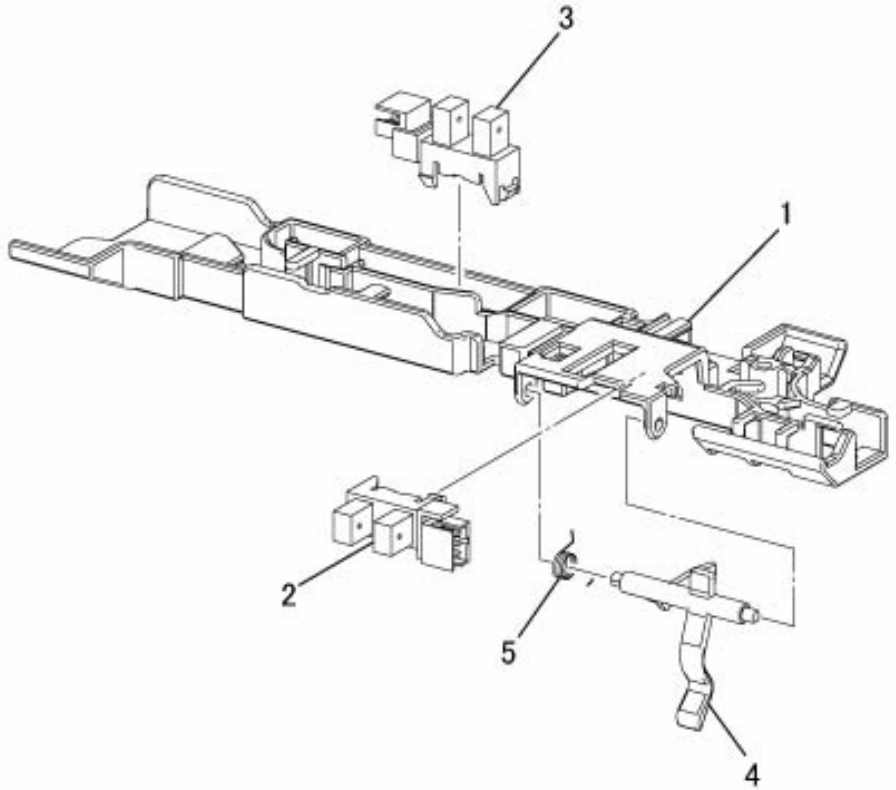
Item	Parts No	Description	A.C.
1	054E 50170	Retard Chute	22P1
2	848K 68730	DADF Retard Pad (REP 56.13.1) 22P2	
3	035K 84270	Rear Seal	22P3
4	035K 84260	Front Seal	22P4
5	–	Label	22P5
6	–	Pad	22P6
7	899E 01520	Spring	22P7
8	050E 28270	Set Gate	22P8
9	899E 01510	Spring	22P9
10	–	Shaft	22PB
11	019E 84131	Rear Holder	22PC
12	019E 84120	Front Holder	22PD
13	059E 08661	Pinch Roll	22PE
14	899E 01531	Spring	22PF
15	413W 11460	Bearing	22PG
16	012E 18280	Link	22PH



PL 56.14 Sensor Bracket

Item	Parts No	Description	A.C.
1	032E 40221	Sensor Bracket	22Q1
2	930W 00121	DADF Regi. Sensor	22Q2
3	930W 00121	DADF Pre Regi. Sensor	22Q3
4	120E 34260	Actuator (Regi.)	22Q4
5	809E 50792	Spring	22Q5

PL56.14



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98.1 Screws

Table 1

Item	PART NO.	Description
AA	112W 27898	Pan Head Screw (M3x8)
AB	113W 20478	Screw (M3x4:White)
AC	113W 20678	Screw (M3x6:White)
AD	113W 20698	Round Screw (M3x6)
AE	113W 20878	Screw (M3x8:White)
AF	113W 21098	Round Screw (M3x10)
AG	113W 21678	Screw (M3x16:White)
AH	113W 27488	Pan Head Screw (M3x4:White)
AJ	113W 27688	Pan Head Screw (M3x6:White)
AK	114W 27678	Bind Head Tapping Screw (M3x6:White) (P 0.5)
AL	115W 27878	Bind Head Tapping Screw (3x8:White) (P 1.4)
AM	115W 28078	Bind Head Tapping Screw (3x10:White) (P 1.4)
AN	116W 27678	Bind Head Screw (M3x6:White)
AP	153W 16088	Tapping Screw (M4x10:White)
AQ	153W 16288	Tapping Screw (M4x12:White)
AR	153W 17688	Tapping Screw (M3x6:White)
AS	153W 17888	Tapping Screw (M3x8:White)
AT	153W 18088	Tapping Screw (M3x10:White)
AU	153W 27678	Bind Head Tapping Screw (M3x6:White) (P 1.06)
AV	153W 27878	Bind Head Tapping Screw (M3x8:White) (P 1.06)
AW	158W 27678	Screw (M3x6:White)
AX	158W 27688	Round Point Screw (M3x7:White)
AY	158W 27878	Screw (M3x8:White)
AZ	252W 29450	Nylon Washer (8) (t 1)
BA	271W 11250	Dowel Pin (1.6x12)
BB	271W 16050	Dowel Pin (2x10)
BC	271W 21050	Dowel Pin (2.5x10)
BD	354W 15278	E-Clip (2:White)
BE	354W 19278	E-Clip (2.5:White)
BF	354W 21254	KL-Clip (3)
BG	354W 21278	E-Clip (3:White)
BH	354W 24254	KL-Clip (4)
BJ	354W 24278	E-Clip (4:White)
BK	354W 26278	E-Clip (5:White)
BL	354W 27254	KL-Clip (6)
BM	354W 27278	E-Clip (6:White)
BN	354W 29278	E-Clip (8:White)
BP	158W 36678	Screw (M4x16:White)
BQ	158W 45078	Screw (M5x10:White)

Table 1

Item	PART NO.	Description
BR	153W 18288	Tapping Screw (M3x12:White)

99.1 Paper

Table 1

	Paper	A.C
1	J Paper	57B1
2	JD Paper	57B2
3	C2 Paper	57B3
4	Plain (XEROX)	5711
5	Plain (Other makers)	57B4
6	Recycled Paper (XEROX)	5712
7	Recycled Paper (Other makers)	57B5
8	Heavyweight	57B6
9	Tracing Paper	5714
10	Transparency Paper	5713
11	Transparency Paper (Other makers)	57B7
12	Tack Film	57B8
13	Labels	57B9
14	Postcard	57BB
15	Tab Stock Paper	57BC
16	Hole Punched Paper	57BD
17	Heavyweight 2	57BE
18	Heavyweight 1 Side 2	57BF
19	Heavyweight 2 Side 2	57BG
20	Coated Paper	57BH
21	Coated Paper Side 2	57BJ

99.2 Environment

Table 1

	Environment	A.C
1	Problem Mishandling (covered by User Guide)	9081
2	Problem Mishandling (beyond User Guide)	9082
3	Operational Error (covered by User Guide)	9083
4	Operational Error (beyond User Guide)	9084
5	No Reproduction after Power ON/OFF	9085
6	Interference with Peripheral	9086
7	Power at Customer Site	9087
8	Not Reproduced at Call	9088
9	No Reproduction after Power ON/OFF (Reproduced at Call)	9089
10	Not Cause/Location Identified	908A

99.3 Consumables

Table 1

	Consumables	A.C
1	Toner (K)	409K

99.4 Electrical Adjustment

Table 1

	Electrical Adjustment	A.C
1	Side Regi Adjustment (Tray 1)	77B1
2	Side Regi Adjustment (Tray 2)	77B2
3	Side Regi Adjustment (MSI)	77B5
4	Lead Regi Adjustment (Tray 1)	77C5
5	Lead Regi Adjustment (Tray 2)	77C6
6	Lead Regi Adjustment (MSI)	77C9
7	White Ref Adjustment	771M
8	IIT Calibration	7726
9	CCD Calibration	77CD
10	Light Axis Fluctuation Correction	77CE
11	ROS Write Timing	77F7
12	Border Erase Adjustment	77B6
13	Calibration	77B7
14	MAX SET UP (Image Quality Adjustment)	7720
15	ATC SENSOR SET UP	77B8
16	TRC Adjustment	77B9
17	ADC/AGC SETUP	77BB
18	Tone UP/DOWN Adjustment	77BC
19	NVM Initialization (IIT/IPS)	702A
20	NVM Initialization (SYS-System)	77BE
21	NVM Initialization (SYS-User)	702D
22	NVM Initialization (IOT)	77BF
23	NVM Initialization (ALL)	77BG
24	Lead Edge Border Erase Adjustment	77BH
25	Trail Edge Border Erase Adjustment	77BJ
26	Side Erase Adjustment	77BK
27	FS R/E Adjustment	77BL
28	SS R/E Adjustment	77BM
29	Temperature Adjustment	7751
30	Fixed R/E Change	77C1
31	Buzzer Level	77C2
32	Download (Reinstall)	77E1
33	Download (Version UP)	77E2
34	Other NVM Changes	7760
35	Other Diag. Adjustment	77BN
36	Auto Gradation Correction	77F1
37	ATC Sensor Setup	77F3
38	Tone Up/Down	77F5
39	Secondary Traansfer Output Adjustment	77F6

99.5 Mechanical Adjustment

Table 1

	Mechanical Adjustment	A.C
1	Full/Harf Parallel Adjutment	1050

99.6 Originals

Table 1

	Originals	A.C
1	Photo Originals	572B
2	Printed Originals	572C
3	Maps and Low Contrast Originals	572D
4	Paste-up Originals	572E
5	Dirty/areased Originals	572F
6	Colored Originals	572G
7	Other Originals	572H

99.7 Accessories Related

Table 1

	Accessories Related	A.C
1	Accessories Related	80AA
2	EP-SV unit	80AB
3	Cable between M/C and EP-SV	80AC
4	Cable between EP-SV and Related product	80AD
5	TEL line for EP-SV	80AE
6	AC Adaptor for EP-SV	80AF

99.8 DMP/Network Functions Related

Table 1

	DMP/Network Functions Related	A.C
1	User Environment	90AA
2	Problems at remort station when data is sent (storage destination of Push-Scan etc, PC/server etc)	9061
3	Problems at sent station when data is received (PC/server etc)	9062
4	Problems at Timer Server	9066
5	Problems at Router	9067
6	Problems at HUB	9068
7	Problems at USB Device (Commercial item)	9069
8	Problems at Memory Media (Commercial item)	906B
9	Problems at Wireless LAN	906C
10	Network-related Services SW	906
11	DocuHouseAccouthgService/ApeosWareAccouthgService	9076
12	CentreWareDeviceService/ApeosWareDeviceService	9077
13	DocuShare	9078
14	FreeFlow related (XDOD)	9079
15	Print/Scan Driver	907B
16	XDOM	907C
17	External Access Kit	906D

Navi 1.1 Processor + Option

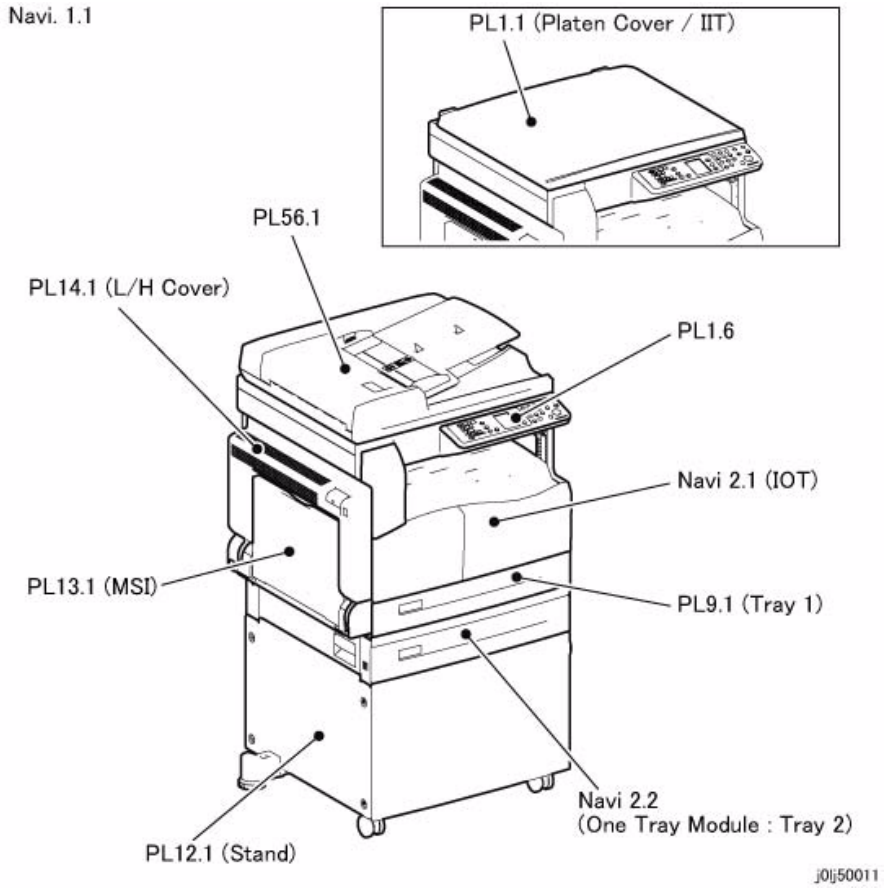

Figure 1 j0lj50011

Navi 2.1 IOT

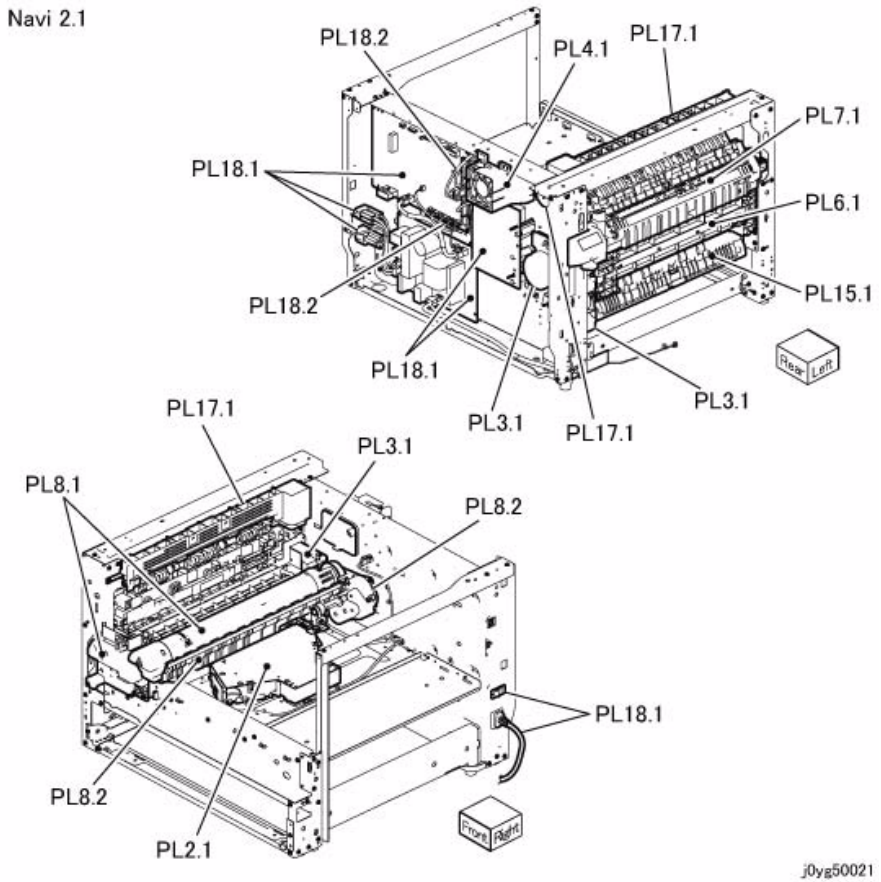

Figure 1 j0yg50021

Navi 2.2 One Tray Module

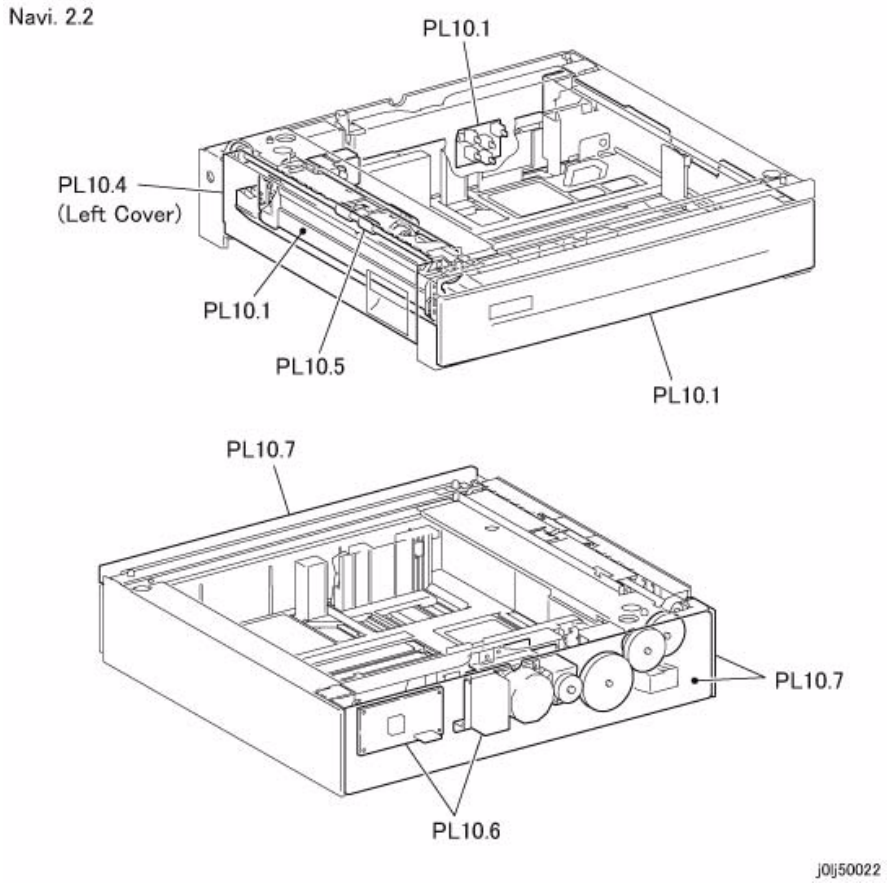

Figure 1 j0lj50022

Navi 2.3 DADF

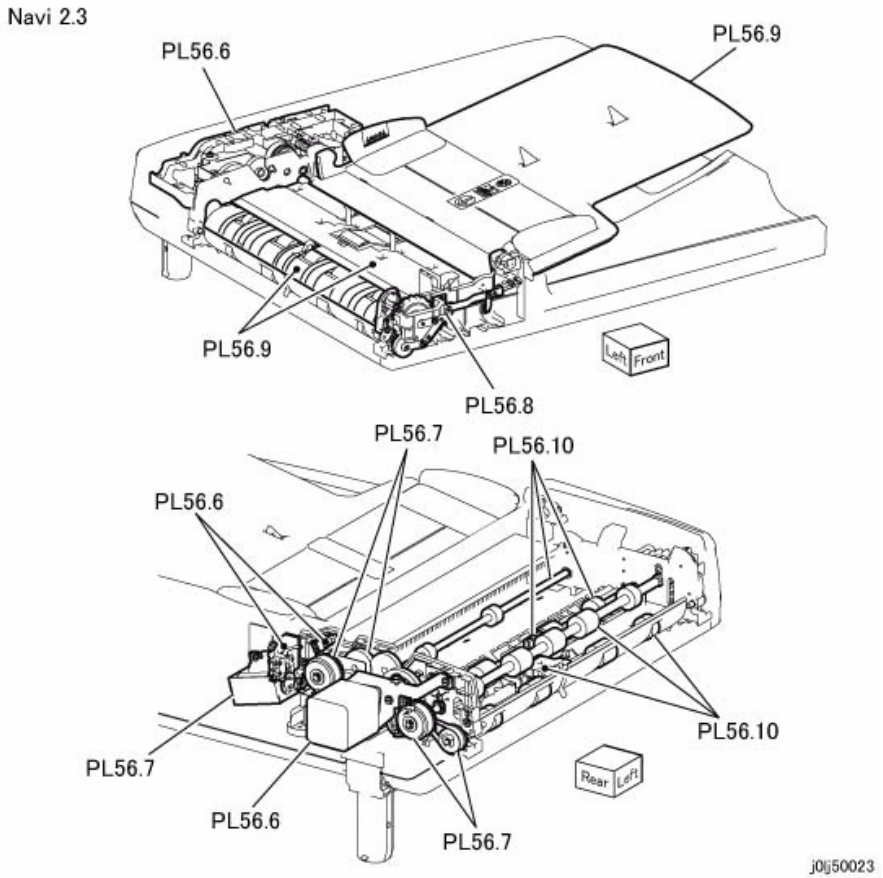

Figure 1 j0lj50023

6 General Procedures

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6.6 KO PROGRAM# LIST

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6.1.1 Product Name/Product Code/Serial No.

6.1.1.1 Main Unit

Table 1

Destination	Product Name	Model	Product Code	XJ Code	Speed	Voltage	Platen Cover	DADF	Dup	Host I/F Print	Host I/F Sacn	WHQL	Serial No.
DMO-E	WorkCentre 5019	CPS	A00 (TL200536)	ZJR	18	220V	Std	-	-	Std	Std	Yes	xxxxxx~xxxxxx
DMO-W	WorkCentre 5019	CPS	YX9 (TL200537)	ZJP	18	110V	Std	-	-	Std	Std	Yes	xxxxxx~xxxxxx
INDIA	WorkCentre 5019	CPS	A10 (TL200538)	ZJT	18	220V	Std	-	-	Std	Std	Yes	xxxxxx~xxxxxx
DMO-E	WorkCentre 5021	CPS	A60 (TL200539)	ZJV	20	220V	Std	-	-	Std	Std	Yes	xxxxxx~xxxxxx
DMO-W	WorkCentre 5021	CPS	A53 (TL200540)	ZJU	20	110V	Std	-	-	Std	Std	Yes	xxxxxx~xxxxxx
DMO-E	WorkCentre 5021	CPS	A81 (TL200541)	ZJY	20	220V	-	Std	Std	Std	Std	Yes	xxxxxx~xxxxxx
DMO-W	WorkCentre 5021	CPS	A61 (TL200542)	ZJW	20	110V	-	Std	Std	Std	Std	Yes	xxxxxx~xxxxxx

6.1.1.2 Options

Table 2

Name	Code	Installation	Others
STM (Single Tray Module)	EL201044	User	
Stand	EL201045	User	

6.1.2 Standard Specification of IIT, IOT, and PANEL

The standard specification of Engine part is as follows:

Table 1

	20 PPM	**18 PPM**
IIT	- CCD Image Sensor capable of scaninig at multi-level 600 dpi	- CCD Image Sensor capable of scaninig at multi-level 600 dpi
IOT	- 20 PPM- 600x600 dpi - Paper Feeding: • 1 tray 250 sheets • MSI 100 sheets - Paper Output: • Face down tray (250 paper capacity) - Duplex: Factory Option	- 18 PPM- 600x600 dpi - Paper Feeding: • 1 tray 250 sheets • MSI 100 sheets - Paper Output: • Face down tray (250 paper capacity) - Duplex: Factory Option
PANEL	- Fixed LCD	- Fixed LCD

6.1.3 Standard Specification of Controller

The standard specification of Controller as follows:

Table 1

Item	**Controller**
CPU	- Z4310 (300MHz)
Standard Memory	- ROM: 4MB - RAM: 128MB - EEPROM: Main: 8KB, Back-up: 8KB
Extended slot	- Not support

6.1.4 Standard Specification of Host I/F

The standard specification of Host I/F as follows:

Table 1

Item	Description
Host I/F	- USB(2.0) • Apply to Full Speed (12Mbps) and High Speed (480Mbps) according to USB host version. • Not apply to Low Speed (1.5Mbps).

NOTE: *Foreign I/F: not support*

6.1.5 Operating Modes

The following 4 operating modes are available.

Table 1

Mode	State
Running Mode	The data receiving/image creation/recording (printing) operation mode
Ready Mode	When the system can enter the Running Mode immediately
Low Power Mode	The mode that reduces the power consumption more than the Ready Mode
Sleep Mode *1	The mode that reduces the power consumption further more than the Low Power Mode

*1: Applies to the International Energy Star Program.

6.1.5.1 IOT States

The IOT systems are in the following states in each mode.

Table 2

	Running Mode	Ready Mode	Low Power Mode	Sleep Mode	Power OFF
Fusing System (Fusing Unit)	Maintaining the operating temperature	Maintaining the standby temperature	Stop state	Stop state	Stop state
Recording System (Transfer/Development)	Operating state	Stop state	Stop state	Stop state	Stop state
ROS Assembly	Operating state	Stop state	Stop state	Stop state	Stop state
ESS/MCU PWB (Reference)	Operating state	Standby	Standby	Ready to receive	Stop state

6.1.6 Machine Sizes and Basis Weights

The following are the sizes and weights of the individual products: (excluding toner)

6.1.6.1 Machine Sizes

Projecting sections such as label recesses are not included. The sizes are for when the Bypass Tray is minimized.

The tolerance is +/-5 mm.

Table 1

Product Configuration	Configuration	Machine Size (mm) *1		
	Tray Module	Width *2	Depth	Height *3
Basic Model 1	None (Desktop)	595	569	462
Basic Model 2	STM	595	569	572
Basic Model 3	STM+Stand	639	685	964

*1: For details on the machine sizes, refer to 6.1.6.3.

*2: This measurement is for when the Power Cord is disconnected. If it is connected, add +27 mm for Basic Models 1 and 2, and add +22 mm for Basic Model 3.

*3: The height is measured up to the top surface of the Platen Glass. Add +34 mm to this if the Platen Cover is installed and add +119 mm if the DADF is installed.

6.1.6.2 Machine Weights

Measurement Conditions:

Not inclusive of Options, Output Tray, Paper, and New Toner Cartridges.

Table 2

Configuration	Main Unit Weight
Main Unit (IOT w/Dup + IIT w/DADF)	36.0 kg or lighter
Main Unit (IOT Simp + IIT + Platen Cover)	36.0 kg or lighter
Platen Cover	1.8 kg or lighter
DADF	6.3 kg or lighter
STM	10.7 kg or lighter
Stand	19 kg or lighter

Max Floor Weight Capacity (Reference value):

= Main Unit (w/Dup + w/DADF) + STM + Stand = 36.0 kg + 10.7 kg + 19 kg = 65.7 kg

6.1.6.3 Detailed Machine Sizes

1. Basic Model 1
   - Basic Model 1-1 (Main Unit + Platen Cover)

     Machine Size (W x D x H): 595 mm x 569 mm x 496 mm (Figure 1)

     *1: This machine size (W) does not include the Power Cord.

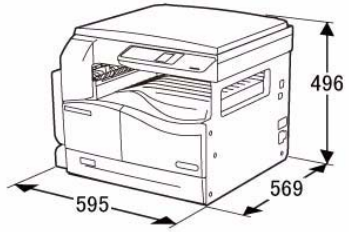


Figure 1 j0lj60001

   - Basic Model 1-2 (Main Unit + DADF)

     Machine Size (W x D x H): 595 mm x 569 mm x 581 mm (Figure 2)

     *1: This machine size (W) does not include the Power Cord.

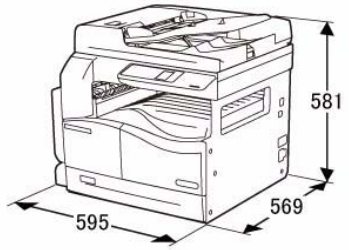


Figure 2 j0lj60002

2. Basic Model 2

- Basic Model 2-1 (Main Unit +STM+ Platen Cover)
  Machine Size (W x D x H): 595 mm x 569 mm x 606 mm (Figure 3)
  *1: This machine size (W) does not include the Power Cord.

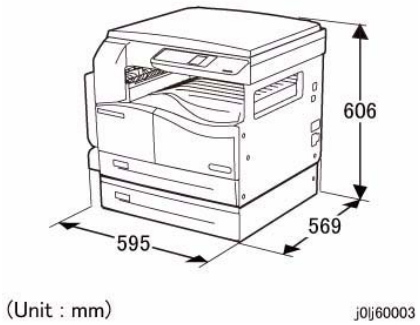


Figure 3 j0lj60003

- Basic Model 2-2 (Main Unit +STM+ DADF)
  Machine Size (W x D x H): 595 mm x 569 mm x 691 mm (Figure 4)
  *1: This machine size (W) does not include the Power Cord.

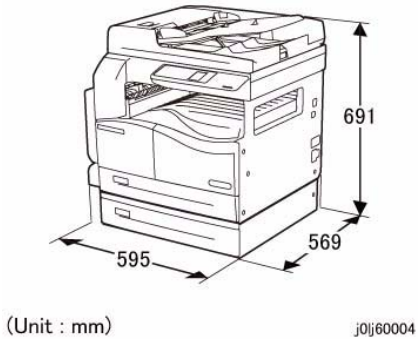


Figure 4 j0lj60004

3. Basic Model 3
   - Basic Model 3-1 (Main Unit +STM+ Stand + Platen Cover)
     Machine Size (W x D x H): 639 mm x 685 mm x 998 mm (Figure 5)
     *1: This machine size (W) does not include the Power Cord.

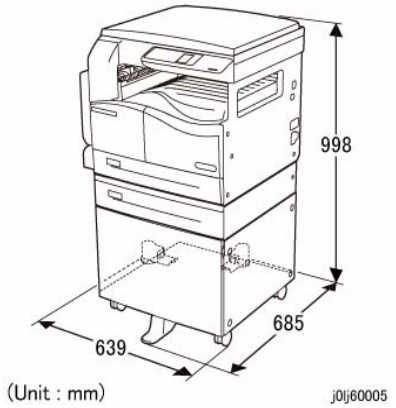


Figure 5 j0lj60005

- Basic Model 3-2 (Main Unit +STM+ Stand + DADF)
  Machine Size (W x D x H): 639 mm x 685 mm x 1083 mm (Figure 6)
  *1: This machine size (W) does not include the Power Cord.

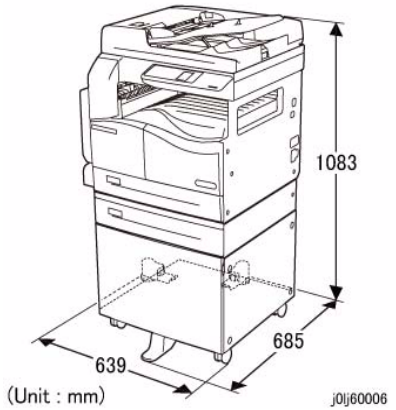


Figure 6 j0lj60006

6.1.7 Installation Space

6.1.7.1 Installation Space

Sufficient space must be made available around the machine for performing activities such as loading paper, refilling, retrieving printouts, replacing consumables, clearing Jams, maintenance inspection, and etc., as well as to ensure that the machine's performance can be maintained.

Table 1

Configuration	Width (mm)	Depth (mm)	Area (square meters)
Main Unit (w/Platen Cover or w/DADF)	1101	1460	1.61
Main Unit + STM	1101	1460	1.61
Main Unit + STM + Stand	1101	1460	1.61

- Width: The max. width with the MSI Tray pulled out is 921 mm.
- Depth: The depth with the Tray pulled out is 960 mm. (Including the Front Cover)

The installation space includes the following working space.

- Width: 80 mm added to the left and 100 mm added to the right
- Depth: 400 mm added to the front (for pulling out of Tray) and 100 mm added to the back (for air circulation)

6.1.7.2 Occupied Space

The occupied space may include a fully extended Bypass Tray and Output Tray.

Table 2

Configuration	Width (mm)	Depth (mm)	Area (square meters)
Main Unit + Platen Cover	947	569	0.54
Main Unit + Platen Cover + STM	947	569	0.54
Main Unit + Platen Cover + STM + Stand	947	685	0.65
Main Unit + DADF	972	569	0.56
Main Unit + DADF + STM	972	569	0.56
Main Unit + DADF + STM + Stand	972	685	0.66

6.1.7.3 Installation Space Details

1. Main Unit (w/Platen Cover)
   - Installation Space (W x D): 1101 mm x 1460 mm (Figure 1)

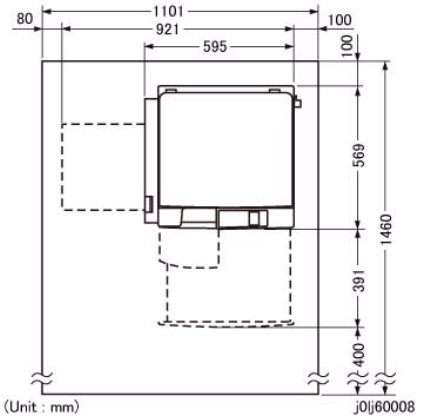


Figure 1 j0lj60008

2. Main Unit (w/DADF) + STM
   - Installation Space (W x D): 1101 mm x 1460 mm (Figure 2)

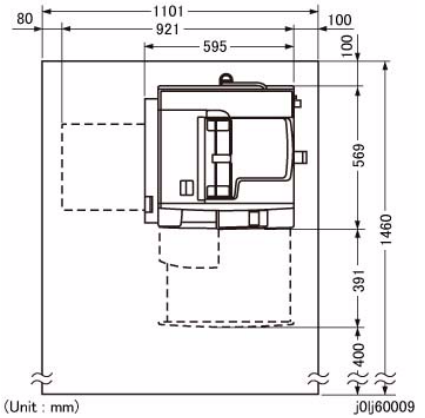


Figure 2 j0lj60009

3. Main Unit (w/DADF) +STM+ Stand

- Installation Space (W x D): 1101 mm x 1460 mm (Figure 3)

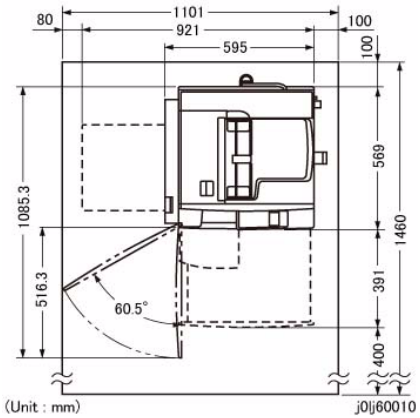


Figure 3 j0lj60010

6.1.8 Leveling

The machine shall operate properly when it is placed horizontally and the front-to-back tilt in the surface below the cabinet (casters) is within 5mm and the side-to-side tilt is within 10mm.

6.1.9 Operating Air Pressure

The machine shall operate properly when it is isntalled in a location at altitudes of 0-8200 feet (0-2500 meters). However, the IOT requires some adujustments when it is installed in a location at an altitude higher than 1000 meters.

6.1.10 Electrical Characteristics

Specifies the power supply operating voltage/frequency and the power consumption.

6.1.10.1 Operating Voltage and Frequency of Power

- The power consumption of the system is as follows, and complies with 'Energy Star'.

Table 1

	Input Voltage	Frequency (Hz)	Rated input current Max (A)	Power Consumption* Spec (VA)
110-127V	127+10% 110-10%	50/60 +/- 3 Hz	12A	1676 VA (Max)
220-240V	240+10% 220-10%	50/60 +/- 3 Hz	6A	1584 VA(Max)

*: Power consumption is specified assuming full configuration

6.1.10.2 Rated Power Consumption

Rated power consumption is as follows:

Table 2

Mode	Power consumption	Configuration
Low-power mode	CPS: 45W or less45W or less	(20cpm) (18cpm)
Sleep mode (Off mode)	CPS: 3.0 W or less 3.0 W or less	(20cpm) (18cpm)
Plug-in Off mode	0.5 W of less	

6.1.10.3 TEC method

Table 3

Configuration	TEC (KWh/week)
CP 20ppm	2.3
CP 18ppm	2.5

6.1.11 Environmental Friendliness

6.1.11.1 Energy Star Program, Blue Angel Mark and ErP Lot6

The table below shows the time to enter other mode after operation completion and power consumption in each mode.

- *1: Actual measured power value, which is base of the power value notified to Energy Star Program.
- *2: Factory default setting.
- *3: Used for Blue Angel Mark acquisition. (Not applicable for this product)
- *4: Used for ErP Lot6 (EMC Class B product for EU) certification. (Not applicable for this product)
- *5: Measured by Energy Star tesing condition.

Table 1 (Input voltage: AC115V/AC230Vz)

Configuration	TEC method		Low Power Mode				
	Power (Standard) (kWh/week)	(Reference)	Power (BA Std) (W)	Power (Catalog) (W)	Power(W)*1 *3	Shift time *2 *3	Recovery time (for BA) *3
18PPM CPS Platen/Simp (230V)	2.3	1.232	-	50	42	1min	-
20PPM CPS DADF/Dup (230V)	2.5	1.343	-	50	42	1min	-
18PPM CPS Platen/Simp (115V)	2.3	1.233	-	45	40	1min	-
20PPM CPS DADF/Dup (115V)	2.5	1.370	-	45	40	1min	-

Table 2 (Input voltage: AC115V/AC230Vz)

Configuration	Sleep Mode					
	Power (BA Std) (W)	Power (Catalog) (W)	Power(W)*1 *3	Shift time *2 *3	Recovery time (for BA)*3	Recovery time (Catalog)*5
18PPM CPS Platen/Simp (230V)	-	3.0	2.5	1min	-	30sec
20PPM CPS DADF/Dup (230V)	-	3.0	2.6	1min	-	30sec
18PPM CPSPlaten/Simp (115V)	-	3.0	2.4	1min	-	30sec
20PPM CPSDADF/Dup (115V)	-	3.0	2.5	1min	-	30sec

Table 3 (Input voltage: AC115V/AC230Vz)

Configuration	Ready Mode			Plug-in Off Mode *4	
	Power (BA Std) (W)	Power (Catalog) (W)	Power (W)*1 *3	Power (ErP Std) (W)	Power (W)*3
18PPM CPS Platen/Simp (230V)	-	65	56	-	-
20PPM CPS DADF/Dup (230V)	-	65	60	-	-
18PPM CPS Platen/Simp (115V)	-	75	65	-	-
20PPM CPSDADF/Dup (115V)	-	75	67	-	-

6.1.11.2 Audible Noise

Audible noise level of the product shall be the following values or below (when 60Hz M/C is available, it shall be used for the assessment.):Noise shall be measured according to C11-707.

Table 4

Item	18 CPM		20 CPM	
	Base Config *1	**Full System *2**	**Base Config *1**	**Full System *2**
Declared A-weighted sound power level at standby *3 (unit: B)	4.30	4.30	4.30	4.30
Delcared A-weighted sound power level at running *3 (unit: B)	6.53	7.10	6.60	7.17
Sound pressure level at running *4 (unit: dB) (reference only)	49	52	49	52

- *1: Base Configuration: Platen Cover + IIT + IOT
- *2: Full System Configuaration: DADF + IIT + IOT + Duplex + STM
- *3: LwAd: Sound power level at a source. = measured value LwA (1 M/C) + 0.3B
- *4: LpAm: Sound pressure level at a bystander position

6.1.12 Installation Environment

This machine can be operated under the following conditions:

- Temperature: 10 degrees C to 32 degrees C
- Humidity: 15 to 85% (with no condensation)
- Altitute: 0 to 8,200 feet (0 to 2,500 meters)

6.1.13 Warm-up Time

Machine requires the following warm-up time after prower is turned on, after exiting Low Power Mode or Sleep Mode. Measuring Conditions:

- 20degC / 65%RH / Rated Voltage
- Not includeing toner recovery or set-up cycle.
- Power on after 3 hours or more seasoning with the power turned off.
- Machine configuration: Standard M/C

1. Time To Start Printing *1

Table 1

Config	After Power On	After ExitingSleep Mode *2	After ExitingLow Power Mode *2
220V M/C	30sec	30sec	30sec
120V M/C	30sec	30sec	30sec

2. Time to display Ready to Copy (reference)

Table 2

Config	After Power On	After ExitingSleep Mode *2	After ExitingLow Power Mode *2
220V M/C	30sec	30sec	30sec
120V M/C	30sec	30sec	30sec

*1: Time from Power On to 1st sheet output - Time from Standby to 1st sheet output.

The time A minus B below;

A: Time from when the power is tunred on and print is designated to when the trail edge of the 1st sheet is ejected from Exit.

B: Time from when the print is designated while IOT is in standby state to when the trail edge of the 1st sheet is efected from Exit.

*2: When machine exits Sleep Mode / Low Power Mode after one hour passes from the transition to Sleep Mode / Low Power Mode.

6.1.14 FCOT :First Copy Output Time (Warm start)

FCOT shall be 7.5sec or less.

FCOT (Warm start) is from the time Start button is pressed (when the engine receives a START command in the 'STAND-BY' state) till the trail edge of the first sheet is fed out in the following conditions.

- Documents are placed on Platen
- Power is on
- Engine motor is not running
- Fusing Unit is ready
- Laser scanner motor (ROS: Raster Output Scanner) is ready
- Paper size and feeding orientation: A4 or 8.5x11 LEF
- Paper tray: Tray 1
- FCOT Mode

6.1.15 Print Speed

Continuous speed (PPM) of the print engine is defined as follows:

During output to Face Down Tray, taking the time from when the tail edge of the 1st sheet is output from the IOT exit area until the tail edge of the 11th sheet is output from the MC exit area to be t seconds, the no. of sheets that is printed in 1 minute is given by the formula: [(60/t)x10 for 1 Sided and (60/t)x20 for 2 Sided] as shown in the following table. The numerical value for Duplex is IPM (Images Per Minute).

Limitations

- This does not include the time for settings/cleaning/sagging/procon.
- When automatic recognition of paper size at the MSI is in operation, it prints at the corresponding productivity rate of that paper size. However, if the paper size is not automatically detected, the 1st paper is printed with the same productivity as the A3 SEF or 17' paper. Immediately after that, the 2nd BTR is cleaned, then the 2nd and subsequent paper will be printed with the productivity of the paper size that was detected when printing the 1st paper.

20/18 IOT (feed from Tray/output to Center Tray)

Unit: 1 Sided: ppm, 2 Sided: ipm

Table 1

Paper Type Settings	216.0 mm or shorter in the SS direction and 210.0 mm or longer in the FS direction				216.1 mm to 297.2 mm in the SS direction		297.3 mm to 364.1 mm in the SS direction		364.2 mm to 432.0 mm in the SS direction (A3S/11x17S)	
	A4 LEF 8.5x11 LEF B5 LEF		A5 SEF B5 SEF 5.5x8.5 SEF		A4 SEF 8.5x11 SEF		B4 SEF 8.5x13 SEF8.5x14 SEF8.5x13.4 SEF		A3 SEF 11x17 SEF	
	1 Sided	2 Sided	1 Sided	2 Sided	1 Sided	2 Sided	1 Sided	2 Sided	1 Sided	2 Sided
Bond-PlainRe-cycledPlain Reload *	20/18	13.1/13.1	12/12	7.2/7.2	15/14	8.7/8.7	12/12	7.9/7.9	10/10	7.2/7.2

*: There is no 2 Sided for Plain Reload

6.1.16 Tray (Paper Feed)

6.1.16.1 Paper Trays

Paper Trays refer to all type of Trays that are pulled out towards the front. The Main Unit has the MSI and the 250-sheet Paper Tray (1 level) as standard configuration.The 500-sheet Paper Tray (Single Tray Module: STM) is available as a field option.The MSI is installed on the left side of the IOT by standard.

6.1.16.2 Paper Tray Characteristics

Table 1

IOT/TM	Tray NO.	Supported Paper (Standard Size)	Supported Paper (Non-Standard Size) (W x L) mm	Supported Paper Weight (gsm)	Storage Capacity *1	Remarks
IOT	Tray1	Min:B5 Max:A3S,11X17S	Non-Standard Sizes not supported	60-90	250sheets (Business 80gsm)	Stack height: 27 mm
	MSI	Min:A5S, 5.5X8.5 Max:A3S,11X17S	Non-Standard Sizes not supported	60-110	100sheets (Business 70gsm)	Stack height: 10 mm
STM	Tray2	Min:B5S Max:A3S,11X17S	Non-Standard Sizes not supported	60-90	500sheets (Business 70gsm) 450sheets (Business 80gsm)	Stack height: 54 mm

*1: B Zone/Fresh Paper, P Paper

6.1.16.3 Remaining Paper Amount Detection

Table 2

Tray	Detection & Notification	Remarks
Tray1-2	1 level: 0%	
MSI	1 level: 0%	

- When the power is turned OFF during liftup, if the power is turned ON again without removing the Tray, and the Tray is inserted again while the Bottom Plate has not dropped, the remaining paper amount cannot be detected correctly.

6.1.17 Classifications and Functions

6.1.17.1 Classifications and Functions

This section describes the relationship between paper type selection and paper feeding.

The Paper Type Settings for the Main Unit Tray and Option Trays can be set at the Key Operator Tools Mode (KO) or the CE Mode.

The Paper Type Settings for the MSI can also be set in the same way as for the Main Unit Trays at the KO Mode or the CE Mode.

O: Possible, X: Not Possible

Table 1

Tray	UI Classification	IOT Paper Type Data	Weight gsm	Function			
				Paper Size			Output
				Standard Size	Non-Standard Size	Automatic 2 Sided Print	Exit1
Tray 1	Plain	Normal Paper	64-90	O	X	O	O
	Lightweight	Thin Paper	60-63	O	X	O	O
STM	Plain	Normal Paper	64-90	O	X	O	O
	Lightweight	Thin Paper	60-63	O	X	O	O
MSI	Plain	Normal Paper	64-90	O	X	O	O
	Heavy-weight	Thick Paper 1	91-110	O	X	O	O
	Lightweight	Thin Paper	60-63	O	X	O	O

6.1.17.2 Classifications and Paper Types

This is not specified as there is no classification.

6.1.18 Auto 2 Sided Printing

The paper sizes and weights that can be used for 2 sided print are as follows.

1. Paper Size (Standard Sizes only. Non-Standard Sizes are not supported.)
   - Min: B5 SEF
     Min: A5 SEF, 5.5 X 8.5’ SEF (MSI)
   - Max: A3 SEF, 11x17’ SEF

2. Paper Weight
   - 60 gsm~110gsm*

   *: 91 gsm to 110 gsm is for MSI only

6.1.19 Output Function

6.1.19.1 Center Tray

Supported Size: All paper sizes handled by the machine

Capacity: The average values of the no. of sheets that can be accommodated are as follows (using fresh paper).

Table 1

Configuration	Output Tray	Paper Type	Output Capacity
Center Tray	Top of machine	A4 LEF Standard Paper (P Paper)	250 sheets
		Heavyweight (90 to 110 gsm)	50 sheets

- The above is Simplex print
- The ability to accomodate A4 SEF and Letter SEF is not defined.
- Full Stack detection: None
- Finishing Capability
  - Can easily sort without folding or messing up the order
  - Paper curl: 20 mm or less (standard paper, 22 degrees C/55% RH)
- Output orientation: Face down

6.1.19.2 SCT

SCT (Simple Catch Tray) output function not available.

6.1.19.3 OCT

OCT (Offset Catch Tray) output function not available.

6.1.19.4 Side Tray

Side Tray output function not available.

6.1.20 Resolution/Gradation

6.1.20.1 IOT Unit

- Resolution
  Fast Scan: 600 dots/25.4 mm (by the ESS), Slow Scan: 600 dots/25.4 mm

- Gradation
  256 Gradation

6.1.20.2 Copy Quality/Resolution

- Data Resolution: Processing resolution for ESS output

Table 1

Printing Type		Standard
BW	Data Resolution (dpi) Depth	600X600 1bit
	IE (Black Text only)	None

- Output Resolution: The resolution that is printed by the IOT after receiving the above ESS data

Table 2

Printing Type		Standard
BW	Output Resolution (dpi) Depth	600X600 1bit
	IE (Black Text only)	None

6.1.21 Paper Selection

For the paper tray selection function, there is Auto Paper Selection (APS) and Auto Tray Switching (ATS).

- Auto Paper Selection (APS)

  For printing, selecting [Auto Paper Select] for [Paper Tray] in the 'Paper/Output' tab on the printer driver setting screen and then instructing to print prompts the machine to select the appropriate Paper Tray based on the size and orientation of the document to be printed.For copying, selecting [Auto] for [Paper Supply] activates the Auto Paper Selection. In cases where there are multiple Trays that fit the criteria, the Auto Paper Selection will perform selection in the order of Tray 1->Tray 2. (Trays 2 is an option)

  NOTE: *Paper Tray 5 (MSI) is not included in the Auto Paper Selection.*

- Auto Tray Switching (ATS)

  If the paper ran out when printing/copying is in progress, this will select another Tray that contains paper with the same size and orientation as the last printed/copied paper and continue with the copying/printing.

6.1.22 Image Loss

Each paper size has the following image loss.

- Lead Edge: 4 +/-1.5 mm or shorter
- Side Edge: 4 +/-1.5 mm or shorter

To adjust the Edge Erase amount, refer to [ADJ 18.1.2 Edge Erase Value Adjustment] in Chapter 4 of the Service Manual.

6.1.23 Print Area

6.1.23.1 Paper Sizes that Can be Transported

The minimum and maximum paper sizes that can be transported in the Main Unit are as follows:

- Minimum transportable paper size:
  - Width IOT/STM: 182 mm (B5 SEF), MSI: 139.7 mm (5.5x8.5 SEF)
  - Length: 182 mm (B5 LEF)

- Maximum transportable paper size:
  - Width: 297.0 mm (A3)
  - Length: 431.8. mm (11x17)

6.1.23.2 Maximum Print Area

The printable area defines the area where the image can be printed. The maximum printable area of the Main Unit is as follows.

- Maximum printable area: 297.0 mm wide x 425.8 mm long

6.1.23.3 Maximum Print Guaranteed Area

The area where the image quality is guaranteed is referred to as Print Guaranteed Area. The Print Guaranteed Area of the Main Unit is as follows.

- Maximum print guaranteed area: 289.0 mm wide x 423.4 mm long

  However, this print area is fully applied only when the Copy Job and Print Job uses paper with size A3 SEF in width direction or 11x17’ SEF in length direction.

6.1.24 Alignment Specification

- Alignment Measurement Method and Specification (Calculated for 100%)
- Alignment (Calculated for 100%) (Upper IOT Side 1, Lower IOT Side 2)
- (-) means a deviation in the Lead direction while (+) means a deviation in the Tail direction.

***NOTE:** . Effect of paper elongation and shrinkage due to environmental changes is not included.*

Table 1

Item	SYSTEM Spec *1 (Platen)		SYSTEM Spec (DADF)	IOT			IIT	DADF	Conditions
	Tray	MSI *2		Tray	MSI*2	STM			
Lead Regi *3	+/- 2.8 mm +/- 3.8 mm	+/- 3.6 mm -	+/- 3.8 mm +/- 4.4 mm	+/- 2.4 mm +/- 3.4 mm	+/- 3.1 mm -	+/- 3.1 mm -	+/- 0.7 mm -	+/- 1.5mm +/- 1.5 mm	
Side Regi *4	+/- 3.4 mm +/- 3.8 mm	+/-3.6 mm -	+/- 4.2 mm +/- 4.6 mm	+/- 3.0 mm +/- 3.4 mm	+/-3.2 mm -	+/-3.1 mm -	+/-0.75 mm -	+/-1.5 mm +/-1.5 mm	
Lead Skew (200 mm)	+/-2.4 mm +/-2.8 mm	+/-2.7 mm -	+/- 2.8 mm +/- 3.2 mm	+/-1.9 mm +/-2.3 mm	+/-2.2 mm -	+/-1.9 mm -	+/-0.8 mm -	+/-1.0 mm +/-1.0 mm	
Side Skew (400 mm)	+/-4.4 mm +/-4.6 mm	+/-4.8 mm -	+/- 5.4 mm +/- 5.6 mm	+/-3.8 mm +/-4.0 mm	+/-4.4 mm -	+/-3.8 mm -	+/-1.2 mm -	+/-2.2 mm +/-2.2 mm	
Horizontal R/E Precision (All area) Applicable for 100%	+/-1.05% +/-1.4%	- -	+/-1.6% +/-2.0%	+/-0.95% +/-1.3%	- -		+/-0.31% -	+/-0.5% +/-0.5%	This value is for length of 280 mm
Vertical R/E Precision (All area) Applicable for 100%	+/-1.05% +/-1.4%	-	+/-1.6% +/-2.0%	+/-0.95% +/-1.3%	- -		+/-0.31%	+/-0.5% +/-0.5%	This value is for length of 400 mm
Perpendicularity (400 mm)	+/-3.1 mm	-	+/-3.4 mm	+/-1.7 mm	-		+/-1.7 mm	+/-2.2 mm +/-2.2 mm	
Linearity (Vertical)	1.8 mm	-	2.4 mm	1.4 mm	- -		0.8 mm -	0.5 mm 0.5 mm	This value is for length of 400 mm
Linearity (Horizontal)	1.8 mm	-	2.4 mm	1.4 mm	-		Not defined	-	This value is for length of 280 mm
Linearity (Diagonal)	1.8 mm	- -	2.4 mm	1.4 mm	- -		Not defined	- -	This value is for length of 283 mm
Parallelism (400 mm)	+/-2.1 mm	-	+/-3.0 mm	+/-2.0 mm	-		+/-0.7 mm	+/-1.8 mm	

*1: Specified in the state where the center of the document is set correctly.

*2: Specified in the state where the Side Guide is set correctly.

*3: The User Adjustment Pitch is 0.254 mm.

*4: The User Adjustment Pitch is 0.135 mm.

- DC Test Pattern (STP3600) (Figure 1)

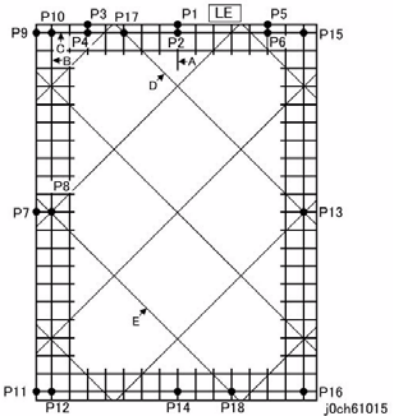


Figure 1 j0ch61015

How to Measure

Table 2

Measurement Item	**How to Measure**
Lead Regi [mm]	(P1 to P2) - Reference value *1
Side Regi [mm]	(P7 to P8) - Reference value *1
Lead Skew (200 mm) [mm]	(P5~P6)-(P3~P4)
Side Skew (400 mm) [mm]	(P9~P10)-(P11~P12)
Horizontal R/E Precision (All area) [%]	[(P8~P13)-280]/280X100
Vertical R/E Precision (All area) [%]	[(P2~P14)-400]/400X100
Perpendicularity [mm]	The shift between P14 and the perpendicular line that extends from the intersection of the straight line connecting P4 and P6 and the line A.
Linearity (Vertical) (400 mm) [mm]	The maximum shift between the intersections of the vertical line B with the various horizontal lines and the straight line connecting P10 and P12.
Linearity (Horizontal) (280 mm) [mm]	The maximum shift between the intersections of the horizontal line C with the various vertical lines and the straight line connecting P10 and P15.
Linearity (Diagonal) (280 mm) [mm]	The maximum shift between the intersections of the diagonal line D with the various lines and the straight line connecting P17 and P13, or the maximum shift of the intersections of the diagonal line E with the various lines and the straight line connecting P8 and P18, whichever is larger.
Parallelism [mm]	(P10~P12)-(P15~P16)

*1: For the reference value in the table, measure the length of the corresponding position on the STP3600.

6.1.25 Print Feature

6.1.25.1 Saving of Toner

- Supported.

6.1.25.2 Resolution

- 600x600dpi (Normal).

6.1.25.3 Halftone (Gray Scale)

- 256 levels (area gradation)

6.1.25.4 Maximum Paper Size

- Maxiumu Paper Size: A3/11x17'

6.1.25.5 Supported OS

Table 1

Client OS	Printer Driver	ScanerDriver	Setup Tool	Firmware Downloader *1
Windows XP(32bit/64bit)	Yes	Yes	Yes	Yes
Server2003(32bit/64bit)	Yes	Yes	Yes	Yes
Vista(32bit/64bit)	Yes	Yes	Yes	Yes
Server2008(32bit/64bit)	Yes	Yes	Yes	Yes
Server2008R2	Yes	Yes	Yes	Yes
Windows 7(32bit/64bit)	Yes	Yes	Yes	Yes
Windows 8 (32bit/64bit) *2	Yes	Yes	Yes	Yes
Mac OS X	No	No	No	No
Linux	Yes	Yes	No	No

*1: Firmware Downloader is used by Customer Engineer and User.

*2: Windows 8 will be supported after launch.

6.1.26 Local Scan Feature

6.1.26.1 Scan Method

- B&W CCD

6.1.26.2 Scan Speed

- DADF:8.0 sec

  Set one original chart on DADF and measure time from starting the scan (start from DocuWorks) to until the scanned image is displayed on PC monitor.

  [Conditions]Client: Dell OptiPlex755 (Core2 Duo 2.66GHz, RAM 2GB)OS: WinXP (English)TWAIN Driver/Output format=DocuWorksA4LEF/200dpi/Magnification=100%Test Chart: ITUT-T No.1Other settings=default

6.1.26.3 Scan Speed through DADF

- 18 page / min

  Set 30 orignal charts on DADF and press the start key. Measure time between 11th original chart is fed out and 21th original chart is fed out (T sec) and calculate number of scanned sheets per 60sec. The Job display on UI should be closed after the job is started.

  [Conditions]

  Same as 6.1.26.2

6.1.26.4 Resolution

- 600dpi Max

6.1.26.5 Scan Depth

- Mono: Binary

6.1.26.6 Resolution Select

- Customer can select 4 kinds of resolution: 200/300/400/600 dpi

6.1.26.7 Supported Document Size

- Fixed Document Size: A3/11 x 17' (Max) ~A5 (Min)
- Customer Settable Document Size: support

6.1.26.8 Document Type Select

- 3 kinds of document type ('Text'', ''Photo'', ''Text/Photo'') can be select via PC

6.1.26.9 Density adjustment

- Print density can be adjusted by gamma correction and threshold choice of binarization.

6.1.27 Document Feeder (DADF)

Table 1

Item	Description
Type of Document Feeder	Duplex Auto Document Feeder
Originals Size/Type	Max: A3, 11x17' (Min: A5 38 to 128 g/m2 (2 Sided: 50 to 128 g/m2)
Document capacity	110 sheets
Document replacement speed (A4 LEF 1 Sided Copy)	WC 5019 : 18 sheets/min WC 5021 : 20 sheets/min
Size/Weight	Width: 540 mm or shorter x Depth: 492 or shorter x Height: 95 mm or shorter 6.3 kg or lighter (TBD) (Counter Balance included)

6.1.28 Count-up for Print/Copy jobs

- This section describes the count-up specification for jobs (Printer, Copy)

  The purpose of the count-up meter is to manage the number of sheets of the print output by print jobs and copy jobs. The count-up meter of WC5021/5019 is not guaranteed as a meter to charge.

  The device UI can display 'Copy','Print' and 'Total' counters.

6.1.29 Count-up modes

- WC5021/5019 supports two modes of counter.

Table 1

Paper size	**Number of counter increments**	
	Normal Mode*	Large Size Mode
Fixed Paper size over 100mm2 Non-fixed paper size	1*	2
Fixed paper size 100mm2 or less	1	1

*: Factory default setting: Normal Mode

6.2.1 Tools and Service Consumables

6.2.1.1 Tools

Most of the maintenances can be done with standard tools described in the following table:

Table 1

No.	TOOL No.	TOOL NAME
1	499T 00247	Test Pattern(Mono A3X1)
2	499T 00283	Test Pattern (A3) for DADF Adjustment
3	499T 00301	Screw Driver(-) 3X50
4	499T 00353	Stubby Driver*
5	499T 00355	Screw Driver(+) 100 mm
6	499T 01423	Box Driver with Magnet(5.5 mm)
7	499T 01901	Side Cutting Nipper
8	499T 02005	Round Nose Plier-Safety
9	499T 02320	S/E TESTER SET
10	499T 02601	Silver Scale 150 mm
11	499T 08104	Flash Light(U-3)
12	499T 08902	Brush
13	499T 09507	TESTER LEAD WIRE (Red)
14	499T 09508	TESTER LEAD WIRE(Black)

*: 499T 00353 : STUBBY DRIVER should be used when replacing the ROS ASSEMBLY.

6.2.1.2 Service Consumables

There are no Service Consumables unique to this model.

Whenever special consumables for the machine are required, it will be notified in a separate technical information.

6.2.2 Consumables

Table 1

Consumables	Product Code	CRU/ERU	YieLd / life
Toner Cartridge(9K)	CT202037	CRU	9KPV*1 @Declared yield in accordance with ISO/IEC 19752
Drum Cartridge	CT350986	CRU	343Kcycle @ ISO/IEC 19752 Standard Test Page <Reference>75KPV*2@18PPM / 80KPV*2@20PPM

*1: The maximum number of copies should be regarded as only a guide because it depends on the way to use, the type of document and the density of print.

*2: The maximum number of prints is a reference value under the condition of A4 LEF and simplex printing. Some specific conditions such as paper size, number of copies for a print job, etc. might cause a serious deterioration of image quality before the time to replace the drum cartridge comes.Evaluation : ISO/IEC 19752 Test Standard. Drum Cartridge specification is applied when the machine is operated under the following condition.

- Paper: A4 LEF - Paper Tray: Tray1- Mode: Simplex print- Job Runlength: 4 Pages/job- Life distribution: B(50)

6.3.1.1 DADF Input Component Check List

Table 1 DADF Input Component Check List

Chain-Link	Component Name	Connecter Level	Description
005-102	DADF DOCUMENT SET SENSOR	L	L: Document detected at DADF DOCUMENT SET SENSOR
005-110	DADF REGI. SENSOR	H	H: Document detected at DADF REGI SENSOR
005-206	DADF PRE REGI. SENSOR	H	H: Document detected at DADF PRE REGI SENSOR
005-211	DADF INVERT SENSOR	H	H: Document detected at DADF INVERT SENSOR
005-212	DADF INTERLOCK SWITCH	L	L: FEEDER OPEN SENSOR
005-213	DADF OPEN SENSOR	H	H: DADF PLATEN INTERLOCK OPEN
005-215	DADF TRAY SET GUIDE SENSOR 1	L	L: The Actuator is not blocked.
005-216	DADF TRAY SET GUIDE SENSOR 2	L	L: The Actuator is not blocked.
005-217	DADF TRAY SET GUIDE SENSOR 3	L	L: The Actuator is not blocked.
005-221	DOCUMENT TRAY SIZE SENSOR 1	L	L: Document detected at DOCUMENT TRAY SIZE SENSOR 1
005-222	DOCUMENT TRAY SIZE SENSOR 2	L	L: Document detected at DOCUMENT TRAY SIZE SENSOR 2
005-224	SACN START	H	H: SCAN START signal ON detected
005-228	APS EXIST	L	L: APS SENSOR detected

6.3.1.2 IIT Input Component Check List

Table 1 IIT Input Component Check List

Chain-Link	Component Name	Connecter Level	Description
062-201	SHEET ABORT	L	Registers a document
062-212	IIT REGI. SENSOR	L	L: IIT REGI SENSOR deactuated
062-240	DADF EXIST	H	H: DADF not installed
062-272	SCAN START	L	Scanning possible

6.3.1.3 IOT Input Component Check List

Table 1 IOT Input Component Check List

Chain-Link	Component Name	Connecter Level	Description
071-300	L/H COVER INTERLOCK SWITCH	H	H: L/H COVER INTERLOCK SWITCH is closed
071-301	FRONT COVER INTERLOCK SWITCH	H	H: FRONT COVER INTERLOCK SWITCH is closed
072-300	STM LEFT COVER SWITCH	L	L: STM LEFT COVER SWITCH is closed
072-100	TRAY 1 NO PAPER SENSOR	L	L: Paper detected at TRAY 1 NO PAPER SENSOR
072-101	TRAY 2 NO PAPER SENSOR	L	L: Paper detected at TRAY 2 NO PAPER SENSOR
072-102	MSI NO PAPER SENSOR	L	L: Paper detected at MSI NO PAPER SENSOR
072-103	TRAY 2 NUDGER LEVEL SENSOR	H	H: TRAY LIFT UP
072-104	TRAY 2 FEED OUT SENSOR	L	L: Paper detected at TRAY 2 FEED OUT SENSOR
072-105	TRAY 2 PAPER SIZE SWITCH	L	L: SW 5 of TRAY 2 PAPER SIZE SWITCH is ON
071-105	REGI. SENSOR	L	L: Paper detected at REGI SENSOR
071-106	FUSING UNIT EXIT SENSOR	L	L: Paper detected at FUSING UNIT EXIT SENSOR

6.3.2.1 DADF Output Component Check List

Table 1 DADF Output Component Check List

Chain-Link	Component Name	Connecter Level	Description
005-004	DADF FEED MOTOR CW 82.5 mm/s	-	Drives the DADF FEED MOTOR at 82.5 mm/s in CW direction. Turns ON for 50 s -> Auto OFF
005-005	DADF FEED MOTOR CW 110.0 mm/s	-	Drives the DADF FEED MOTOR at 110.0 mm/s in CW direction. Turns ON for 50 s -> Auto OFF
005-008	DADF FEED MOTOR CW 165.0 mm/s	-	Drives the DADF FEED MOTOR at 165.0 mm/s in CW direction. Turns ON for 50 s -> Auto OFF
005-010	DADF FEED MOTOR CW 220.0 mm/s	-	Drives the DADF FEED MOTOR at 220.0 mm/s in CW direction. Turns ON for 50 s -> Auto OFF
005-015	DADF FEED MOTOR CW 330.0 mm/s	-	Drives the DADF FEED MOTOR at 330.0 mm/s in CW direction. Turns ON for 50 s -> Auto OFF
005-046	DADF FEED MOTOR CCW 82.5 mm/s	-	Drives the DADF FEED MOTOR at 82.5 mm/s in CCW direction. Turns ON for 50 s -> Auto OFF
005-047	DADF FEED MOTOR CCW 110.0 mm/s	-	Drives the DADF FEED MOTOR at 110.0 mm/s in CCW direction. Turns ON for 50 s -> Auto OFF
005-048	DADF FEED MOTOR CCW 165.0 mm/s	-	Drives the DADF FEED MOTOR at 165.0 mm/s in CCW direction. Turns ON for 50 s -> Auto OFF
005-049	DADF FEED MOTOR CCW 220.0 mm/s	-	Drives the DADF FEED MOTOR at 220.0 mm/s in CCW direction. Turns ON for 50 s -> Auto OFF
005-062	DADF FEED CLUTCH	-	Drives the DADF FEED CLUTCH. Turns ON for 3 s -> Auto OFF
005-072	EXIT NIP RELEASE SOLENOID	L	L: Turns ON the EXIT NIP RELEASE SOLENOID. Turns ON for 3 s -> Auto OFF
005-083	DOCUMENT READY	L	L: Turns ON the DOCUMENT READY signal.
005-088	Image Area ON	-	Turns ON the Image Area signal for 5 s.
005-098	TAKEAWAY CLUTCH	-	Turns ON the TAKEAWAY CLUTCH for 3 s.

6.3.2.2 IIT Output Component Check List

Table 1 IIT Output Component Check List

Chain-Link	Component Name	Connecter Level	Description	Remarks
062-002	IIT Exposure Lamp	L	L: Turns ON the IIT Exposure Lamp. Turns the Lamp ON for 180 s -> Auto OFF	Will also turn OFF when Stop is instructed before Auto OFF.
062-005	CARRIAGE MOTOR (Scan direction)	4 phases eachH/L switch	Moves it 50 mm from current position in Scan direction -> Auto OFF	Will not accept Stop instruction before Auto OFF.
062-006	CARRIAGE MOTOR (Return direction)	4 phases eachH/L switch	Moves it 50 mm from current position in Return direction -> Auto OFF	Will not accept Stop instruction before Auto OFF.
062-091	Exchange to DADF	L	Turns ON the document exchange command signal to the DADF.	

6.3.2.3 IOT Output Component Check List

Table 1 IOT Output Component Check List

Chain-Link	Component Name	Connector Level	Description
042-001	MAIN DRIVE MOTOR On	L	L: Drives the MAIN DRIVE MOTOR.
042-002	NOHAD FAN (High Speed)	-	Drives the NOHAD FAN at high speed.
042-003	NOHAD FAN (Low Speed)	-	Drives the NOHAD FAN at low speed.
071-001	REGI. CLUTCH On	L	L: Turns ON the REGI CLUTCH.
071-002	DUPLEX CLUTCH On	L	L: Turns ON the DUPLEX CLUTCH.
071-003	INVERT MOTOR (CW Phase1-2)	-	Drives the INVERT MOTOR in CW Phase 1-2.
071-004	INVERT MOTOR (CW Phase2)	-	Drives the INVERT MOTOR in CW Phase 2.
071-005	INVERT MOTOR (CCW Phase1-2)	-	Drives the INVERT MOTOR in CCW Phase 1-2.
071-006	INVERT MOTOR (CCW Phase2)	-	Drives the INVERT MOTOR in CCW Phase 2.
072-001	TRAY 1 FEED CLUTCH On	L	L: Turns ON the TRAY 1 FEED CLUTCH.
072-002	TRAY 2 FEED/LIFT UP MOTOR (Feed)	-	Performs the Paper Feed operation using TRAY 2 FEED/LIFT UP MOTOR.
072-003	STM TAKEAWAY ROLL CLUTCH On	L	L: Turns ON the STM TAKEAWAY ROLL CLUTCH.
072-004	STM TAKEAWAY MOTOR On	L	L: Drives the STM TAKEAWAY MOTOR.
072-005	TRAY 2 FEED/LIFT UP MOTOR (Lift Up)	-	Performs the Tray Lift Up operation using TRAY 2 FEED/LIFT UP MOTOR.
072-006	MSI FEED CLUTCH On	L	L: Turns ON the MSI FEED CLUTCH.
091-001	Xero Combination	-	Carries out combined operation of the following components. • BCR AC Bias On • BCR DC Bias On • DEVE DC Bias On • MAIN DRIVE MOTOR On • BTR -Bias On
091-002	BCR AC Bias On	-	Turns ON the BCR AC Bias.
091-003	BCR DC Bias On	-	Turns ON the BCR DC Bias.
091-004	DEVE DC Bias On	-	Turns ON the DEVE DC Bias.
091-005	BCR AC DC Bias On	-	Turns ON the AC and DC BCR Bias.
092-001	TONER DISPENSE MOTOR On	L	L: Drives the TONER DISPENSE MOTOR.
094-001	BTR +Bias On	-	Turns ON the BTR positive bias.

Table 1 IOT Output Component Check List

Chain-Link	Component Name	Connector Level	Description
094-002	BTR -Bias On	-	Turns ON the BTR negative bias.

6.3.3 Analog Monitor Code List

Table 1 Analog Monitor Code List

Chain-Link	Component Name	Description
072-050	TRAY 2 PAPER SIZE Sensor	Displays the AD value for Tray 2 paper size. For the relationsip between the Tray 2 paper size and the AD value, refer to 'BSD Chain 7.1' in Chapter 7.
092-050	ATC SENSOR	Displays the AD value that was detected by the ATC SENSOR. • AD Value Retrieval Range: 0~999 • Normal Range: 100~900 • Failure Determination Level: Out of the above range
010-050	Heat Roll STS Center Temperature at the Center of the Heat Roll	Displays the AD value for the temperature that was detected by the FUSING UNIT CENTER THERMISTOR. • AD Value Retrieval Range: 0~1023 • Normal Environment: 488 (210 degrees C) to 760 (145 degrees C) • High Temperature Failure Determination Level: when 362 and lower [245 degrees C and higher] is detected continuously for the specified time.
010-051	Heat Roll STS Rear Temperature at the Ends of the Heat Roll	Displays the AD value for the temperature that was detected by the FUSING UNIT REAR THERMISTOR. • AD Value Retrieval Range: 0~1023 • Normal Environment: 490 (210 degrees C) to 761 (145 degrees C) • High Temperature Failure Determination Level: when 292 and lower [270 degrees C and higher] is detected continuously for the specified time.

6.3.4.1 DADF HFSI List

Table 1 DADF HFSI List

Chain-Link	Content Name	Life Value	Setting Range	Count Condition	Description
955-806	Document Feed (CVT DADF machine)	200,000	0~5,000,000	Counts up when the Feed Sensor turns ON HFSI -> Document Feed count after clearing HFSI Counter Recycle -> Total Document Feed count without clearing To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'.	No. of sheets fed from the CVT Tray The NVM is controlled by the CVT
955-807	Document Feed Simp (CVT DADF machine)	360,000	0~5,000,000	Counts the no. of document sheets fed in Simplex mode To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'.	The NVM is controlled by the CVT * Life is common to 955-808
955-808	Document Feed Dup (CVT DADF machine)	360,000	0~5,000,000	Counts the no. of document pages fed in Duplex mode To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'.	The NVM is controlled by the CVT * Life is common to 955-807
955-810	Platen Open/Close Count (CVT DADF machine)	180,000	0~1,000,000	Counts up when the Platen Interlock opens To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'.	The NVM is controlled by the CVT
955-812	Takeaway Clutch ON Count	1,080,000	0~1,000,000	Counts up at Takeaway Clutch On	The NVM is controlled by the CVT
955-826	Nip Release Solenoid ON Count	500,000	0~1,000,000	Counts up at Nip Release Solenoid On	The NVM is controlled by the CVT
955-828	Feed Clutch ON Count	360,000	0~1,000,000	Counts up at Feed Clutch On	The NVM is controlled by the CVT

6.3.4.2 IIT HFSI List

Table 1 IIT HFSI List

Chain-Link	Content Name	Life Value	Setting Range	Count Condition	Description
956-802	IIT Scan	-	0~6,881,175	Scan Count (including pre-Scan) Counts up with each scan HFSI -> Scan count after clearing HFSI Counter Recycle -> Total Scan count without clearing To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'.	The NVM Write timing is T.B.D. 1 time increments Max count value = 6,000,000 times and above Only count Platen Scans, not CVT Scans
956-803	Lamp ON Time	-	0~7,864,200	Lamp ON Time Starts timing when the lamp turns ON Stops timing when the lamp turns OFF Writes to the NVM during CRG Initialize HFSI -> Lamp ON time after clearing HFSI Counter Recycle -> Total Lamp ON time without clearing To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'.	Lamp Life 2000 hours 1 second increments Max count value = 7,200,000 s and above Counts the total duration when the lamp is ON (including AGOC, LampCheck).
956-804	Lamp ON Count	-	0~6,881,175	Lamp ON count after clearing HFSI Counter Counts up when the lamp turns ON Writes to the NVM during CRG Initialize To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'.	Lamp Life 6,000,000 times 1 time increments Max count value = 6,000,000 times and above Counts the no. of times the lamp turns ON (including AGOC, LampCheck).

6.3.4.3 IOT HFSI List

Table 1 IOT HFSI List

Chain-Link	HFSI Name	Life Value	Count Condition	Description
950-800	BTR Unit	10,000,000	Counts up when paper passes through the Fusing Unit Exit Sensor.The count value is determined based on multiples of paper length in 216 mm.0 mm < Paper Length <= 216 mm: 1 Count Up216 mm < Paper Length <= 432 mm: 2 Counts Up To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'. This can count up to the maximum of 99,999,999 and the maximum value is retained until the counter is cleared.	BTR Unit ON Count (PV conversion)
950-801	Fusing Unit	17,500,000	Counts up when paper passes through the Fusing Unit Exit Sensor. The conversion value is calculated with 1 sheet of A4 L being equivalent to a value of 100. Count value = Paper Length [0.1 mm]/21 To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'. This can count up to the maximum of 99,999,999 and the maximum value is retained until the counter is cleared.	No. of sheets transported through the Fusing Unit (A4 LEF conversion value)
950-802	MSI Feed Roll/Nudger Roll/Retard Pad	50,000	Counts up at feeding from MSI. To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'. This can count up to the maximum of 999,999 and the maximum value is retained until the counter is cleared.	No. of sheets fed to MSI Feed Roll, MSI Nudger Roll, and MSI Retard Pad
950-803	Tray1 Feed Roll/Retard Pad	50,000	Counts up at feeding from Tray 1. To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'. This can count up to the maximum of 999,999 and the maximum value is retained until the counter is cleared.	No. of sheets fed to Tray 1 Feed Roll and Tray 1 Retard Pad.
950-804	Tray2 Feed/Retard/Nudger Roll	300,000	Counts up at feeding from Tray 2. To clear the counter, enter the HFSI Counter Read / Clear Mode and select [Clear] -> [Start] to clear it to '0'. This can count up to the maximum of 999,999 and the maximum value is retained until the counter is cleared.	No. of sheets fed through Tray 2 Feed Roll, Tray 2 Retard Roll, and Tray 2 Nudger Roll
950-805	Deodorant Filter	-	Not used	
950-807	Drum_Cycle_Counter	[18PPM] 343K Cycle (Ref 75K PV) [20PPM] 343K Cycle (Ref 80K PV)	Counts up at each 0.1 cycle. This can count up to the maximum of 8,000,000 and the maximum value is retained until the counter is cleared.	

6.3.5 NVM DADF

Table 1 NVM DADF

Chain-Link	NVM Name	Setting Range	Default Value	step	Description
711-001	DADF Lead Reg. Adjustment (Side 1) (220.0 mm/s)	105-135	120	0.1 mm	1) Default Value: 0 mm (When 711-140 value is Default and 711-001 value is 120) 2) Adjustment Range (when 711-140 value is Default) : +1.5 mm (105 pulse) / -1.5 mm (135 pulse) 3) Adjustment Range (when 711-140 value is 80 to 230) : +5.5 mm (80 pulse) / -12.5 mm (230 pulse)
711-002	DADF Lead Reg. Adjustment (Side 1) (165.0 mm/s)	105-135	120	0.1 mm	1) Default Value: 0 mm (When 711-140 value is Default and 711-002 value is 120) 2) Adjustment Range (when 711-140 value is Default) : +1.5 mm (105 pulse) / -1.5 mm (135 pulse) 3) Adjustment Range (when 711-140 value is 80 to 230) : +5.5 mm (80 pulse) / -12.5 mm (230 pulse)
711-003	DADF Lead Reg. Adjustment (Side 1) (110.0 mm/s)	105-135	120	0.1 mm	1) Default Value: 0 mm (When 711-140 value is Default and 711-003 value is 120) 2) Adjustment Range (when 711-140 value is Default) : +1.5 mm (105 pulse) / -1.5 mm (135 pulse) 3) Adjustment Range (when 711-140 value is 80 to 230) : +5.5 mm (80 pulse) / -12.5 mm (230 pulse)
711-004	DADF Lead Reg. Adjustment (Side 1) (82.5 mm/s)	105-135	120	0.1 mm	1) Default Value: 0 mm (When 711-140 value is Default and 711-004 value is 120) 2) Adjustment Range (when 711-140 value is Default) : +1.5 mm (105 pulse) / -1.5 mm (135 pulse) 3) Adjustment Range (when 711-140 value is 80 to 230) : +5.5 mm (80 pulse) / -12.5 mm (230 pulse)
711-021	DADF Lead Reg. Adjustment (Side 2) (220.0 mm/s)	105-135	120	0.1 mm	1) Default Value: 0 mm (When 711-141 value is Default and 711-021 value is 120) 2) Adjustment Range (when 711-141 value is Default) : +1.5 mm (105 pulse) / -1.5 mm (135 pulse) 3) Adjustment Range (when 711-141 value is 80 to 230) : +5.5 mm (80 pulse) / -12.5 mm (230 pulse)
711-022	DADF Lead Reg. Adjustment (Side 2) (165.0 mm/s)	105-135	120	0.1 mm	1) Default Value: 0 mm (When 711-141 value is Default and 711-022 value is 120) 2) Adjustment Range (when 711-141 value is Default) : +1.5 mm (105 pulse) / -1.5 mm (135 pulse) 3) Adjustment Range (when 711-141 value is 80 to 230) : +5.5 mm (80 pulse) / -12.5 mm (230 pulse)
711-023	DADF Lead Reg. Adjustment (Side 2) (110.0 mm/s)	105-135	120	0.1 mm	1) Default Value: 0 mm (When 711-141 value is Default and 711-023 value is 120) 2) Adjustment Range (when 711-141 value is Default) : +1.5 mm (105 pulse) / -1.5 mm (135 pulse) 3) Adjustment Range (when 711-141 value is 80 to 230) : +5.5 mm (80 pulse) / -12.5 mm (230 pulse)

Table 1 NVM DADF

Chain-Link	NVM Name	Setting Range	Default Value	step	Description
711-024	DADF Lead Reg. Adjustment (Side 2) (82.5 mm/s)	105-135	120	0.1 mm	1) Default Value: 0 mm (When 711-141 value is Default and 711-024 value is 120) 2) Adjustment Range (when 711-141 value is Default) : +1.5 mm (105 pulse) / -1.5 mm (135 pulse) 3) Adjustment Range (when 711-141 value is 80 to 230) : +5.5 mm (80 pulse) / -12.5 mm (230 pulse)
711-041	DADF Tail Edge Adjustment (Side 1) (220.0 mm/s)	0-255	151	0.0718 mm	Default Value: 0 mm (151 pulse), +10.8 mm (-151 pulse) / -7.5 mm (+104 pulse) Tail Edge adjustment = Lead Regi adjustment value + Tail Edge fine adjustment value
711-042	DADF Tail Edge Adjustment (Side 1) (165.0 mm/s)	0-255	151	0.0718 mm	Default Value: 0 mm (151 pulse), +10.8 mm (-151 pulse) / -7.5 mm (+104 pulse) Tail Edge adjustment = Lead Regi adjustment value + Tail Edge fine adjustment value
711-043	DADF Tail Edge Adjustment (Side 1) (110.0 mm/s)	0-255	151	0.0718 mm	Default Value: 0 mm (151 pulse), +10.8 mm (-151 pulse) / -7.5 mm (+104 pulse) Tail Edge adjustment = Lead Regi adjustment value + Tail Edge fine adjustment value
711-044	DADF Tail Edge Adjustment (Side 1) (82.5 mm/s)	0-255	151	0.0718 mm	Default Value: 0 mm (151 pulse), +10.8 mm (-151 pulse) / -7.5 mm (+104 pulse) Tail Edge adjustment = Lead Regi adjustment value + Tail Edge fine adjustment value
711-061	DADF Tail Edge Adjustment (Side 2) (220.0 mm/s)	0-255	151	0.0718 mm	Default Value: 0 mm (151 pulse), +10.8 mm (-151 pulse) / -7.5 mm (+104 pulse) Tail Edge adjustment = Lead Regi adjustment value + Tail Edge fine adjustment value
711-062	DADF Tail Edge Adjustment (Side 2) (165.0 mm/s)	0-255	151	0.0718 mm	Default Value: 0 mm (151 pulse), +10.8 mm (-151 pulse) / -7.5 mm (+104 pulse) Tail Edge adjustment = Lead Regi adjustment value + Tail Edge fine adjustment value
711-063	DADF Tail Edge Adjustment (Side 2) (110.0 mm/s)	0-255	151	0.0718 mm	Default Value: 0 mm (151 pulse), +10.8 mm (-151 pulse) / -7.5 mm (+104 pulse) Tail Edge adjustment = Lead Regi adjustment value + Tail Edge fine adjustment value
711-064	DADF Tail Edge Adjustment (Side 2) (82.5 mm/s)	0-255	151	0.0718 mm	Default Value: 0 mm (151 pulse), +10.8 mm (-151 pulse) / -7.5 mm (+104 pulse) Tail Edge adjustment = Lead Regi adjustment value + Tail Edge fine adjustment value
711-081	Vertical Reduce/Enlarge Fine Adjustment 1 (High:TBD,Mid:220.0 mm/s, Low:TBD)	0-40	20	0.001	Default Value: 0% (20), +/-2% (+/-20), 0.1% increments Adjusts only the Top Speed for Feed Motor.
711-082	Vertical Reduce/Enlarge Fine Adjustment 2 (High:TBD,Mid:165.0 mm/s, Low:TBD)	0-40	20	0.001	Default Value: 0% (20), +/-2% (+/-20), 0.1% increments Adjusts only the Top Speed for Feed Motor.
711-083	Vertical Reduce/Enlarge Fine Adjustment 3 (High:TBD,Mid:110.0 mm/s, Low:TBD)	0-40	20	0.001	Default Value: 0% (20), +/-2% (+/-20), 0.1% increments Adjusts only the Top Speed for Feed Motor.
711-084	Vertical Reduce/Enlarge Fine Adjustment 4 (High:TBD,Mid:82.5 mm/s, Low:TBD)	0-40	20	0.001	Default Value: 0% (20), +/-2% (+/-20), 0.1% increments Adjusts only the Top Speed for Feed Motor.
711-140	DADF Lead Regi Offset NVM(Side 1)	80-230	120	0.1 mm	Default Value: 0 mm (120 pulse), +4.0 mm (80 pulse) / -11.0 mm (230 pulse)
711-141	DADF Lead Regi Offset NVM(Side 2)	80-230	120	0.1 mm	Default Value: 0 mm (120 pulse), +4.0 mm (80 pulse) / -11.0 mm (230 pulse)
711-142	DADF Tail Edge Replace All NVM (Side 1)	0-255	151	0.0718 mm (x2 for Soft)	Default Value: 0 mm (151 pulse), +10.8 mm (-151 pulse) / -7.5 mm (+104 pulse) Rewrites all data of 711-041 to 711-044 with the specified data.
711-143	DADF Tail Edge Replace All NVM (Side 2)	0-255	151	0.0718 mm (x2 for Soft)	Default Value: 0 mm (151 pulse), +10.8 mm (-151 pulse) / -7.5 mm (+104 pulse) Rewrites all data of 711-061 to 711-064 with the specified data.
711-144	Vertical Ratio Fine Adjustment - Replace All	0-40	20	0.001	Default Value: 0% (20), +/-2% (+/-20), 0.1% increments Adjusts only the Top Speed for Feed Motor. Rewrites all data of 711-081 to 711-084 with the specified data.
711-150	Loop Amount Adjustment (Side 1) (x1 Pulse)	0-9	6	40 Pulse	Feed Roll Step: 0.026112 NVM 1Count: 0.026112 * 40 = 1.044 mm
711-151	Loop Amount Adjustment (Side 2) (x6 Pulse)	0-14	5	30 Pulse	Exit Roll Step: 0.035904 NVM 1Count: 0.035904 * 30 = 1.077 mm

Table 1 NVM DADF

Chain-Link	NVM Name	Setting Range	Default Value	step	Description
711-155	Feed Gear Initialize Operation	0-1	0	-	0: Do not perform initialize operation 1: Perform initialize operation
711-158	Stop Position Adjustment During Invert (T27)	0-40	20	0.2 mm	Sets the adjustment time so that the distance (step distance) is the same for every speed. Adjustment Value (ms) = (NVM Input Value - NVM Default Value) / Transport Speed x 1000 x 0.2 (mm step).
711-159	TA Clutch OFF Timing (T21)	0-20	0	0.2 mm	Sets the adjustment time so that the distance (step distance) is the same for every speed. Adjustment Value (ms) = (NVM Input Value - NVM Default Value) / Transport Speed x 1000 x 0.2 (mm step).
711-160	Feed Clutch OFF Timing (Side 1 Loop Unravel Timing) (T20)	0-40	20	0.2 mm	Sets the adjustment time so that the distance (step distance) is the same for every speed. Adjustment Value (ms) = (NVM Input Value - NVM Default Value) / Transport Speed x 1000 x 0.2 (mm step).
711-161	Solenoid ON Timing (Side 2 Loop Unravel Timing) (T22)	0-40	20	0.2 mm	Sets the adjustment time so that the distance (step distance) is the same for every speed. Adjustment Value (ms) = (NVM Input Value - NVM Default Value) / Transport Speed x 1000 x 0.2 (mm step).
711-164	Document Slow Scan Size Correction Value	0-100	50	0.1 mm	Correction value for [Size Detection Auto-Correction Function] Document Size Correction Value: +/-5 mm
711-174	Nudger Lift Up Adjustment (High) (T26 ms)	0-40	20	4ms	Default value: 0 ms +/-80 ms, 4 ms increments
711-175	Nudger Lift Up Adjustment (Middle) (T26 ms)	0-40	20	4ms	Default value: 0 ms +/-80 ms, 4 ms increments
711-176	Nudger Lift Up Adjustment (Low) (T26 ms)	0-40	20	4ms	Default value: 0 ms +/-80 ms, 4 ms increments
711-187	Letter Mode Setting	0-15	0	-	Operation setting for letter documents
711-188	Prohibited Combination Jam Detection Settings (No Mixed Mode)	0-1	1	-	When in No Mixed Mode: 0: Do not detect Jams due to prohibited combinations 1: Detect Jams due to prohibited combinations
711-190	Too Long Jam Settings Switch	0-165	40	15 mm	Default value: 1275 mm (40), -600 mm/+1875 mm, 15 mm increments
711-191	Too Short Jam Detection Settings	0-1	1	-	0: Do not detect Jams 1: Detect Jams
711-198	DADF OPEN SENSOR Availability	0-1	0		There is a DADF OPEN SENSOR at the DADF: 0 (WC 5021/5019) There is no DADF OPEN SENSOR at the DADF: 1
711-199	Drive Type	0-3	1	-	0: High, 1: Middle, 2: Low, 3: Dummy
711-202	Speed Up Start Position Adjustment During Duplex (T25)	0-40	20	0.2 mm	Sets the adjustment time so that the distance (step distance) is the same for every speed. Adjustment Value (ms) = (NVM Input Value - NVM Default Value) / Transport Speed x 1000 x 0.2 (mm step).
711-204	Solenoid ON Timing During Invert Output (T24)	0-20	10	0.2 mm	Sets the adjustment time so that the distance (step distance) is the same for every speed. Adjustment Value (ms) = (NVM Input Value - NVM Default Value) / Transport Speed x 1000 x 0.2 (mm step).
711-205	Feed Motor Reverse Start Time Adjustment Value at Side 2 (T1 ms)	0-20	4	4 ms	Default Value: 0 ms, +80 ms/-20 ms, 4 ms increments
711-209	Invert Start Time Adjustment Value (T6 ms)	0-25	5	4 ms	Default Value: 0 ms, +80 ms/-20 ms, 4 ms increments

Table 1 NVM DADF

Chain-Link	NVM Name	Setting Range	Default Value	step	Description
711-213	DADF Stamp Solenoid ON Time Adjustment	0-20	5	2 ms	Default value: 10 ms, +30 ms/-4 ms, 2 ms increments
711-214	DADF Stamp Position Adjustment Side 1 (T23)	0-30	15	0.5 mm	Default Value: 0 mm, +7.5 mm/-7.5 mm, approx. 0.5 mm increments Default Value is 10 mm from Tail Edge
711-215	DADF Stamp Position Adjustment Side 2 (T28)	0-40	20	0.2 mm	Sets the adjustment time so that the distance (step distance) is the same for every speed. Adjustment Value (ms) = (NVM Input Value - NVM Default Value) / Transport Speed x 1000 x 0.2 (mm step).
711-220	Usage of DPM Control Parameter Instructed from the Controller	0-1	1	-	0: Cont DPM Parameter Reject 1: Cont DPM Parameter Accept
711-221	DADF DPM Control Parameter	0-255	101	-	100th Digit: Drive Type (0: High, 1: Middle, 2: Low) 10th Digit: Loop Control 1st Digit: Pre Regist Speed
711-272	Side 1 Side Regi Adjustment Value (ADF-IIT Combine Adjustment Value Data 3)	0-240	120	-	Side 1 Side Regi Adjustment Value
711-274	Side 2 Side Regi Adjustment Value (ADF-IIT Combine Adjustment Value Data 5)	0-240	120	-	Side 2 Side Regi Adjustment Value
711-276	ADF-IIT Combine Adjustment Value Data 7	0-255	0	-	Adjustment Value Data 7 sent to IIT during ADF-IIT Combine
711-277	ADF-IIT Combine Adjustment Value Data 8	0-255	0	-	Adjustment Value Data 8 sent to IIT during ADF-IIT Combine
711-278	ADF-IIT Combine Adjustment Value Data 9	0-255	0	-	Adjustment Value Data 9 sent to IIT during ADF-IIT Combine
711-279	ADF-IIT Combine Adjustment Value Data 10	0-255	0	-	Adjustment Value Data 10 sent to IIT during ADF-IIT Combine
711-280	ADF-IIT Combine Adjustment Value Data 11	0-255	0	-	Adjustment Value Data 11 sent to IIT during ADF-IIT Combine
711-281	ADF-IIT Combine Adjustment Value Data 12	0-255	0	-	Adjustment Value Data 12 sent to IIT during ADF-IIT Combine
711-282	ADF-IIT Combine Adjustment Value Data 13	0-255	0	-	Adjustment Value Data 13 sent to IIT during ADF-IIT Combine
711-283	ADF-IIT Combine Adjustment Value Data 14	0-255	0	-	Adjustment Value Data 14 sent to IIT during ADF-IIT Combine
711-284	ADF-IIT Combine Adjustment Value Data 15	0-255	0	-	Adjustment Value Data 15 sent to IIT during ADF-IIT Combine
711-297	Communication Fail Bypass	0-1	0	-	0: Communication Fail Bypass OFF 1: Communication Fail Bypass ON

6.3.6 NVM IIT

Table 1 NVM IIT

Chain-Link	NVM Name	Setting Range	Default Value	Read/Write	Description
710-501	Fax Document Size Detection Method for DADF	0-1	0	O	Indicates the switching of detection method when Fax Document Size Detection is specified in DADF mode. 0: A/B series 1: Inch series
710-551	JAM Bypass	0-1	0	O	0: Bypass Off 1: Bypass On Applies to CVT mode.
710-600	Size Mismatch Detection Setting	1-3	3	O	1: When Size Mismatch is detected, notify a Jam. 2: Size Mismatch Detection OFF. 3: When Size Mismatch is detected, notify an operation fail and purge the document. Mixed size is not allowed and the range for non-standard in the Detection Table is reduced.
710-601	Alternate Size Set 1	1-2	1	O	Switches between 8.5x13 SEF and 8.46x12.4 SEF. 0: Default 1: 8.5X13SEF 2: 8.46X12.4SEF
710-602	Alternate Size Set 2	1-2	1	O	Switches between 8.5x14 SEF and 8.46x12.4 SEF. 0: Default 1: 8.5X14SEF 2: 8.46X12.4SEF
710-603	Alternate Size Set 3	0-2	0	O	Switches between 11x15 SEF and 11x17 SEF. 0: Default 1: 11X17S 2: 11X15S
710-604	Alternate Size Set 4	0-2	0	O	Switches between 8.5x13 SEF and 8.5x14 SEF. 0: Default 1: 8.5X13S 2: 8.5x14 SEF or 8.5x13.4 SEF
710-605	Alternate Size Set 5	0-2	0	O	Switches between B5 SEF and 16K SEF. 0: Default 1: B5S 2: 16K SEF
710-606	Alternate Size Set 6	0-3	0	O	Switches among 8x10 SEF, 8x10.5 SEF, and 8.5x11 SEF. 0: Default 1: 8.5X11S 2: 8X10S 3: 8X10.5S
710-607	Alternate Size Set 7	0-3	0	O	Switches among 8x10 LEF, 8x10.5 LEF, and 8.5x11 LEF. 0: Default 1: 8.5X11L 2: 8X10L 3: 8X10.5L

Table 1 NVM IIT

Chain-Link	NVM Name	Setting Range	Default Value	Read/Write	Description
710-608	Alternate Size Set 8	0-4	0	O	Switches among B4 SEF, 8K SEF, and 11x17 SEF. 0: Default 1: B4S 2: 8K SEF 3: 11X17S
710-609	Alternate Size Set 9	0-2	0	O	Switches between 8x10 SEF and 8x10.5 SEF. 0: Default 1: 8X10S 2: 8X10.5S
710-610	Alternate Size Set 10	0-3	0	O	Switches among B5 LEF, 16K LEF, and 8.5x11 LEF. 0: Default 1: B5L 2: 16K LEF 3: 8.5X11L
710-611	Alternate Size Set 11	0-3	0	O	Switches among B5 SEF, 16K SEF, and 8.5x11 SEF. 0: Default 1: B5S 2: 16K SEF 3: 8.5X11S
710-612	Size-Mix Mode Size Orientation	0-1	1	O	Switches between LEF and SEF 0: LEF 1: SEF
710-613	Fax Job Mixed Size Standard Size Mode	0-1	0	O	During Fax Mixed Size Mode, switches the size (Standard/Non-standard) notified to IISS from the DADF. 0: Non-standard mode 1: Standard mode
710-620	DADF DPM Setting	0-65535	0	O	Specifies the DPM for DADF. 0: Operates at the maximum performance DPM of DADF 1~65535: Operates at the specified DPM (in increments of 1 DPM)
715-010	Energy Saver Mode Disabling NVM	0-1	0	O	Setting Value: 0 At Power OFF: Move the CRG to the W-Ref board position. *Note At Power ON: Initialize the CRG. Returning from Energy Saver: Do not initialize the CRG. Setting Value: 1 At Power OFF: Do not move the CRG. At Power ON: Initialize the CRG. Returning from Energy Saver: Initialize the CRG.
715-017	IIT Fail Bypass	0-1	0	O	0: Fail Bypass OFF 1: Fail Bypass ON
715-018	Config Fail Bypass	0-1	0	O	Controls whether to perform Fail bypass for the [Configuration Check]. 0: Fail Bypass OFF 1: Fail Bypass ON
715-022	Lamp Fan Fail Bypass	0-1	0	O	Lamp Fan Fail Detection 0: Detects Lamp Fan Fail. 1: Does not detect Lamp Fan Fail.

Table 1 NVM IIT

Chain-Link	NVM Name	Setting Range	Default Value	Read/Write	Description
715-023	Lamp Fan Low Rotation ON Time	0-60	15	O	Lamp Fan low rotation ON time (Unit: min)
715-024	Lamp Fan Stop Time	0-60	0	O	Lamp Fan stop time (Unit: min)
715-025	FL Timer Set	0-1	0	O	0: Standard FL Timer Setting (30 min rest/0.5 s ON) 1: Condensation Mode Setting (Function with the timer settings in Diag 715-026 and 715-027)
715-026	Lamp ON Interval	0-60	30	O	Interval setting (Unit: min)
715-027	Lamp ON Time	0-60	1	O	Lamp ON time setting (Unit: s)
715-030	IIT Faulty Parts Diagnosis	0-65535	0	O	Writing 1 starts the IIT Faulty Parts Diagnosis. After that, the write value of this NVM will be changed from '1' to the presumed faulty Parts No. After the Faulty Part Diagnosis has completed, reading this NVM displays the presumed faulty Part No. When a Fail occurs during the Faulty Part Diagnosis, the Faulty Part Diagnosis ends after the Fail code is recorded in this NVM. * If other than '1' has been written, it will follow the usual NVM-Write operation. (Faulty Parts Diagnosis will not be performed)
715-050	Platen SS Registration Adjustment	16-184	100	O	Regi Correction in Slow Scan Direction 'Factory Settings'
715-051	Platen SS Reduce / Enlarge Adjustment	44-56	50	O	Slow Scan Direction Regi Correction Value (0.1% increments) 'Factory Settings'
715-053	Platen FS Registration Adjustment	0-240	120	O	Fast Scan Regi Correction Value (Dot) VLSS=PROMVLSS+(PRadjF -120)X2 'Factory Settings'
715-056	CVT FS Offset Side 1-1 (139.7-148)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-057	CVT FS Offset Side 2-1 (139.7~148)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-058	CVT FS Offset Side 1-2 (182-194)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-059	CVT FS Offset Side 2-2 (182~194)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-060	CVT FS Offset Side 1-3 (203.2)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-061	CVT FS Offset Side 2-3 (203.2)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-062	CVT FS Offset Side 1-4 (210)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-063	CVT FS Offset Side 2-4 (210)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-064	CVT FS Offset Side 1-5 (214.9-215.9)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-065	CVT FS Offset Side 2-5 (214.9~215.9)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-066	CVT FS Offset Side 1-6 (254-257)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'

Table 1 NVM IIT

Chain-Link	NVM Name	Setting Range	Default Value	Read/Write	Description
715-067	CVT FS Offset Side 2-6 (254~257)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-068	CVT FS Offset Side 1-7 (266.7-267)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-069	CVT FS Offset Side 2-7 (266.7~267)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-070	CVT FS Offset Side 1-8 (279.4)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-071	CVT FS Offset Side 2-8 (279.4)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-072	CVT FS Offset Side 1-9 (297)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-073	CVT FS Offset Side 2-9 (297)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-074	CVT FS Offset Side 3-1 (139.7-148)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-075	CVT FS Offset Side 4-1 (139.7-148)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-076	CVT FS Offset Side 3-2 (182-194)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-077	CVT FS Offset Side 4-2 (182-194)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-078	CVT FS Offset Side 3-3 (203.2)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-079	CVT FS Offset Side 4-3 (203.2)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-080	CVT FS Offset Side 3-4 (210)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-081	CVT FS Offset Side 4-4 (210)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-082	CVT FS Offset Side 3-5 (214.9-215.9)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-083	CVT FS Offset Side 4-5 (214.9-215.9)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-084	CVT FS Offset Side 3-6 (254-257)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-085	CVT FS Offset Side 4-6 (254-257)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-086	CVT FS Offset Side 3-7 (266.7-267)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-087	CVT FS Offset Side 4-7 (266.7-267)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'

Table 1 NVM IIT

Chain-Link	NVM Name	Setting Range	Default Value	Read/Write	Description
715-088	CVT FS Offset Side 3-8 (279.4)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-089	CVT FS Offset Side 4-8 (279.4)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-090	CVT FS Offset Side 3-9 (297)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-091	CVT FS Offset Side 4-9 (297)	0-240	120	O	Fast Scan Regi Correction Value (0.1 mm/step) during CVT 'Factory Settings'
715-095	W-Ref Correction Coefficient BW-X (or BW-K)	70-255	140	O	BW-X W-Ref correction coefficient, 'Factory Settings'
715-110	CVT FS Offset Side 1 Reference Adjustment Value	0-240	120	O	Fast Scan Regi Reference Adjustment Value (0.1 mm/step) during CVT Side 1 'Factory Settings' At Power ON, this will be overwritten by the DADF NVM (711-272) value.
715-111	CVT FS Offset Side 2 Reference Adjustment Value	0-240	120	O	Fast Scan Regi Reference Adjustment Value (0.1 mm/step) during CVT Side 2 'Factory Settings' At Power ON, this will be overwritten by the DADF NVM (711-274) value.
715-112	CVT FS Offset Side 3 Reference Adjustment Value	0-240	120	O	Fast Scan Regi Reference Adjustment Value (0.1 mm/step) during CVT Side 3 'Factory Settings' At Power ON, this will be overwritten by the DADF NVM (711-274) value.
715-113	CVT FS Offset Side 4 Reference Adjustment Value	0-240	120	O	Fast Scan Regi Reference Adjustment Value (0.1 mm/step) during CVT Side 4 'Factory Settings' At Power ON, this will be overwritten by the DADF NVM (711-274) value.
715-281	HOSEI_SCAN (for images)	0-4	1	O	Correction coefficient no., 'Factory Settings' Used for parameter selection at ENL
715-307	Original Size Detection Table Switch	40913	2	O	1: Inch13-2 2: mm-2 3: mm 4: Inch13-1 5: Inch14
715-362	FL_CHK_NG_Count	0-65535	0	O	Lamp Check NG Count (Reset when lamp is replaced)
715-363	FL_CHK_NG_Data	0-1023	0	O	Data obtained when Lamp Check fails (Blank scan data of G compared at checking)
715-418	AOC Flow Abnormal End Count	0-255	0	O	No. of times the AOC flow has ended abnormally

6.3.7 NVM DIAG

Table 1 NVM DIAG

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
740-001	DIAG_TONE_UP_DOWN_JOB_VOLUME	0	20	1	Enable	Enable	Diagnostic Tone Up/Down job volume (Unit: 1 sheet)

6.3.8 NVM DRIVE & NOHAD

Table 1 NVM DRIVE & NOHAD

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
741-001	DRV_MAIN_MOTOR_SPEED	1040000	1562000	1301028	Enable	Enable	main motor speed (Unit: Ref CLK)
741-002	NOHAD_PRINT_STOP_DELAY	15	1800	15	Enable	Enable	The time for Fan high speed rotation after printing has completed. (Unit: 1 s)
741-003	NOHAD_STBY_MODE_INTVAL	1	20	1	Enable	Enable	The temperature sampling time for Fusing Fan Temperature Control. (Unit: 1 s)
741-004	NOHAD_STBY_MODE_COUNT_THRESHOLD	1	20	3	Enable	Enable	The threshold count for determining the mode transition of the Fusing Fan Temperature Control. (Unit: times)
741-005	NOHAD_STBY_MODE_TEMP_THRESHOLD	0	800	245	Enable	Enable	The threshold temperature for determining the mode transition of the Fusing Fan Temperature Control. (Unit: 0.1 degrees C)
741-006	NOHAD_STBY_MODE_SWITCH	0	1	1	Enable	Enable	Fusing Fan Temperature Control Execution Switch 0: Do not perform 1: Perform
741-007	NOHAD_COLD_MODE_TEMP_THRESHOLD	0	300	140	Enable	Enable	The threshold temperature for determining the Fan Low Temperature Stop Operation. (Unit: 0.1 degrees C)
741-008	NOHAD_COLD_MODE_HOLD_TIME	0	180	0	Enable	Enable	The time to maintain the Fan in low speed rotation for Fan Low Temperature Stop Operation. (Unit: 1 s)
741-027	NOHAD_CONDENSE_SWITCH	0	1	0	Enable	Enable	Condensation Mode Execution Switch 0: Do not perform 1: Perform
741-028	NOHAD_CONDENSE_ENTRY_TEMP_THRESHOLD	0	300	120	Enable	Enable	The threshold temperature for determining whether to transition to the Condensation Mode. (Unit: 0.1 degrees C)
741-029	NOHAD_CONDENSE_HOLD_TIME	0	240	90	Enable	Enable	The time where the transition to the Sleep Mode is prohibited after entering the Condensation Mode. (Unit: min)
741-030	NOHAD_SMELL_FILTER_SWITCH	0	1	0	Enable	Enable	Deodorant Filter Availability Switch 0: No Deodorant Filter 1: Deodorant Filter available
741-032	NOHAD_FAN_FAIL_START_TIMER	0	60	6	Enable	Enable	The time where Fail Detection is prohibited after the Fan operation. (Unit: 1 s)
741-033	NOHAD_FAN_FAIL_SUMPLE_TIME_THRESHOLD	10	300	48	Enable	Enable	Fan Fail Signal Accumulated Time (Unit: 1 s)

Table 1 NVM DRIVE & NOHAD

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
741-034	NOHAD_FAN_FAIL_ERROR_COUNT_THRESHOLD	5	150	24	Enable	Enable	The threshold count for determining a Fail by the Fan Fail Accumulated Time. If an abnormal Fan Fail Determination Pulse Count (number of times) is detected in the Fail Accumulated Time, it will be judged as a Fail. (Unit: times)
741-035	NOHAD_FAN_FAIL_BYPASS	0	1	0	Enable	Enable	FAN Fail Bypass 0: Bypass OFF 1: Bypass ON

6.3.9 NVM PH

Table 1 NVM PH

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
742-001	PH_LEAD_REGI_ALL_TRAY	-50	50	0	Enable	Enable	LEAD REGI ADJUSTMENT - ALL TRAY Image input is delayed when Set Value is increased. (Unit: 2 ms)
742-002	PH_LEAD_REGI_TRAY1	-50	50	0	Enable	Enable	TRAY1 for Normal LEAD REGI ADJ Image input is delayed when Set Value is increased. (Unit: 2 ms)
742-003	PH_LEAD_REGI_TRAY2	-50	50	0	Enable	Enable	TRAY2 for Normal LEAD REGI ADJ Image input is delayed when Set Value is increased. (Unit: 2 ms)
742-004	PH_LEAD_REGI_MSI	-50	50	0	Enable	Enable	MSI for Normal LEAD REGI ADJ Image input is delayed when Set Value is increased. (Unit: 2 ms)
742-005	PH_LEAD_REGI_DUPLEX	-50	50	0	Enable	Enable	DUP ALL SIZE for Normal LEAD REGI ADJ Image input is delayed when Set Value is increased. (Unit: 2 ms)
742-006	PH_REGI_LOOP_ALL_TRAY	-50	50	0	Enable	Enable	REGI LOOP ADJUSTMENT - ALL TRAY Image input is delayed when Set Value is increased. (Unit: 2 ms)
742-007	PH_REGI_LOOP_TRAY1	-50	50	0	Enable	Enable	TRAY1 for Normal REGI LOOP ADJ Image input is delayed when Set Value is increased. (Unit: 2 ms)
742-008	PH_REGI_LOOP_TRAY2	-50	50	0	Enable	Enable	TRAY2 for Normal REGI LOOP ADJ Image input is delayed when Set Value is increased. (Unit: 2 ms)
742-009	PH_REGI_LOOP_MSI	-50	50	0	Enable	Enable	MSI for Normal REGI LOOP ADJ Image input is delayed when Set Value is increased. (Unit: 2 ms)
742-010	PH_REGI_LOOP_DUPLEX	-50	50	-10	Enable	Enable	DUP ALL SIZE for Normal REGI LOOP ADJ Image input is delayed when Set Value is increased. (Unit: 2 ms)
742-040	PH_DUP_OPT_ENABLE_SWITCH	0	1	0	Enable	Enable	Dup Option Availability Switch 0: No Dup Option 1: Dup Option available
742-041	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_ ALL_TRAY	-50	1	0	Enable	Enable	ROS Write Position (All) (0.169 mm increments)
742-042	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_ TRAY1	-50	50	0	Enable	Enable	ROS Write Position (Tray 1) (0.169 mm increments)
742-043	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_ TRAY2	-49	49	0	Enable	Enable	ROS Write Position (Tray 2) (0.169 mm increments)

Table 1 NVM PH

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
742-044	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_ MSI	-50	50	0	Enable	Enable	ROS Write Position (MSI) (0.169 mm increments)
742-045	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_ DUP_ALL_TRAY	-50	50	0	Enable	Enable	ROS Write Position (Dup-All) (0.169 mm increments)
742-046	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_ DUP_TRAY1	-50	50	0	Enable	Enable	ROS Write Position (Dup-Tray 1) (0.169 mm increments)
742-047	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_ DUP_TRAY2	-50	50	0	Enable	Enable	ROS Write Position (Dup-Tray 2) (0.169 mm increments)
742-048	PH_ROS_LASER_SIDE_REGI_ADJUSTMENT_ DUP_MSI	-50	50	0	Enable	Enable	ROS Write Position (Dup-MSI) (0.169 mm increments)

6.3.10 NVM Fusing

Table 1 NVM Fusing

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
744-040	Fusing_U42_HISTORY	0	3	0	Enable	Enable	The Overheat Temp Fail has occurred.
744-056	Fusing_U41_HISTORY	0	4	0	Enable	Enable	Types of Fusing On Time Fail occurence: 0: Has not occurred1: U4-1 Control 12: U4-1 Control 23: U4-1 Control 34: U4-1 Control 4

6.3.11 NVM Xfer

Table 1 NVM Xfer

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
745-015	XERO_TEMP_DATA	-20	60	18	Enable	Enable	Stores the temperature detection result. (Unit: 1 degrees C)
745-097	XERO_BTR_OUTPUT_SIDE1_BIAS	0	200	80	Enable	Enable	Stores the BTR Output (Side 1) (Unit: 0.1 MicroAmp)
745-098	XERO_BTR_OUTPUT_SIDE2_BIAS	0	200	80	Enable	Enable	Stores the BTR Output (Side 2) (Unit: 0.1 MicroAmp)
745-100	XERO_BTR_CORR_COEF_PLAIN_SIDE1	0	200	100	Enable	Enable	BTR Output Correction Coefficient (for Plain Side 1) (Unit: %)
745-101	XERO_BTR_CORR_COEF_PLAIN_SIDE2	0	200	100	Enable	Enable	BTR Output Correction Coefficient (for Plain Side 2) (Unit: %)
745-102	XERO_BTR_CORR_COEF_HEAVY_SIDE1	0	200	100	Enable	Enable	BTR Output Correction Coefficient (for Heavyweight Side 1) (Unit: %)
745-103	XERO_BTR_CORR_COEF_HEAVY_SIDE2	0	200	100	Enable	Enable	BTR Output Correction Coefficient (for Heavyweight Side 2) (Unit: %)
745-104	XERO_BTR_NET_OUTPUT_SIDE1_BIAS	0	200	80	Enable	Enable	Stores the BTR Final Output (for Side 1) (Unit: 0.1 MicroAmp)
745-105	XERO_BTR_NET_OUTPUT_SIDE2_BIAS	0	200	80	Enable	Enable	Stores the BTR Final Output (for Side 2) (Unit: 0.1 MicroAmp)

6.3.12 NVM XERO

Table 1 NVM XERO

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
745-015	XERO_TEMP_DATA	-20	60	18	Enable	Enable	Stores the temperature detection result. (Unit: 1 degrees C)
745-097	XERO_BTR_OUTPUT_SIDE1_BIAS	0	200	80	Enable	Enable	Stores the BTR Output (Side 1) (Unit: 0.1 MicroAmp)
745-098	XERO_BTR_OUTPUT_SIDE2_BIAS	0	200	80	Enable	Enable	Stores the BTR Output (Side 2) (Unit: 0.1 MicroAmp)
745-100	XERO_BTR_CORR_COEF_PLAIN_SIDE1	0	200	100	Enable	Disable	BTR Output Correction Coefficient (for Plain Side 1) (Unit: %)
745-101	XERO_BTR_CORR_COEF_PLAIN_SIDE2	0	200	100	Enable	Disable	BTR Output Correction Coefficient (for Plain Side 2) (Unit: %)
745-102	XERO_BTR_CORR_COEF_HEAVY_SIDE1	0	200	100	Enable	Disable	BTR Output Correction Coefficient (for Heavyweight Side 1) (Unit: %)
745-103	XERO_BTR_CORR_COEF_HEAVY_SIDE2	0	200	100	Enable	Disable	BTR Output Correction Coefficient (for Heavyweight Side 2) (Unit: %)
745-104	XERO_BTR_NET_OUTPUT_SIDE1_BIAS	0	200	80	Enable	Enable	Stores the BTR Final Output (for Side 1) (Unit: 0.1 MicroAmp)
745-105	XERO_BTR_NET_OUTPUT_SIDE2_BIAS	0	200	80	Enable	Enable	Stores the BTR Final Output (for Side 2) (Unit: 0.1 MicroAmp)
750-001	XERO_BCR_AC_IO_BIAS	0	222	121	Enable	Disable	BCR-AC I/O Check Output Value (Unit: 3.95 MicroAmp)
750-002	XERO_BCR_DC_IO_BIAS	0	100	74	Enable	Disable	BCR-DC I/O Check Output Value (Unit: 1%)
750-003	XERO_DEVE_IO_BIAS	0	100	86	Enable	Disable	Deve-DC I/O Check Output Value (Unit: 1%)
750-023	XERO_DRUM_CYCLE	0	8000000	0	Disable	Enable	Drum Cycle (Unit: 0.1 cycle)
750-024	XERO_DRUM_PV	0	200000	0	Disable	Enable	Drum PV (Unit: 1 sheet)
750-025	XERO_TOTAL_DRUM_CYCLE	0	4294967295	0	Enable	Enable	M/C Total Cycle (Unit: 0.1 cycle)
750-026	XERO_TOTAL_DRUM_PV	0	4294967295	0	Enable	Enable	M/C Total PV (Unit: 1 sheet)
750-051	XERO_DRUM_PRE_NEAR_CYCLE_DATA	0	65535	0	Enable	Enable	Cycle Count When Pre Near Occurs (Unit: 100 cycle)
750-052	XERO_DRUM_PRE_NEAR_PV_DATA	0	65535	0	Enable	Enable	PV When Pre Near Occurs (Unit: 100 sheet)
750-053	XERO_DRUM_PRE_NEAR_TICK_DATA	0	5000	0	Enable	Enable	Remaining Film Thickness When Pre Near Occurs (Unit: 0.01 Micrometer)

Table 1 NVM XERO

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
750-054	XERO_DRUM_NEAR_CYCLE_DATA	0	65535	0	Enable	Enable	Cycle Count When Near Occurs (Unit: 100 cycle)
750-055	XERO_DRUM_NEAR_PV_DATA	0	65535	0	Enable	Enable	PV When Near Occurs (Unit: 100 sheet)
750-056	XERO_DRUM_NEAR_TICK_DATA	0	5000	0	Enable	Enable	Remaining Film Thickness When Near Occurs (Unit: 0.01 Micrometer)
750-057	XERO_DRUM_LIFE_END_CYCLE_DATA	0	65535	0	Enable	Enable	Cycle Count When Life End Occurs (Unit: 100 cycle)
750-058	XERO_DRUM_LIFE_END_PV_DATA	0	65535	0	Enable	Enable	PV When Life End Occurs (Unit: 100 sheet)
750-059	XERO_DRUM_LIFE_END_TICK_DATA	0	5000	0	Enable	Enable	Remaining Film Thickness When Life End Occurs (Unit: 0.01 Micrometer)

6.3.13 NVM ROS

Table 1 NVM ROS

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
749-001	ROS_MOTOR_AUTO_STOP_TIME	1	30	10	Enable	Enable	The timeout time during priority start up. This may shorten the lifespan of the ROS. (Unit: 1 s)
749-002	ROS_MOTOR_JOB_END_AUTO_STOP_TIME	1	10	1	Enable	Enable	ROS Motor Stop Delay This may shorten the lifespan of the ROS. (Unit: 1 s)

6.3.14 NVM PROCON

Table 1 NVM PROCON

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
752-007	PRC_CRU_EMPTY_STATE	0	3	0	Enable	Enable	Flag empty detection state 0: Normal 1: PreNear 2: NearEmpty 3: Empty
752-010	PRC_DRUM_CYCLE_COUNT	0	1023	0	Enable	Enable	Drum Rotation Time(Cycle Count) uint32_t
752-011	PRC_DRUM_LIFE_INFO	0	4	0	Enable	Enable	Drum Cartridge Status(NVM. 0 to 4) 0: Normal 1: Pre-near 2: Near 3: Over 4: End
752-015	PRC_TEMP_NOW	-10	80	0	Enable	Enable	temp_now (temperature)
752-053	PRC_ATC_AVE	0	999	0	Enable	Enable	ATC Average Value
752-054	PRC_ATC_AMP	0	999	0	Enable	Enable	ATC Amplitude
752-055	PRC_ATC_AVE_FAIL	0	1	0	Enable	Enable	ATC Average Fail 0: Normal 1: Fail
752-056	PRC_ATC_AMP_FAIL	0	1	0	Enable	Enable	ATC Amplitude Fail 0: Normal 1: Amplitude too small
752-057	PRC_ATC_WARNING	0	1	0	Enable	Enable	ATCwarning
752-058	PRC_ATC_WARNING_CNT	0	65535	0	Enable	Enable	ATC Warning Counter
752-059	PRC_ATC_FAIL	0	1	0	Enable	Enable	ATCFail
752-060	PRC_ATC_FAIL_CONTINUED_CNT	0	255	0	Enable	Enable	ATC Fail Continuous Count
752-061	PRC_ATC_AVE_FAIL_CNT	0	65535	0	Enable	Enable	ATC Average Fail Count
752-062	PRC_ATC_AMP_FAIL_CNT	0	65535	0	Enable	Enable	ATC Amplitude Fail Count
752-063	PRC_ATC_FAIL_CNT	0	65535	0	Enable	Enable	Number of ATC Fails
752-080	PRC_ATC_DOUBLE_AVE_PRE	0	999	548	Enable	Enable	ATC_2 Weighted Average Value_Previous
752-081	PRC_ATC_DOUBLE_AVE	0	999	548	Enable	Enable	ATC_2 Weighted Average Value
752-082	PRC_DELTA_ATC_TARGET_DIFF	-999	999	0	Enable	Enable	Delta ATC_Target Deference
752-083	PRC_TEMP_SNR	0	1023	0	Enable	Enable	Temperature Sensor Value
752-086	PRC_TEMP_SNR_FAIL	0	1	0	Enable	Enable	Temperature Sensor Fail 0: Normal 1: Fail
752-087	PRC_TEMP_SNR_FAIL_CNT	0	65535	0	Enable	Enable	Temperature Sensor Fail Count
752-094	PRC_MAX_TEMP	-20	60	0	Enable	Enable	Maximum temperature value (Unit: 1 degrees C)

Table 1 NVM PROCON

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
752-097	PRC_IMAGE_PIXEL_HI	0	16383	0	Enable	Enable	Image_Pixel_Hi
752-098	PRC_IMAGE_PIXEL_LO	0	65535	0	Enable	Enable	Image_Pixel_Lo
752-101	PRC_ACCUM_USE_ICDC_ACCUM	0	2147483648	0	Enable	Enable	ICDC Accumulated Value for Measuring Accumulated Usage
752-107	PRC_ICDC_MOVE_AVE_ACCUM_FEW	0	32767	0	Enable	Enable	ICDC Moving Average Accumulated Value [Minority]
752-108	PRC_ICDC_MOVE_AVE_ACCUM_MANY	0	32767	0	Enable	Enable	ICDC Moving Average Accumulated Value [Majority]
752-111	PRC_ICDC_MOVE_AVE_FEW	0	1023	0	Enable	Enable	ICDC Moving Average Value [Minority]
752-112	PRC_ICDC_MOVE_AVE_MANY	0	1023	0	Enable	Enable	ICDC Moving Average Value [Majority]
752-140	PRC_DISP_TONER_REMAIN_CORR_COEF	0	255	0	Enable	Enable	Disp Remaining Toner Correction Coefficient
752-159	PRC_DELTA_ATC_TARGET_TEMP_CORR	-999	999	0	Enable	Enable	Delta ATC Target Temperature Correction Amount
752-160	PRC_DELTA_ATC_TARGET_HUMI_CORR	-999	999	0	Enable	Enable	Delta ATC Target Humidity Correction Amount
752-173	PRC_DELTA_AGE_ATC	0	255	0	Enable	Enable	Delta Age_ATC
752-176	PRC_DELTA_ATC_TARGET_DEVE_CORR	-999	999	0	Enable	Enable	Delta ATC Target Deve Correction Amount
752-186	PRC_DELTA_ATC_TARGET_AC_CORR	-32768	32767	0	Enable	Enable	Delta ATC Target AC Correction Amount
752-188	PRC_ATC_MOD_TARGET	0	999	548	Enable	Enable	ATC Correction Target Value
752-192	PRC_DELTA_ATC_TARGET_MANUAL_CORR	-512	511	0	Enable	Enable	Delta ATC Target Manual Correction Amount
752-224	PRC_BCR_DC_OUT	0	1000	735	Enable	Enable	BCR_DC_OUT (0 ~ 1000 : -0 ~ -1000V)
752-225	PRC_BIAS_DC_OUT	0	255	220	Enable	Enable	BIAS_DC_OUT (0 ~ 255 : 0 ~ -700V)
752-226	PRC_LD_OUT	0	255	185	Enable	Enable	LD_OUT (0 ~ 255 : 0 ~ 2V)
752-230	PRC_DELTA_LD_MANUAL_CORR	-100	100	0	Enable	Enable	Delta LD_Manual Correction Amount (0 ~ 255 : 0 ~ 2V)
752-248	PRC_DELTA_VH_TEMP	-128	127	0	Enable	Enable	Delta VHtemp
752-278	PRC_DELTA_VH_PR	-128	127	0	Enable	Enable	Delta VHpr
752-301	PRC_DELTA_LD_TEMP	-128	127	0	Enable	Enable	Delta LDtemp
752-317	PRC_DELTA_LD_HUMI	-128	127	0	Enable	Enable	Delta LDhum
752-331	PRC_DELTA_LD_PR	-128	127	0	Enable	Enable	Delta LDpr
752-344	PRC_DELTA_LD_EMP	-128	127	0	Enable	Enable	Delta LDemp
752-350	PRC_DELTA_LD_MANUAL_CORR_MAX	0	100	0	disable	Enable	Delta LD_Manual Correction Amount Upper Limit
752-351	PRC_DELTA_LD_MANUAL_CORR_MIN	-100	100	0	disable	Enable	Delta LD_Manual Correction Amount Lower Limit
752-352	PRC_DELTA_LD	-128	127	0	Enable	Enable	Delta LD
752-398	PRC_FLAG_EMPTY_CHECK_STATE_ATC	0	3	0	Enable	Enable	Flag ATC empty detection state 0: Normal 1: Empty detection count in progress 2: NearEmpty 3: Empty
752-402	PRC_ATC_EMPTY_CHECK_STATE1_CNT	0	65535	0	Enable	Enable	ATC empty detection state 1 count
752-403	PRC_BUFFER_EMPTY_CHECK_CNT	-30000	30000	0	Enable	Enable	Buffer empty detection count

Table 1 NVM PROCON

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
752-406	PRC_EMPTY_CHECK_START_ATC_MOD_TARGET	0	999	0	Enable	Enable	The ATC Correction Target Value at the start of empty detection
752-414	PRC_CORR_BUFFER_EMPTY_CHECK_CNT	-30000	30000	0	Enable	Enable	Correction Buffer empty detection count
752-440	PRC_1_TO_2_PV_CNT_PRE	0	4294967295	0	Enable	Enable	1 to 2 PV count_previous
752-441	PRC_1_TO_2_PV_CNT	0	4294967295	0	Enable	Enable	1 to 2 PV count
752-473	PRC_TONER_REST	0	100	100	Enable	Enable	Remaining Toner %
752-482	PRC_RECOVERY_CNT	0	255	0	Enable	Enable	Recovery count
752-527	PRC_DISP_MOTOR_FAIL_FLAG	0	1	0	Enable	Enable	DispenseFailFlag 0: Has not occurred 1: Yes
752-535	PRC_SEAL_DETECT_FLAG	0	1	0	Enable	Enable	Seal Not Pulled Off Detection Flag
752-538	PRC_DELTA_ATC_TARGET_SETUP_CORR	-128	127	0	Enable	Enable	Delta ATC Target Setup Correction Amount
752-556	PRC_REAL_TEMP	-50	110	0	Enable	Enable	The actual temperature
752-557	PRC_RECOERY_RETRY_CNT	0	255	0	Enable	Enable	Recovery retry count
752-750	PRC_DELTA_VH_PR2	-1000	1000	0	Enable	Enable	Delta VHpr2
752-765	PRC_DELTA_VB_PR	-255	255	0	Enable	Enable	Delta VBpr
752-766	PRC_DELTA_VB	-255	255	0	Enable	Enable	Delta VB

6.3.15 NVM CRUM

Table 1 NVM CRUM

Chain-Link	NVM Name	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Yes/No	Initialization Yes/No	Description
767-082	CRUM_MODE	0	1	0	Disable	Disable	Stores the CRUM control status.
767-083	CRUM_MODE_SWITCH	0	1	0	Enable	Enable	Switch for changing 3rd Party Mode to Xerox Mode

6.3.16 NVM SYSTEM

Table 1 NVM SYSTEM

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
610-400	KO_PASSWORD_1	400	0	9	1	O	O	The 1st digit (highest order digit) number of the KO Password.
610-401	KO_PASSWORD_2	401	0	9	1	O	O	The 2nd digit number of the KO Password.
610-402	KO_PASSWORD_3	402	0	9	1	O	O	The 3rd digit number of the KO Password.
610-403	KO_PASSWORD_4	403	0	9	1	O	O	The 4th digit number of the KO Password.
610-404	KO_PASSWORD_5	404	0	10	1	O	O	The 5th digit number of the KO Password. '10' indicates a termination.
610-405	KO_PASSWORD_6	405	0	10	10	O	O	The 6th digit number of the KO Password. '10' indicates a termination.
610-406	KO_PASSWORD_7	-	10	10	10	O	O	The 7th digit number of the KO Password. '10' indicates a termination.
610-407	KO_PASSWORD_8	-	10	10	10	O	O	The 8th digit number of the KO Password. '10' indicates a termination.
610-408	KO_PASSWORD_9	-	10	10	10	O	O	The 9th digit number of the KO Password. '10' indicates a termination.
610-409	KO_PASSWORD_10	-	10	10	10	O	O	The 10th digit number of the KO Password. '10' indicates a termination.
610-410	KO_PASSWORD_11	-	10	10	10	O	O	The 11th digit number of the KO Password. '10' indicates a termination.
610-411	KO_PASSWORD_12	-	10	10	10	O	O	The 12th digit (lowest order digit) number of the KO Password.'10' indicates a termination.
620-407	CHINESE_PAPER	205	0	0	0	O	O	0: GCO Size
621-400	NVM_MATCHING	-	0	2	0	O	X	0: Default Value 1: Perform restore from Controller NVM to Backup NVM 2: Perform restore from Backup NVM to Controller NVM
700-120	TIMEZONE	8	0	32	7	O	O	0: UTC -12:00, 1: UTC -11:00, 2: UTC -10:00 3: UTC -09:00, 4: UTC -08:00, 5: UTC -07:00 6: UTC -06:00, 7: UTC -05:00, 8: UTC -04:00 9: UTC -03:30, 10: UTC -03:00, 11: UTC -02:00 12: UTC -01:00, 13: UTC 00:00, 14: UTC +01:00 15: UTC +02:00, 16: UTC +03:00, 17: UTC +03:30 18: UTC +04:00, 19: UTC +04:30, 20: UTC +05:00 21: UTC +05:30, 22: UTC +05:45, 23: UTC +06:00 24: UTC +06:30, 25: UTC +07:00, 26: UTC +08:00 27: UTC +09:00, 28: UTC +09:30, 29: UTC +10:00 30: UTC +11:00, 31: UTC +12:00, 32: UTC +13:00
700-122	DATE_FORMAT	6	0	2	0	O	O	0: YYMMDD 1: MMDDYY 2: DDMMYY
700-123	TIME_FORMAT	7	0	1	1	O	O	0: 12h 1: 24h

Table 1 NVM SYSTEM

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
700-124	AUTO_RESET_TIMER	102	0	6	2	O	O	0: Return to default display after 15 s 1: Return to default display after 30 s 2: Return to default display after 45 s 3: Return to default display after 1 min 4: Return to default display after 2 min 5: Return to default display after 3 min 6: Return to default display after 4 min
700-125	JOB_CANCEL_TIMER	105	-	-	600	O	O	0: Feature Disabled (s)
700-126	AUTO_PRINT_TIMER	103	1	240	10	O	O	(sec)
700-127	JOB_DONE_TIMER	106	1	10	3	O	O	The time to display the Job Complete screen (s)
700-128	AUTO_SCAN_COMPLETE_TIMER	104	1	4	2	O	O	1: Scan Complete in 20 s 2: Scan Complete in 30 s 3: Scan Complete in 60 s 4: Scan Complete in 90 s
700-129	LOW_POWER_MODE_TIMER	100	0	60	1	O	O	0: Feature Disabled (min)
700-130	SLEEP_MODE_TIMER	101	0	239	1	O	O	0: Feature Disabled (min)
700-144	JOB_HISTORY	201	0	0	0	X	O	Not used in WC 5021/5019
700-401	PAPER_CLASS	206	2	5	4	O	X	2: XC (NA (North America)) 3: XE/DMO-E (EU) 4: AP/GCO (AP) 5: DMO-W (SA (South America))
700-420	DOWNLOAD_DISABLE_FLAG	-	-	-	2	O	X	0: Allow Download for same family 2: Allow Download for same model only
720-006	PRINT_COUNTER_PRINTJOB	7001	0	10000000	0	X	X	The counters for Print Job, Report Job, and Maintenance Report. When Large Size is applied, this will count up by 2 for each impression.
720-009	PRINT_COUNTER_COPYJOB	7000	0	10000000	0	X	X	The counter for Copy Job. When Large Size is applied, this will count up by 2 for each impression.
720-065	LARGE_SIZE_COUNT	-	0	1	0	O	O	0: Count as normal (1 count) 1: Count as Large Size (2 counts)
780-009	IOT_TRAY1_PAPER_SIZE (For PAPER_CLASS = XC)	-	-	-	16	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 23: B5L

Table 1 NVM SYSTEM

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
780-009	(For PAPER_CLASS = DMO-W)	-	-	-	16	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 23: B5L 56: 8.5x13.4S
780-009	(For PAPER_CLASS = AP/GCO)	-	-	-	18	O	O	1: 11x17S 2: A3S 3: 8K(GCO)S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 11: 16K(GCO)S 14: B5S 16: 8.5x11L 18: A4L 20: 16K(GCO)L 23: B5L
780-009	(For PAPER_CLASS = XE/DMO-E)	-	-	-	18	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 23: B5L

Table 1 NVM SYSTEM

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
780-010	IOT_STM_PAPER_SIZE (For PAPER_CLASS = XC)	-	-	-	1	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 23: B5L
780-010	(For PAPER_CLASS = DMO-W)	-	-	-	1	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 23: B5L 56: 8.5x13.4S
780-010	(For PAPER_CLASS = AP/GCO)	-	-	-	2	O	O	1: 11x17S 2: A3S 3: 8K(GCO)S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 11: 16K(GCO)S 14: B5S 16: 8.5x11L 18: A4L 20: 16K(GCO)L 23: B5L

Table 1 NVM SYSTEM

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
780-010	(For PAPER_CLASS = XE/DMO-E)	-	-	-	2	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 23: B5L
780-013	IOT_TRAY1_PAPER_TYPE	500	-	-	0	O	O	0: Plain 5: Lightweight
780-014	IOT_STM_PAPER_TYPE	501	-	-	0	O	O	0: Plain 5: Lightweight
780-017	IOT_MSI_PAPER_SIZE (For PAPER_CLASS = XC)	-	-	-	1	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 17: 5.5x8.5S 18: A4L 19: A5S 23: B5L
780-017	(For PAPER_CLASS = DMO-W)	-	-	-	1	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 19: A5S 23: B5L 56: 8.5x13.4S

Table 1 NVM SYSTEM

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
780-017	(For PAPER_CLASS = AP/GCO)	-	-	-	2	O	O	1: 11x17S 2: A3S 3: 8K(GCO)S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 11: 16K(GCO)S 14: B5S 16: 8.5x11L 18: A4L 19: A5S 20: 16K(GCO)L 23: B5L
780-017	(For PAPER_CLASS = XE/DMO-E)	-	-	-	2	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 19: A5S 23: B5L
780-018	IOT_MSI_PAPER_TYPE	502	-	-	0	O	O	0: Plain 2: Heavyweight 5: Lightweight
780-266	UIPANEL_DRUM_ALERT_PHASE1	207	0	2	1	O	O	0: Do not display 1: Display only after the power had been turned OFF and ON 2: Display only when the Auto Reset Timer had timed-out
780-267	UIPANEL_DRUM_ALERT_PHASE2	208	0	2	2	O	O	0: Do not display 1: Display only after the power had been turned OFF and ON 2: Display only when the Auto Reset Timer had timed-out
790-004	UIPANEL_TONER_ALERT	209	0	2	1	O	O	0: Do not display 1: Display only after the power had been turned OFF and ON 2: Display only when the Auto Reset Timer had timed-out

6.3.17 NVM IPS

Table 1 NVM IPS

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
680-400	IPS_AE1FS_EXTERNAL_AREA	-	0	65535	255	O	O	Speed Priority AE/Fast Scan Direction Non-detection Area INSTV during SMPST and SMPED settings
680-401	IPS_LINE_TO_FIX_VARIATION	-	0	65535	60	O	O	Speed Priority AE/Slow Scan Variable Fixed Position/NCON Slow Scan Lead Edge AE Detection Amount
680-402	IPS_AE_CONTROL_OF_FS_LENGTH	-	0	1	0	O	O	AE Control of FS Length 0: Always use the document size detection result 1: Use the [Minimum FS Length for AE] as detection size
680-403	IPS_MINIMUM_FS_LENGTH_FOR_AE	-	0	65535	500	O	O	Minimum FS Length for AE. Fast Scan Detection Min Range. For calculating AES parameter.
680-404	IPS_BW_COPY_OFFSET_LEVEL_OF_AE	-	0	1092	0	O	O	Background Suppression Level for BW Copy. The suppression level: 0 (weak) to 4 (strong) for each Input Device. bit [0:3]: Platen bit [4:7]: ADF/DADF bit [8:11]: ReservedCIS Anything exceeding level 4 (5 to 15) will be treated as level 0.
680-405	IPS_BW_SCAN_FAX_OFFSET_LEVEL_OF_AE	-	0	1092	0	O	O	Background Suppression Level for Fax Send/BW Scan. The suppression level: 0 (weak) to 4 (strong) for each Input Device. bit [0:3]: Platen bit [4:7]: ADF/DADF bit [8:11]: ReservedCIS Anything exceeding level 4 (5 to 15) will be treated as level 0.
680-406	IPS_CL_CONTONE_OFFSET_LEVEL_OF_AE	-	0	1092	0	O	O	Background Suppression Level for Full Color Scan. The suppression level: 0 (weak) to 4 (strong) for each Input Device. bit [0:3]: Platen bit [4:7]: ADF/DADF bit [8:11]: ReservedCIS Anything exceeding level 4 (5 to 15) will be treated as level 0.
680-407	IPS_SCAN_SHOW_THROUGH_REMOVAL_SWITCH	-	0	1	0	O	O	Shadow Suppression for Full Color Scan. 0: OFF 1: ON
680-408	IPS_SCAN_SHOW_THROUGH_REMOVAL_LEVEL	-	0	4	2	O	O	Shadow Suppression Level for Full Color Scan. 0: Lower -2 1: Lower -1 2: Normal 3: Higher +1 4: Higher +2
680-409	IPS_CL_BALANCE_DEF_K_LOW_DENSITY	-	0	8	4	O	O	Default Color Balance Adjustment Level K Color Low Density

Table 1 NVM IPS

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
680-410	IPS_CL_BALANCE_DEF_K_MEDIUM_ DENSITY	-	0	8	4	O	O	Default Color Balance Adjustment Level K Color Medium Density
680-411	IPS_CL_BALANCE_DEF_K_HIGH_ DENSITY	-	0	8	4	O	O	Default Color Balance Adjustment Level K Color High Density
680-412	IPS_PLT_JOB_RAE_SS_NOT_DETECT_ AREA	-	0	65535	0	O	O	For Speed Priority Background Suppression/Slow Scan Non-detection Area Platen Jobs Slow Scan Non-detection Area Setup Value BASE at Real Time AE for Platen Jobs.
680-413	IPS_ADF_JOB_RAE_SS_NOT_DETECT_ AREA	-	0	65535	0	O	O	For Speed Priority Background Suppression/Slow Scan Non-detection Area ADF/DADF Jobs. Slow Scan Non-detection Area Setup Value BASE at Real Time AE for ADF/DADF Jobs.
680-414	IPS_DENSITY_ADJUSTMENT_FLAG_FOR_ ORIGINAL_TYPE_OF_COPY	-	0	7	0	O	O	Density Fine Adjustment Flag - Copy Document Type bit [0]: Text, bit [1]: Photo & Text, bit [2]: Photo 1: Enabled, 0: Disabled
680-415	IPS_DENSITY_ADJUSTMENT_FLAG_FOR_ DENSITY_LEVEL_OF_COPY	-	0	63	0	O	O	Density Fine Adjustment Flag - Copy Density Level bit [0]: Lighten +2 to bit [4]: Darken +2 1: Enabled, 0: Disabled
680-416	IPS_DENSITY_ADJUSTMENT_FLAG_FOR_ ORIGINAL_TYPE_OF_BW_SCAN_AND_FAX	-	0	7	0	O	O	Density Fine Adjustment Flag - BW Scan/Fax Document Type bit [0]: Text, bit [1]: Photo & Text, bit [2]: Photo 1: Enabled, 0: Disabled
680-417	IPS_DENSITY_ADJUSTMENT_FLAG_FOR_ DENSITY_LEVEL_OF_BW_SCAN_AND_FAX	-	0	63	0	O	O	Density Fine Adjustment Flag - BW Scan/Fax Density Level bit [0]: Lighten +2 to bit [4]: Darken +2 1: Enabled, 0: Disabled
680-418	IPS_DENSITY_ADJUSTMENT_ PARAMETER_A_FOR_COPY	-	0	255	64	O	O	Density Fine Adjustment Slant A for Copy. Slant A fixed decimal format. bit [6] corresponds to coefficient 1.
680-419	IPS_DENSITY_ADJUSTMENT_ PARAMETER_B_FOR_COPY	-	0	255	0	O	O	Density Fine Adjustment Section B for Copy. The section B negative is specified with 2 complements.
680-420	IPS_DENSITY_ADJUSTMENT_ PARAMETER_A_FOR_BW_SCAN_AND_FAX	-	0	255	64	O	O	Density Fine Adjustment Slant A for BW Scan/Fax. Slant A fixed decimal format. bit [6] corresponds to coefficient 1.
680-421	IPS_DENSITY_ADJUSTMENT_ PARAMETER_B_FOR_BW_SCAN_AND_FAX	-	0	255	0	O	O	Density Fine Adjustment Section B for BW Scan/Fax. The section B negative is specified with 2 complements.
680-422	IPS_FULL_COLOR_SCAN_SATURATION_A DJUSTMENT	-	0	4	2	O	O	Saturation Adjustment for Full Color Scan. 0: Pastel +2 1: Pastel +1 2: Normal 3: Vivid +1 4: Vivid +2

Table 1 NVM IPS

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
680-423	IPS_FULL_COLOR_SCAN_CONTRAST_ ADJUSTMENT	-	0	4	2	O	O	Contrast Adjustment for Full Color Scan. 0: Less Contrast -2 1: Less Contrast -1 2: Normal 3: More Contrast +1 4: More Contrast +2
680-424	IPS_COLOR_SPACE	-	0	1	0	O	O	Color Space 0: Standard Color Space 1: Device Color Space
680-425	IPS_IMAGE_ENHANCE_FOR_COPY_ PHOTO_MODE	-	0	1	1	O	O	The binarization image processing method at Photo Mode of Copy. 0: Error Diffusion 1: Dither

6.3.18 NVM JOB ATTRIBUTE

Table 1 NVM JOB ATTRIBUTE

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
630-181	COPYJOB_DEFAULT_DUPLEX_MODE	3014	3	4	3	O	O	3: Flip on Long Edge 4: Flip on Short Edge
630-407	COPYJOB_DEFAULT_DOCUMENT_TYPE_FOR_TONER_SAVE	-	1	3	2	O	O	1: Text 2: Text & Photo 3: Photo
630-408	COPYJOB_DEFAULT_LIGHTEN_DARKEN_FOR_TONER_SAVE	-	0	4	0	O	O	0: Lighten +2 1: Lighten +1 2: Normal 3: Darken +1 4: Darken +2
630-409	COPYJOB_DEFAULT_SHARPNESS_FOR_TONER_SAVE	-	0	4	4	O	O	0: Soften +2 1: Soften +1 2: Normal 3: Sharpen +1 4: Sharpen +2
630-411	COPYJOB_DEFAULT_IDCARD_SCAN_AREA	3013	86	297	100	O	O	mm
780-066	COPYJOB_DEFAULT_EDGE_ERASE	-	0	500	40	O	O	Paper Edge Erase Amount (0.1 mm) To calculate the pixel count, use the following formula. ((This Value x 600) / 254) rounded to the nearest whole number
785-022	COPYJOB_DEFAULT_AE_LEVEL	3011	0	4	1	O	O	0: Level 1 1: Level 2 2: Level 3 3: Level 4 4: Level 5
790-060	COPYJOB_PRESET_MAGNIFICATION (For PAPER_CLASS = XC)	3010	25	400	81	O	O	%
790-060	COPYJOB_PRESET_MAGNIFICATION (For PAPER_CLASS = DMO-W)	3010	25	400	81	O	O	%
790-060	COPYJOB_PRESET_MAGNIFICATION (For PAPER_CLASS = AP/GCO)	3010	25	400	81	O	O	%
790-060	COPYJOB_PRESET_MAGNIFICATION (For PAPER_CLASS = XE/DMO-E)	3010	25	400	81	O	O	%
790-070	COPYJOB_DEFAULT_TRAY	3000	-	-	1	O	O	0: APS 1: Tray1 2: STM 5: MSI

Table 1 NVM JOB ATTRIBUTE

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
790-072	COPYJOB_DEFAULT_MAGNIFICATION	3002	0	6	3	O	O	0: AMS 1: 50.0% 2: 70.7%/78.5% 3: 100.0% 4: 141.4%/129.4% 5: 200.0% 6: Preset
790-094	COPYJOB_DEFAULT_DOCUMENT_TYPE	3004	1	3	1	O	O	1: Text 2: Text & Photo 3: Photo
790-097	COPYJOB_DEFAULT_AE	3007	0	1	1	O	O	0: AE=Off 1: AE=On
790-098	COPYJOB_DEFAULT_LIGHTEN_DARKEN	3005	0	5	2	O	O	0: Lighten +2 1: Lighten +1 2: Normal 3: Darken +1 4: Darken +2 5: Toner Save
790-122	COPYJOB_DEFAULT_SHARPNESS	3006	0	4	2	O	O	0: Soften +2 1: Soften +1 2: Normal 3: Sharpen +1 4: Sharpen +2
790-131	COPYJOB_DEFAULT_DOCUMENT_SIZE (For PAPER_CLASS = XC)	3008	-	-	16	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 17: 5.5x8.5S 18: A4L 19: A5S 23: B5L 134: Deemed Document Size

Table 1 NVM JOB ATTRIBUTE

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
790-131	COPYJOB_DEFAULT_DOCUMENT_SIZE (For PAPER_CLASS = DMO-W)	3008	-	-	16	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 19: A5S 23: B5L 56: 8.5x13.4S 134: Deemed Document Size
790-131	COPYJOB_DEFAULT_DOCUMENT_SIZE (For PAPER_CLASS = AP/GCO)	3008	-	-	18	O	O	1: 11x17S 2: A3S 3: 8K(GCO)S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 11: 16K(GCO)S 14: B5S 16: 8.5x11L 18: A4L 19: A5S 20: 16K(GCO)L 23: B5L 134: Deemed Document Size
790-131	COPYJOB_DEFAULT_DOCUMENT_SIZE (For PAPER_CLASS = XE/DMO-E)	3008	-	-	18	O	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 19: A5S 23: B5L 134: Deemed Document Size

Table 1 NVM JOB ATTRIBUTE

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Write Allowed/ Protected	Default Value Yes/No	Description
790-181	COPYJOB_DEFAULT_PAGE_MODE	3009	0	3	0	O	O	0: S/S 1: S/D 2: D/S 3: D/D
790-182	COPYJOB_DEFAULT_COLLATED	3001	0	0	0	O	O	0: Uncollate
790-288	SCANJOB_DEFAULT_AE	4001	1	1	1	O	O	1: AE=On
790-301	COPYJOB_DEFAULT_FRAME_ERASE	3003	0	50	2	O	O	Document Border Erase Amount (mm) To calculate the pixel count, use the following formula. ((This Value x 600) / 25.4) rounded to the nearest whole number
790-302	COPYJOB_DEFAULT_FRAME_ERASE_FOR_IDCARD_ COPY	3012	0	10	2	O	O	Document Border Erase Amount (mm) (for ID Card Copy) To calculate the pixel count, use the following formula. ((This Value x 600) / 25.4) rounded to the nearest whole number
790-311	SCANJOB_DEFAULT_SHARPNESS	4000	0	4	2	O	O	0: Soften +2 1: Soften +1 2: Normal 3: Sharpen +1 4: Sharpen +2
840-023	SCANJOB_DEFAULT_AE_LEVEL	4002	0	4	1	O	O	0: Level 1 1: Level 2 2: Level 3 3: Level 4 4: Level 5
870-200	DIAG_TEST_PRINT_INPUT_TRAY	-	-	-	1	O	O	1: Tray 1 2: STM 5: MSI
870-202	DIAG_TEST_PRINT_JOB_VOLUMN	-	1	99	1	O	O	Quantity

6.3.19 NVM ACCOUNT MODE

Table 1 NVM ACCOUNT MODE

Chain-Link	NVM Name	Tools P#	Setting Range (Minimum Value)	Setting Range (Maximum Value)	Default Value	Scan Yes/No	Default Value Yes/No	Description
700-540	COPY_ACCOUNT_MODE	203	0	2	0	O	O	0: Account Free Mode 1: Single Account Mode 2: Multi Account Mode

6.3.20 NVM Jam Counter Clear & Initialize HFSI

Table 1 NVM Jam Counter Clear & Initialize HFSI

Chain-Link	NVM Name	Description
998-970	Jam Counter Clear-Tray1 Regi Sensor On Jam	
998-971	Jam Counter Clear-Tray2 Feed Out#2 Sensor On Jam	
998-972	Jam Counter Clear-Tray2 Regi Sensor On Jam	
998-973	Jam Counter Clear-MSI Regi Sensor On Jam	
998-974	Jam Counter Clear-DUP Regi Sensor On Jam	
998-975	Jam Counter Clear-Regi Sensor Off Jam	
998-976	Jam Counter Clear-Exit Sensor On Jam	
998-977	Jam Counter Clear-Exit Sensor Off Jam	
998-978	Jam Counter Clear-Paper Length Mismatch	Paper Length Mismatch at each Tray
998-980	Initialize Fault History	
998-981	Initialize Jam Counter	Clears all the Jam Counters at one go. • Refer to [6.4.2.10 Jam Counter Reset].
998-982	Initialize HFSI Counter	Clears all the HFSI Counters at one go. • Refer to [6.4.2.8 HFSI Counter Reset].
998-983	Initialize HFSI Counter-IIT	Clears all the IIT-related HFSI Counters at one go.
998-984	Initialize HFSI Counter-MCU	Clears all the MCU-related HFSI Counters at one go.
998-985	Initialize HFSI Counter-DADF	Clears all the DADF-related HFSI Counters at one go.
999-990	NVM Initialize-Controller	• Refer to [6.4.2.5 NVM Initialize].
999-991	NVM Initialize-Network	Same as above
999-992	NVM Initialize-IIT	Same as above
999-993	NVM Initialize-MCU	Same as above
999-994	NVM Initialize-DADF	Same as above
999-999	NVM Initialize-All Area	Same as above
999-980	Maintenance Report	• Refer to [6.4.2.7 Maintenance Report].
999-970	DATA All Delete	Initializes the Job History • Refer to [6.4.2.1.2 Data All Delete].

6.4.1.1 UI CE Diag Mode Structure

The UI displays the CE Diag Mode as a [7-Segment LCD] screen.

UI Screen

The structure of the CE Diag Mode is as follows.

Enter the CE Diag Mode and input the Chain-Link Number in the [Chain-Link Number Entry] screen to assign the Diag function.

1. Shutdown History
   - Initialize Fault History
     DATA All Delete
2. NVM Read/Write
3. Analog Monitor
4. Read Temperature
5. NVM Initialize
6. Component Check (IOT/IIT/DADF)
7. Maintenance Report
8. HFSI Counter Reset
9. HFSI Counter Read/Clear
10. Jam Counter Reset
11. DRUM Counter Reset
12. ATC Sensor Read
13. Tone Up/Down
    - Tone Up
    - Tone Down
14. Test Pattern Print
15. Checking and Repairing the Billing Counter (621-400)

6.4.1.2 How to Enter the CE Diag Mode

Procedure

Enter the CE Diag Mode by the following procedure.

1. Inform the customer that the machine will be temporarily unavailable for use (inform that all Copy and Print Jobs will stop) as it is going to be serviced.
2. Disconnect the machine from the customer's network.
3. Make sure that the machine is not in the middle of a Copy or Print Job. Also check that there are no Stored Jobs.
4. Press and hold the [0] key on the Control Panel for 4 seconds or longer and then press the [Start] button while keeping your finger on the [0] key.
5. The 'CE - Type Passcode' screen will be displayed.

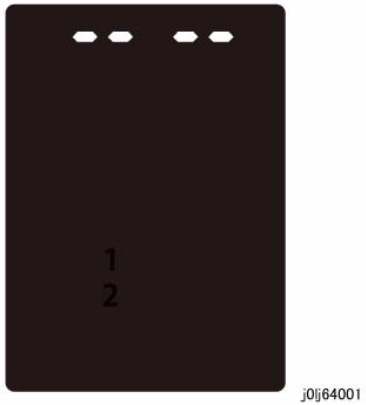


Figure 1 j0lj64001

6. Use the keypad to enter the Passcode '6.7.8.9' and press the [Start] button.
7. The [Chain-Link Number Entry] screen will appear.

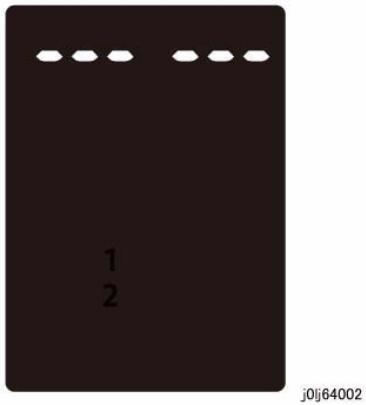


Figure 2 j0lj64002

8. Input the Chain-Link Number in the [Chain-Link Number Entry] screen to perform the various Diagnostics.

6.4.1.3 How to Exit from the CE Diag Mode

CAUTION

Do not leave the machine unattended while it is in the CE Diag Mode.

Procedure

- At the Chain-Link Number Entry, press the [0] key and the [Start] button to exit from the CE Diag Mode. Exiting from the CE Diag Mode will automatically reboot the machine.

6.4.2.1.1 Initialize Fault History

Purpose

Initialize the Fault History.

Check the completed [Initialize Fault History] at the [System Fail History] of [ERROR History Report].

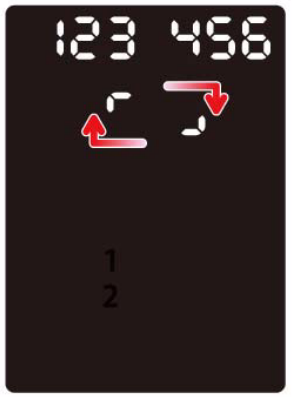
Procedure

1. Enter the CE Diag Mode and input 998-980 in the Chain-Link.
2. Pressing the [Start] button transitions to the [Check Initialization] screen. At this time, the [CLR] and the [Start] button will be flashing.

j0lj64003

Figure 1 j0lj64003

3. Pressing the [Start] button starts the initialization of the [Fault History].
   - An animation will be displayed to indicate that it is in progress.



j0lj64004

Figure 2 j0lj64004

4. When the initialization has completed successfully, [End] will flash twice -> remain ON to indicate the completion of the [Fault History] initialization.
5. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.1.2 DATA All Delete

Purpose

Erases the customer's data in the machine for security reasons when a PWB was replaced, the machine was removed, etc.

To initialize the [Job History] that are stored in the ESS/MCU PWB.

Check the completed [Initialize Job History] at the [Job History Report].

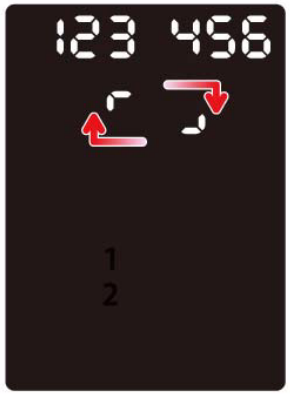
Procedure

1. Enter the CE Diag Mode and input 999-970 in the Chain-Link.
2. Pressing the [Start] button transitions to the [Check Initialization] screen. At this time, the [CLR] and the [Start] button will be flashing.

j0lj64003

Figure 1 j0lj64003

3. Pressing the [Start] button starts the initialization of the [DATA All Delete].
   - An animation will be displayed to indicate that it is in progress.



j0lj64004

Figure 2 j0lj64004

4. When the initialization has completed successfully, [End] will flash twice -> remain ON to indicate the completion of the [DATA All Delete] initialization.
5. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.2 NVM Read/Write

Purpose

Refers to the NVM data or changes setting value.

NOTE: *For details on NVM No. (Chain-Link), refer to 6.3.5 until 6.3.20 in Chapter 6.*

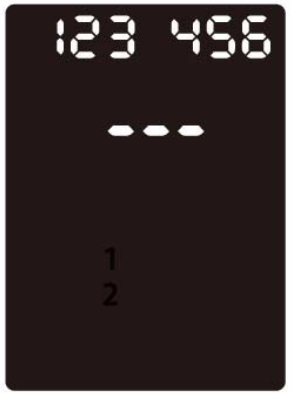
Procedure

1. Referring to NVM Data
   (1) Enter the CE Diag Mode.
   (2) Input the Chain-Link No. and press the [Start] button.
   (3) The current NVM setting value is displayed.
   - Numbers of 3 digits or fewer are displayed as right-justified. Numbers of 4 digits or more will initially have their upper 3 digits displayed as right-justified. Pressing the [Start] button allows you to switch the display to the lower digits.
     – When there is a next screen, the number will be displayed with a [triangle mark] at its heading.

j0lj64005

Figure 1 j0lj64005

2. Changing the Setting Value
   (1) Pressing the [Start] button when an NVM Read value is being displayed causes the currently displayed setting value to disappear and displays the cursor for inputting the setting value that it is to be changed to.



j0lj64006

Figure 2 j0lj64006

   (2) Input the setting value by using the keypad causes the LED of the [Start] button to flash and prompt for a confirmation.
   - To input a negative value, press the [Cancel Scan Jobs] button to add a negative sign.
   - When the setting value is of 4 digits or more, only the least significant 3 digits will be displayed as it is being input. When inputting a number of 4 digits or more, the number will be displayed with a [triangle mark] at its heading.
   - When you need to re-input the setting value, the currently input value can be deleted one-by-one by pressing the [Clear] button.

   (3) Pressing the [Start] button again causes the LED of the [Start] button to turn ON and confirms the setting value.
   (4) Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.3 Analog Monitor

Purpose

Monitors the A/D converted analog value of the sensor while each component is being operated.

- Range of values that can be displayed: 0 to 1099.

NOTE: *For the analog value of 1000 to 1099, only the lower 3 digits are displayed.*

NOTE: *For more details on the Analog Monitor Code, refer to 6.3.3 in Chapter 6.*

Procedure

1. Enter the CE Diag Mode.
2. Input the Chain-Link No. and press the [Start] button.
3. The current analog value is displayed.
   - The analog value is refreshed once every 1/3 second.

j0lj64011

Figure 1 j0lj64011

   - For the analog value of 1000 to 1099, only the lower 3 digits are displayed.
     – Example.: 1099 is displayed as '099'.

j0lj64013

Figure 2 j0lj64013

4. Pressing the [Stop] button causes the [End] to flash twice -> remain ON to indicate that the process has completed.
5. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.4 Read Temperature

Purpose

Displays the Temperature (Degrees Celsius) inside the machine on the UI.

1. Unit: 0.1 Degree Celsius
2. Read Range: 1098 to -488 (109.8 Degrees Celsius to -48.8 Degrees Celsius)

NOTE: *For values of 1000 or higher, only the lower 3 digits are displayed. (Example: 1098 -> 098)*

NOTE: *A flashing number indicates that the temperature in the machine is negative.*

Procedure

1. Enter the CE Diag Mode and input 942-951 in the Chain-Link.
2. Pressing the [Start] button displays the Temperature (Degrees Celsius) inside the machine.

Figure 1 j0lj64011

3. Pressing the [Stop] button causes the [End] to flash twice -> remain ON to indicate that the process has completed.
4. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.5 NVM Initialize

Purpose

Returns the NVM to its default values.

Procedure

1. Enter the CE Diag Mode.
2. Input the Chain-Link No. of the item to initialize.

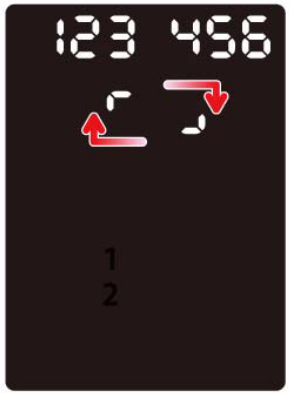
Table 1

Chain-Link	Type	Overview
999-990	NVM Initialize - Controller	Initializes the NVM of the Controller.
999-991	NVM Initialize - Network	Initializes the NVM of the Network.
999-992	NVM Initialize - IIT	Initializes the NVM of the IIT.
999-993	NVM Initialize - MCU	Initializes the NVM of the MCU.
999-994	NVM Initialize - DADF	Initializes the NVM of the DADF.
999-999	NVM Initialize - All Area	Initializes the NVM of all areas.

3. Pressing the [Start] button transitions to the [Check Initialization] screen. At this time, the [CLR] and the [Start] button will be flashing.

Figure 1 j0lj64003

4. Pressing the [Start] button starts the initialization of the [NVM].
   - An animation will be displayed to indicate that it is in progress.



j0lj64004

Figure 2 j0lj64004

5. When the initialization has completed successfully, [End] will flash twice -> remain ON to indicate the completion of the [NVM] initialization.
6. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.6 Component Check (IOT/IIT/DADF)

Purpose

Displays the logic state of Input Component input signals and operates the Output Components.

NOTE: *For more details on the Component Check Code, refer to 6.3.1 and 6.3.2 in Chapter 6.*

Procedure

<Input Component Check>

1. Enter the CE Diag Mode.
2. Input the Chain-Link No. and press the [Start] button.
   - The value is refreshed in 1/3 second.
3. The result of Input Check is displayed as 'HI' for High Level and 'LO' for Low Level.
   - Example of High Level

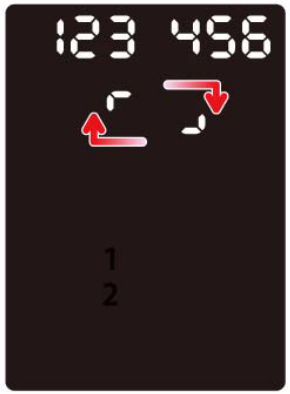
j0lj64007

Figure 1 j0lj64007

4. Pressing the [Stop] button causes the [End] to flash twice -> remain ON to indicate that the Input Check has completed.
5. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

<Output Component Check>

1. Enter the CE Diag Mode.
2. Input the Chain-Link No. and press the [Start] button.
   - When an Output Component is in operation, an animation will be displayed to indicate that it is in progress.



j0lj64004

Figure 2 j0lj64004

3. Pressing the [Auto Stop] or [Stop] button causes the [End] to flash twice -> remain ON to indicate that the Input Check has completed.
4. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.7 Maintenance Report

Purpose

Prints the Maintenance items that can be set from and displayed on the CE Mode.

Procedure

1. Enter the CE Diag Mode and input 999-980 in the Chain-Link.
2. Set the [Paper Size] using the [Paper Supply] button.
3. Pressing the [Start] button prints the Maintenance Report using the following settings.
   - 1 Sided Print - fixed. (The Maintenance Report cannot be printed using 2 Sided.)
   - Quantity: 1 - fixed.
4. An animation will be displayed when this is in progress.

j0lj64012

Figure 1 j0lj64012

5. After the last output or when the [Stop] button is pressed, [End] will be displayed.
6. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.8 HFSI Counter Reset

Purpose

To clear all the HFSI Counters at one go.

To clear the HFSI Counters separately, refer to [6.4.2.9 HFSI Read/Clear].

NOTE: *[950-807 Drum Cycle HFSI] will not be initialized.*

NOTE: *For more details on the HFSI Counter Code, refer to 6.3.4 in Chapter 6. Furthermore, it is also listed in [6.4.2.7 Maintenance Report].*

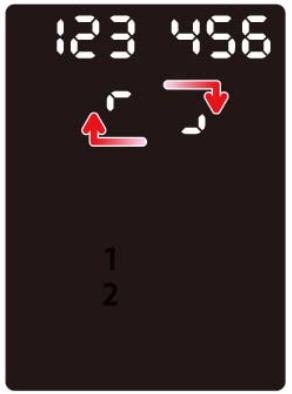
Procedure

1. Enter the CE Diag Mode and input 998-982 in the Chain-Link.
2. Pressing the [Start] button transitions to the [Check Initialization] screen. At this time, the [CLR] and the [Start] button will be flashing.

j0lj64003

Figure 1 j0lj64003

3. Pressing the [Start] button starts the clearing of all [HFSI Counter].
   - An animation will be displayed to indicate that it is in progress.



j0lj64004

Figure 2 j0lj64004

4. When the clear all has completed successfully, [End] will flash twice -> remain ON to indicate the completion of the [HSFI Counter] reset.
5. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.9 HFSI Read/Clear

Purpose

Reads the HFSI Counter that is used as the guideline for replacement of consumables and clear it if neccessary.

NOTE: *For more details on the HFSI Counter Code, refer to 6.3.4 in Chapter 6.*

Procedure

1. Enter the CE Diag Mode.
2. Input the Chain-Link No. and press the [Start] button.
3. The read value of the HFSI Counter for the monitored component is displayed on the UI.
4. Pressing [Clear] and then [Start] clears the read value of the HFSI Counter to '0'.
5. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.10 Jam Counter Reset

Purpose

To clear all the Jam Counters at one go.

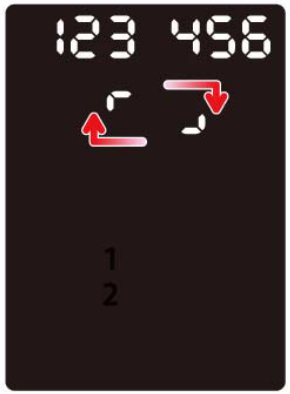
- Check the completed [Jam Counter Reset] at the [Paper Jam History] of [ERROR History Report].

Procedure

1. Enter the CE Diag Mode and input 998-981 in the Chain-Link.
2. Pressing the [Start] button transitions to the [Check Initialization] screen. At this time, the [CLR] and the [Start] button will be flashing.

Figure 1 j0lj64003

3. Pressing the [Start] button starts the clearing of all [Jam Counter].
   - An animation will be displayed to indicate that it is in progress.



j0lj64004

Figure 2 j0lj64004

4. When the clear all has completed successfully, [End] will flash twice -> remain ON to indicate the completion of the [Jam Counter] reset.
5. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.11 DRUM Counter Reset

Purpose

To reset the Drum Counter.

NOTE: *Check the completed [Drum Counter Reset] at [6.4.2.7 Maintenance Report].*

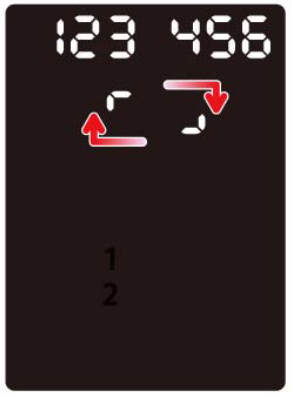
Procedure

1. Enter the CE Diag Mode and input 950-807 in the Chain-Link.
2. Pressing the [Start] button transitions to the [Check Initialization] screen. At this time, the [CLR] and the [Start] button will be flashing.

j0lj64003

Figure 1 j0lj64003

3. Pressing the [Start] button starts the reset of the [Drum Counter].
   - An animation will be displayed to indicate that it is in progress.



j0lj64004

Figure 2 j0lj64004

4. When it has completed successfully, [End] will flash twice -> remain ON to indicate the completion of the [Drum Counter] reset.
5. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.12 ATC Sensor Read

Purpose

To determine ATC Sensor failure and to judge the current state of TC (toner density) in the Developer Housing Assy based on the output value of the ATC Sensor. [6.4.2.13 Tone Up / Down] will be performed depending on the result.

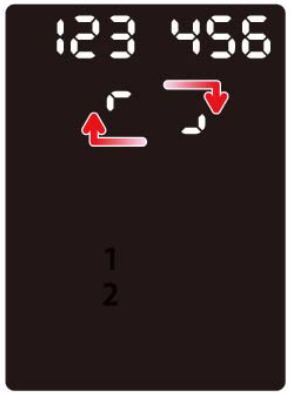
NOTE: *For more details on the Toner Density Adjustment, refer to [ADJ 8.1.1 ATC Sensor Read & Tone Up / Down] in Chapter 4.*

Procedure

1. Enter the CE Diag Mode and input 942-950 in the Chain-Link.
2. Pressing the [Start] button displays the initial screen for [ATC Correction Target Value]. (Value is '0')

Figure 1 j0lj64008

3. Pressing the [Start] button computes the TC Correction Target Value and computes the ATC Average Value after the Xero/Deve ERU drive has started. At this time, an animation will be displayed to indicate that it is in progress.



j0lj64009

Figure 2 j0lj64009

4. After the computation has completed, the result for ATC Correction Target Value will be displayed on the UI.
   - The ATC Correction Target Value is displayed with a [triangle mark] at its heading. Pressing the [Original Size] button will display the ATC Average Value and the ATC Correction Target Value alternately on the UI.

     – ATC Correction Target Value

j0lj64010

Figure 3 j0lj64010

     – ATC Average Value

j0lj64011

Figure 4 j0lj64011

5. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.13 Tone Up/Down

Purpose

Adjusts the toner density.

NOTE: *For more details on the Toner Density Adjustment, refer to [ADJ 8.1.1 ATC Sensor Read & Tone Up / Down] in Chapter 4.*

6.4.2.13.1 Tone Up

Purpose

During ATC Sensor Read, if the value of [ATC Average Value] is larger than the [ATC Correction Target Value], it means that the current toner density is lighter than the target value and hence Tone Up (output of blank paper) will be performed.

NOTE: *The difference between [ATC Correction Target Value] and [ATC Average Value] must be within 30 and the output is equivalent to A4L_7 sheets.*

Procedure

1. Enter the CE Diag Mode and input 923-913 in the Chain-Link.
2. Pressing the [Start] button transitions to the [ATC Sensor Read] initial screen.
   (The same as for ATC Sensor Read)
3. Pressing the [Start] button displays the animation to indicate that it is in progress.
   After the computation has completed, the result for ATC Correction Target Value will be displayed.
   (The same as for ATC Sensor Read)
4. Pressing the [Original Size] button will display the ATC Average Value and the ATC Correction Target Value alternately.
5. Press the [Start] button when the ATC Correction Target Value is displayed with a [triangle mark] at its heading.
6. Use the [Reduce / Enlarge] buttons (Up arrow, Down arrow) to set the number of blank paper to be output (1 to 20 sheets).
7. You can change the Tray and the Paper Size by pressing the [Paper Supply] and the [Size] buttons.

   NOTE: *The Paper Size can be changed by pressing and holding down the [Size] button. Pressing the [Start] button after the change returns you to the settings screen.*

8. Pressing the [Start] button displays the animation to indicate that it is in progress.
   It will count up after each blank paper that is output.

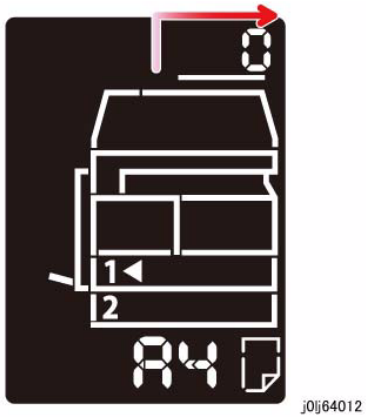


Figure 1 j0lj64012

9. After the last paper is output or when the [Stop] button is pressed, [End] will be displayed on the UI.
10. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.13.2 Tone Down

Purpose

During ATC Sensor Read, if the value of [ATC Average Value] is smaller than the [ATC Correction Target Value], it means that the current toner density is darker than the target value and hence Tone Down (printing of black images) will be performed.

NOTE: *The difference between [ATC Correction Target Value] and [ATC Average Value] must be within 30 and the output is equivalent to A4L_7 sheets.*

Procedure

1. Enter the CE Diag Mode and input 923-914 in the Chain-Link.
2. Step 2 to Step 5 is the same as for Tone Up
3. Use the [Reduce / Enlarge] buttons (Up arrow, Down arrow) to set the number of solid black printouts to be output (1 to 20 sheets).
4. Pressing the [Start] button displays the animation to indicate that it is in progress.
   The machine will output the specified number of solid black printouts to lighten the toner density.

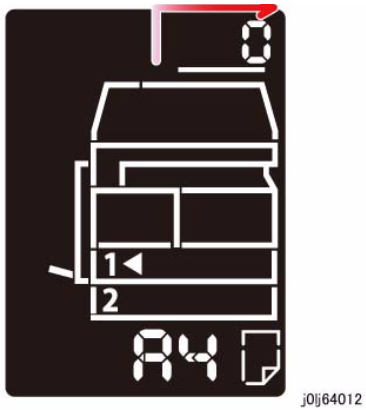


Figure 2 j0lj64012

5. After the last paper is output or when the [Stop] button is pressed, [End] will be displayed on the UI.
6. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.14 Test Pattern Print

Purpose

Performs copy quality check by printing the Test Pattern in the machine.

Procedure

1. Enter the CE Diag Mode.
2. Input the Chain-Link No. of the Test Pattern to be output and press the [Start] button to transition to the [Print Test Pattern Settings] screen.

   NOTE: *The 24 Gradation Density Pattern (998-905 and 998-906) can only be output on A3.*

Table 1

Chain-Link	Type	Overview
998-901	Blank Image	Outputs a blank printout.
998-902	Solid black	Outputs a solid black printout.
998-903	Stripe	Outputs a black and white stripes print-out.
998-904	Grid Pattern	Outputs a grid pattern printout.
998-905	24 Gradation Density Pattern (A3) (ATCN24KED)	Outputs a 24 gradation density pattern (ATCN24KED) printout.
998-906	24 Gradation Density Pattern (A3) (ATCN24KDI)	Outputs a 24 gradation density pattern (ATCN24KDI) printout.

3. The default values for the setting screen are - Quantity: 1, Tray 1, and 1 to 1 Sided.
4. Select the [Quantity], [Paper Supply] and [2 to 1 Sided].

   NOTE: *The Quantity can be specified up to 2 digits, with the maximum of 99.*

5. Pressing the [Start] button outputs the test pattern. An animation will be displayed to indicate that it is being output.

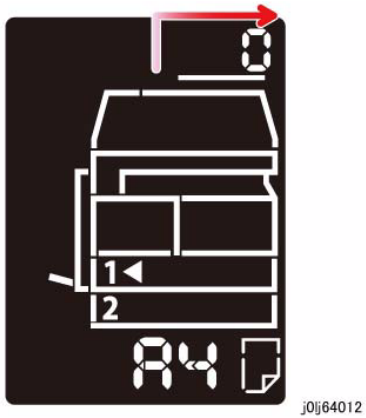


Figure 1 j0lj64012

6. After the final output or when the [Stop] button is pressed, [End] will be displayed on the UI.
7. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.2.15 Checking and Repairing the Billing Counter (621-400)

Purpose

- If there is any difference between the Billing/Meter values at the 2 locations, the error code (116-334) will be displayed. The corrective action for this condition is listed here.

Overview

- The Billing Counter for WC 5021/5019 is a Software Meter. The Billing Counter number of sheets is stored in 2 locations - the [External (Master) EEP ROM] on the ESS/MCU (AIO Controller) PWB and the [Mounted (Backup) EEP ROM] in the PWB.

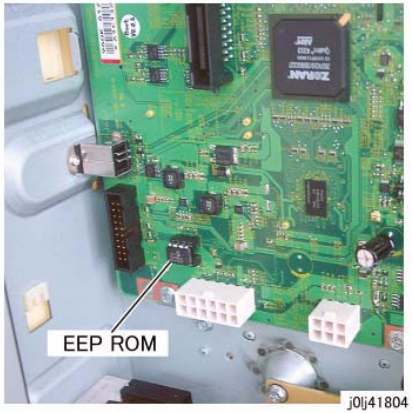


Figure 1 j0lj41804

- When the power is turned ON, the Billing/Meter values that is stored in the EEP ROM at the 2 locations will be checked. If the values at the 2 locations are found to be different, the error code (116-334) will be displayed.

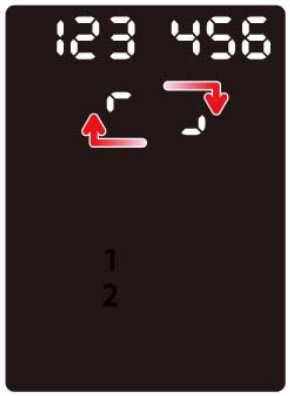
Procedure

1. Enter the CE Diag Mode and input 621-400 in the Chain-Link to perform NVM matching.
2. Input '1' if you want to restore the data from the External (Master) EEP ROM to the Mounted (Backup) EEP ROM and input '2' if you want to restore the data from the Mounted (Backup) EEP ROM to the External (Master) EEP ROM.

Table 1

Input Value	Operation	Data Copy
0	Do nothing	Outputs a blank printout.
1	NVM Restore	Restores the data from the External (Master) EEP ROM to the Mounted (Backup) EEP ROM
2	NVM Restore	Restores the data from the Mounted (Backup) EEP ROM to the External (Master) EEP ROM

3. Pressing the [Start] button displays the animation to indicate that it is in progress.



j0lj64009

Figure 2 j0lj64009

4. Pressing the [Clear All] button returns you to the [Chain-Link Number Entry] screen.

6.4.3 Error Display during Diag

Overview

- The error displays that may appear when performing the various Diag functions are as follows.

Table 1

Diag Function	Error Display	Meaning	Remarks
Refer to NVM	Err E-2	The Chain-Link # that was input is incorrect/an unused Chain-Link #/for an option that is not installed	
	Err E-4	Unable to perform the function as the parts that are the target for the Diag are malfunctioning, etc.	
NVM Settings	Err E-2	The Chain-Link # that was input is incorrect/an unused Chain-Link #/for an option that is not installed	
	Err E-4	Unable to perform the function as the parts that are the target for the Diag are malfunctioning, etc.	
	Err E-5	The Chain-Link # that was input is for an item that cannot be changed	
	Err E-6	The value that was input is out of the valid range	
Initialize NVM	Err E-2	The Chain-Link # that was input is incorrect/an unused Chain-Link #/for an option that is not installed	
	Err E-7	Failed to initialize the specified area	
Shutdown History	Err E-4	Unable to perform the function as the parts that are the target for the Diag are malfunctioning, etc.	
Jam Counter Reset	Err E-2	The Chain-Link # that was input is incorrect/an unused Chain-Link #/for an option that is not installed	
	Err E-4	Unable to perform the function as the parts that are the target for the Diag are malfunctioning, etc.	
HFSI Counter Reset	Err E-2	The Chain-Link # that was input is incorrect/an unused Chain-Link #/for an option that is not installed	
	Err E-4	Unable to perform the function as the parts that are the target for the Diag are malfunctioning, etc.	
Analog Monitor	Err E-2	The Chain-Link # that was input is incorrect/an unused Chain-Link #/for an option that is not installed	
	Err E-4	Unable to perform the function as the parts that are the target for the Diag are malfunctioning, etc.	
Component Check	Err E-2	The Chain-Link # that was input is incorrect/an unused Chain-Link #/for an option that is not installed	
	Err E-4	Unable to perform the function as the parts that are the target for the Diag are malfunctioning, etc.	
Tone Up/Down	Err E-4	Unable to perform the function as the parts that are the target for the Diag are malfunctioning, etc.	
ATC Sensor Read	Err E-4	Unable to perform the function as the parts that are the target for the Diag are malfunctioning, etc.	
READ TEMPERTURE	Err E-4	Unable to perform the function as the parts that are the target for the Diag are malfunctioning, etc.	

6.6 KO PROGRAM# LIST

NOTE: *For how to enter the System Administrator Mode, refer to [1.2 Service Call Procedure] in Chapter 1 Service Call Procedure.*

Table 1 KO PROGRAM# LIST

Tools P#	Name	Min	Max	Default	Infrequent Range	Write by KO	Description
100	Energy Saver: Low Power Mode Timer	1	60	1	-	O	This can also be set to '0' at the DIAGNOSTIC_MODE, which will also display its Current Value as '0'.
101	Energy Saver: Sleep Mode Timer	1	239	1	-	O	This can also be set to '0' at the DIAGNOSTIC_MODE, which will also display its Current Value as '0'. (min)
102	Timer: Auto Clear Timer	0	6	2	-	O	0: Return to default display after 15 s 1: Return to default display after 30 s 2: Return to default display after 45 s 3: Return to default display after 1 min 4: Return to default display after 2 min 5: Return to default display after 3 min 6: Return to default display after 4 min
103	Timer: Operating Timer	1	240	10	-	O	sec
104	Timer: No Next Document Timer	1	4	2	-	O	1: Scan Complete in 20 s 2: Scan Complete in 30 s 3: Scan Complete in 60 s 4: Scan Complete in 90 s
105	Timer: Job Cancel Timer	-	-	600	0, 60~5940	O	0: Feature Disabled (s)
106	Timer: Job End Screen Display Timer	1	10	3	-	O	sec
202	Report: Report Manual Output Instruction	1	5	1	-	O	1: Print the System Setting Report 2: Print the Service Setting Report 3: Print the Job History Report 4: Print the Error History Report 5: Print the Job Counter Report
203	Authentication: Account Mode	0	2	0	-	O	0: Account Free Mode 1: Single Account Mode 2: Multi Account Mode
206	Locale Information: Paper Size Group (WC 5021/5019)	2	5	4	-	O	2: XC (NA (North America)) 3: XE/DMO-E (EU) 4: AP/GCO (AP) 5: DMO-W (SA (South America))
206	Locale Information: Paper Size Group (WC 5021/5019)	2	5	3	-	O	2: XC (NA (North America)) 3: XE/DMO-E (EU) 4: AP/GCO (AP) 5: DMO-W (SA (South America))

Table 1 KO PROGRAM# LIST

Tools P#	Name	Min	Max	Default	Infrequent Range	Write by KO	Description
207	Screen Display Settings: UI Panel Display Setting Related to the Following Fault • Drum Life Was Near To End • Drum Life Was Prenear To End • Drum Life Was Life Over • Drum Normal Life Over • Drum Quality Life Over	0	2	1	-	O	0: Do not display 1: Display only after the power had been turned OFF and ON 2: Display only when the Auto Reset Timer had timed-out
208	Screen Display Settings: UI Panel Display Setting Related to the Following Fault • Drum Abnormal Life Over	0	2	2	-	O	0: Do not display 1: Display only after the power had been turned OFF and ON 2: Display only when the Auto Reset Timer had timed-out
209	Screen Display Settings: UI Panel Display Setting Related to the Following Fault • Toner Near Empty • Toner Prenear Empty	0	2	1	-	O	0: Do not display 1: Display only after the power had been turned OFF and ON 2: Display only when the Auto Reset Timer had timed-out
210	Locale Information: Exclusive Document Size Switching in DMO-W Paper Size Group Exclusive Document Size Switching in AP/GCO Paper Size Group	0	2	0	-	O	For Paper Size Group = DMO-W 0: 8.5x13SEF 1: 8.5x13SEF 2: 8.5x13.4SEF For Paper Size Group = AP/GCO 0: 8.5x14SEF 1: 8.5x13SEF 2: 8.5x14SEF
211	Locale Information: Exclusive Document Size Switching in AP/GCO Paper Size Group	0	2	0	-	O	0: B5SEF 1: B5SEF 2: 16K SEF
400	TOOLS_MODE Entry Password 1st Digit	0	9	1	-	O	The 1st digit (highest order digit) number of the KO Password.
401	TOOLS_MODE Entry Password 2nd Digit	0	9	1	-	O	The 2nd digit number of the KO Password.
402	TOOLS_MODE Entry Password 3rd Digit	0	9	1	-	O	The 3rd digit number of the KO Password.
403	TOOLS_MODE Entry Password 4th Digit	0	9	1	-	O	The 4th digit number of the KO Password.
404	TOOLS_MODE Entry Password 5th Digit (WC 5021/5019)	0	10	1	-	O	The 5th digit number of the KO Password. '10' indicates a termination.
404	TOOLS_MODE Entry Password 5th Digit (WC 5021/5019)	0	10	10	-	O	The 5th digit number of the KO Password. '10' indicates a termination.
405	TOOLS_MODE Entry Password 6th Digit	0	10	10	-	O	The 6th digit number of the KO Password. '10' indicates a termination.
500	Input Tray Related Information: Paper Type in Tray 1 (Quality)	-	-	0	0, 5	O	0: Plain 5: Lightweight
501	Input Tray Related Information: Paper Type in STM (Quality)	-	-	0	0, 5	O	0: Plain 5: Lightweight
502	Input Tray Related Information: Paper Type on MSI (Quality)	-	-	0	0, 2, 5	O	0: Plain 2: Heavyweight 5: Lightweight
600	Reset Copy Count for All User in Multi Account Mode	0	1	0	-	O	0: Do not do anything 1: Clear the Copy Counter for All User in Multi Account Mode

Table 1 KO PROGRAM# LIST

Tools P#	Name	Min	Max	Default	Infrequent Range	Write by KO	Description
601	Password of User 1 in Multi Account Mode	-	-	[0001]	4~6digit ASCII Code	O	
602	Password of User 2 in Multi Account Mode	-	-	[0002]	4~6digit ASCII Code	O	
603	Password of User 3 in Multi Account Mode	-	-	[0003]	4~6digit ASCII Code	O	
604	Password of User 4 in Multi Account Mode	-	-	[0004]	4~6digit ASCII Code	O	
605	Password of User 5 in Multi Account Mode	-	-	[0005]	4~6digit ASCII Code	O	
606	Password of User 6 in Multi Account Mode	-	-	[0006]	4~6digit ASCII Code	O	
607	Password of User 7 in Multi Account Mode	-	-	[0007]	4~6digit ASCII Code	O	
608	Password of User 8 in Multi Account Mode	-	-	[0008]	4~6digit ASCII Code	O	
609	Password of User 9 in Multi Account Mode	-	-	[0009]	4~6digit ASCII Code	O	
610	Password of User 10 in Multi Account Mode	-	-	[0010]	4~6digit ASCII Code	O	
611	Copy Impressions Limit for User 1 in Multi Account Mode	0	255	0	-	O	0: No limit. Unit: 1000 impressions.
612	Copy Impressions Limit for User 2 in Multi Account Mode	0	255	0	-	O	0: No limit. Unit: 1000 impressions.
613	Copy Impressions Limit for User 3 in Multi Account Mode	0	255	0	-	O	0: No limit. Unit: 1000 impressions.
614	Copy Impressions Limit for User 4 in Multi Account Mode	0	255	0	-	O	0: No limit. Unit: 1000 impressions.
615	Copy Impressions Limit for User 5 in Multi Account Mode	0	255	0	-	O	0: No limit. Unit: 1000 impressions.
616	Copy Impressions Limit for User 6 in Multi Account Mode	0	255	0	-	O	0: No limit. Unit: 1000 impressions.
617	Copy Impressions Limit for User 7 in Multi Account Mode	0	255	0	-	O	0: No limit. Unit: 1000 impressions.
618	Copy Impressions Limit for User 8 in Multi Account Mode	0	255	0	-	O	0: No limit. Unit: 1000 impressions.
619	Copy Impressions Limit for User 9 in Multi Account Mode	0	255	0	-	O	0: No limit. Unit: 1000 impressions.
620	Copy Impressions Limit for User 10 in Multi Account Mode	0	255	0	-	O	0: No limit. Unit: 1000 impressions.
900	Controller Firmware Version	-	-	-	0.0.0 ~ 255.255.255	X	
901	UI Panel Firmware Version	-	-	-	0.0.0 ~ 255.255.255	X	
902	DADF Firmware Version	-	-	-	0.0.0 ~ 255.255.255	X	
3000	Copy Job: UI Default Settings: Default Tray Setting in Copy Mode	-	-	1	0~2, 5	O	0: APS 1: Tray1 2: STM 5: MSI

Table 1 KO PROGRAM# LIST

Tools P#	Name	Min	Max	Default	Infrequent Range	Write by KO	Description
3002	Copy Job: UI Default Settings: Default R/E Setting in Copy Mode	0	6	3	-	O	0: AMS 1: 50.0% 2: 70.7%/78.5% 3: 100.0% 4: 141.4%/129.4% 5: 200.0% 6: Preset
3003	Copy Job: UI Default Settings: Default Edge Erase Amount	0	50	2	-	O	Document Border Erase Amount
3004	Copy Job: UI Default Settings: Default Paper Type	1	3	1	-	O	1: Text 2: Text & Photo 3: Photo
3005	Copy Job: UI Default Settings: Default Density Adjustment	0	5	2	-	O	0: Lighten +2 1: Lighten +1 2: Normal 3: Darken +1 4: Darken +2 5: Toner Save
3006	Copy Job: UI Default Settings: Default Sharpness	0	4	2	-	O	0: Soften +2 1: Soften +1 2: Normal 3: Sharpen +1 4: Sharpen +2
3007	Copy Job: UI Default Settings: Default Background Suppression	0	1	1	-	O	0: AE=Off 1: AE=On
3008	Copy Job: UI Default Settings: Default Document Size (For PAPER_CLASS = XC)	-	-	16	1, 2, 5~7, 9, 10, 14, 16~19, 23, 134	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 17: 5.5x8.5S 18: A4L 19: A5S 23: B5L 134: Deemed Document Size

Table 1 KO PROGRAM# LIST

Tools P#	Name	Min	Max	Default	Infrequent Range	Write by KO	Description
3008	Copy Job: UI Default Settings: Default Document Size (For PAPER_CLASS = DMO-W)	-	-	16	1, 2, 5~7, 9, 10, 14, 16, 18, 19, 23, 56, 134	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 19: A5S 23: B5L 56: 8.5x13.4S 134: Deemed Document Size
3008	Copy Job: UI Default Settings: Default Document Size (For PAPER_CLASS = AP/GCO)	-	-	18	1~3, 5~7, 9~11,14, 16, 18~20, 23, 134	O	1: 11x17S 2: A3S 3: 8K(GCO)S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 11: 16K(GCO)S 14: B5S 16: 8.5x11L 18: A4L 19: A5S 20: 16K(GCO)L 23: B5L 134: Deemed Document Size
3008	Copy Job: UI Default Settings: Default Document Size (For PAPER_CLASS = DMO-E)	-	-	18	1, 2, 5~7, 9, 10, 14, 16, 18, 19, 23, 134	O	1: 11x17S 2: A3S 5: B4S 6: 8.5x14S 7: 8.5x13S 9: A4S 10: 8.5x11S 14: B5S 16: 8.5x11L 18: A4L 19: A5S 23: B5L 134: Deemed Document Size
3009	Copy Job: UI Default Settings: Duplex Feature Default Setting	0	3	0	-	O	0: S/S 1: S/D 2: D/S 3: D/D

Table 1 KO PROGRAM# LIST

Tools P#	Name	Min	Max	Default	Infrequent Range	Write by KO	Description
3010	Copy Job: UI Default Settings: Preset R/E Ratio (For PAPER_CLASS = XC)	25	400	81	-	O	
3010	Copy Job: UI Default Settings: Preset R/E Ratio (For PAPER_CLASS = DMO-W)	25	400	81	-	O	
3010	Copy Job: UI Default Settings: Preset R/E Ratio (For PAPER_CLASS = AP/GCO)	25	400	81	-	O	
3010	Copy Job: UI Default Settings: Preset R/E Ratio (For PAPER_CLASS = DMO-E)	25	400	81	-	O	
3011	Copy Job: Control PArameter: Background Suppression Level	0	4	1	-	O	0: Level 1 1: Level 2 2: Level 3 3: Level 4 4: Level 5
3012	Copy Job: UI Default Settings: Default Edge Erase Amount (for ID Card Copy)	0	10	2	-	O	Document Border Erase Amount (for ID Card Copy)
3013	Copy Job: Scan Size in ID Card Copy (One side of a square)	86	297	100	-	O	
3014	Copy Job: UI Default Settings: Flip Direction for 2 Sided when Using SEF Document and SEF Paper	3	4	3	-	O	3: Flip on Long Edge 4: Flip on Short Edge
4000	Scan Job: Control Parameter Default Sharpness Adjustment	0	4	2	-	O	0: Soften +2 1: Soften +1 2: Normal 3: Sharpen +1 4: Sharpen +2
4002	Scan Job: Control Parameter Background Suppression Level Adjustment	0	4	1	-	O	0: Level 1 1: Level 2 2: Level 3 3: Level 4 4: Level 5
7000	Copy Counter	0	10000000	0	-	X	The counter for Copy Job.
7001	Print Counter	0	10000000	0	-	X	The counters for Print Job, Report Job, and Maintenance Report.
7002	Completed Copy Impressions for User 1 in Multi Account Mode	0	100000	0	-	X	0
7003	Completed Copy Impressions for User 2 in Multi Account Mode	0	100000	0	-	X	0
7004	Completed Copy Impressions for User 3 in Multi Account Mode	0	100000	0	-	X	0
7005	Completed Copy Impressions for User 4 in Multi Account Mode	0	100000	0	-	X	0
7006	Completed Copy Impressions for User 5 in Multi Account Mode	0	100000	0	-	X	0

Table 1 KO PROGRAM# LIST

Tools P#	Name	Min	Max	Default	Infrequent Range	Write by KO	Description
7007	Completed Copy Impressions for User 6 in Multi Account Mode	0	1000000	0	-	X	0
7008	Completed Copy Impressions for User 7 in Multi Account Mode	0	1000000	0	-	X	0
7009	Completed Copy Impressions for User 8 in Multi Account Mode	0	1000000	0	-	X	0
7010	Completed Copy Impressions for User 9 in Multi Account Mode	0	1000000	0	-	X	0
7011	Completed Copy Impressions for User 10 in Multi Account Mode	0	1000000	0	-	X	0

7 Wiring Data

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7.1.1 Plug/Jack Location List

How to Use the Plug/Jack Location List

- To find which position to install specific connectors to, refer to the table 'Plug/Jack Location List ' for Figure No. and Item No., and then to the figure in 'Plug/Jack Positions.'
- P/J No. on 'Plug/Jack Location List' is expressed in the four ways below:
  - J250 represents Jack 250.
  - P250 represents Plug 250.
  - CN1 represents Connector 1.
  - FS1 represents Faston Terminal 1.

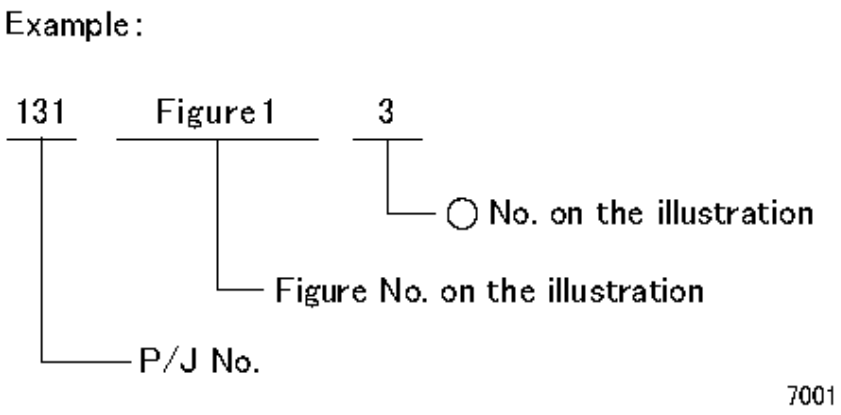


Figure 1 7001

Plug/Jack Location List

Table 1 Plug/Jack Location List

P/J	Fig	Item	Remarkes (where to Connect)
JA	5	9	DRUM CRUM PWB
J1	8	9	AC Inlet
J2	8	7	AC Inlet
J3	8	1	Main Power Switch
J4	8	2	Main Power Switch
J5	8	11	Main Power Switch
J6	8	10	Main Power Switch
J7	8	8	AC Inlet
P/J10	4	7	Fusing Unit
P/J100	7	4	L/H Cover Interlock Switch
P/J101	5	1	Front Cover Interlock Switch
P/J101C	9	2	Tray 2 Nudger Level Sensor (1TM)
P/J102C	9	3	Tray 2 No Paper Sensor (1TM)
P/J102	4	2	MSI No Paper Sensor
P/J103	4	10	Fusing Unit Exit Sensor
P/J104	4	1	Regi. Sensor
P/J105	4	3	Tray 1 No Paper Sensor
P/J108	5	10	Front Cover Switch
P/J130	5	3	ROS Motor
P/J140	5	6	LD PWB (8pin)
P/J160	5	5	LD PWB (2pin)
P/J201	5	7	LD PWB
P/J201	7	5	Main Drive Motor (2pin)
P/J202	7	3	Main Drive Motor (8pin)
P/J203	4	6	Duplex Clutch
P/J204	7	6	Regi. Clutch
P/J205	7	7	Tray 1 Feed Clutch
P/J206	4	4	MSI Feed Clutch
P/J207	6	12	ESS/MCU PWB (to Toner Dispense Motor)
P/J208	7	2	Invert Motor
P/J209	6	6	ESS/MCU PWB (to Nohad Fan)
P/J220C	9	1	Tray 2 Feed/Lift Up Motor (1TM)
P/J400	6	19	ESS/MCU PWB
P/J401	6	13	ESS/MCU PWB
P/J402	6	11	ESS/MCU PWB
P/J403	6	8	ESS/MCU PWB
P/J405	6	7	ESS/MCU PWB
P/J406	6	10	ESS/MCU PWB
P/J407	6	9	ESS/MCU PWB

Table 1 Plug/Jack Location List

P/J	Fig	Item	Remarkes (where to Connect)
P/J409	6	14	ESS/MCU PWB
P/J410	6	16	ESS/MCU PWB
P/J411	6	17	ESS/MCU PWB
P/J412	6	15	ESS/MCU PWB
P413C	10	8	STM PWB
P413	6	20	ESS/MCU PWB (Connect to J413)
J413	9	8	Connector (Connect to P413)
P/J415	6	1	ESS/MCU PWB
P/J416	6	5	ESS/MCU PWB
P/J420	6	3	ESS/MCU PWB
P421	6	4	ESS/MCU PWB (Connect to J421)
J421	2	11	Connector (Connect to P421)
P/J422	6	2	ESS/MCU PWB
P/J426	6	18	ESS/MCU PWB
J443	6	21	ESS/MCU PWB
P/J500	7	8	HVPS
P/J510	8	6	LVPS
P/J511	8	5	LVPS
P/J512	8	4	LVPS
P/J513	8	3	LVPS
P/J541C	10	1	STM PWB
P/J548C	10	6	STM PWB
P/J549C	10	5	STM PWB
P/J552C	10	7	STM PWB
P/J600	4	9	Heat Roll Center / Rear Thermistor (4pin) (WHT)
P/J601	4	5	Connector
P/J602	4	8	Connector (3pin) (BLU)
P/J603	7	1	Connector
P/J615	5	8	DRUM Cartridge
P/J620	5	4	Connector
P/J661C	9	5	Connector (1TM)
P/J700	3	7	IIT Carriage
P/J720	3	1	IIT Regi. Sensor
P/J721	3	2	Carriage Motor
P/J740	3	3	UI PWB
P/J751	2	9	DADF PWB
P/J752	2	8	DADF PWB
P/J753	2	7	DADF PWB
P/J754	2	4	DADF PWB
P/J756	2	5	DADF PWB (to Exit Nip Release Solenoid)
P/J758	2	6	DADF PWB

Table 1 Plug/Jack Location List

P/J	Fig	Item	Remarkes (where to Connect)
P/J759	2	3	DADF PWB
P/J760	2	2	DADF PWB
P/J761	2	1	DADF PWB
P/J764	1	3	Document Tray Size Sensor 1
P/J765	1	4	Document Tray Size Sensor 2
P/J766	1	6	DADF Tray Set Guide Sensor 3
P/J767	1	5	DADF Tray Set Guide Sensor 2 (BLU)
P/J768	1	2	DADF Tray Set Guide Sensor 1
P/J770	1	1	DADF Document Set Sensor
P/J771	1	7	DADF Invert Sensor
P/J772	1	9	DADF Pre Regi. Sensor
P/J773	1	8	DADF Regi. Sensor
P/J774	2	14	DADF Open Sensor
P/J777	2	13	DADF Feed Motor
P/J780	2	10	Feed Clutch
P/J781	2	12	T/A Clutch
P/J812C	9	6	STM Left Cover Switch
P/J820C	9	4	Tray 2 Paper Size Switch (1TM)
P/J821C	9	7	Feed Out Sensor 2 (1TM)
P/J822C	10	4	STM Take Away Roll Clutch
P/J826C	10	2	STM Take Away Motor
P/J841C	10	3	Connector (1TM)
P/J2011	5	2	SOS PWB
P/J7001	3	6	IIT Carriage
P/J7002	3	5	LED Lamp PWB
P/J7401	3	4	Connector (LCD Display)
F1	2	15	DADF Feeder Cover Interlock Switch
F2	2	16	DADF Feeder Cover Interlock Switch

7.1.2 Plug/Jack Location

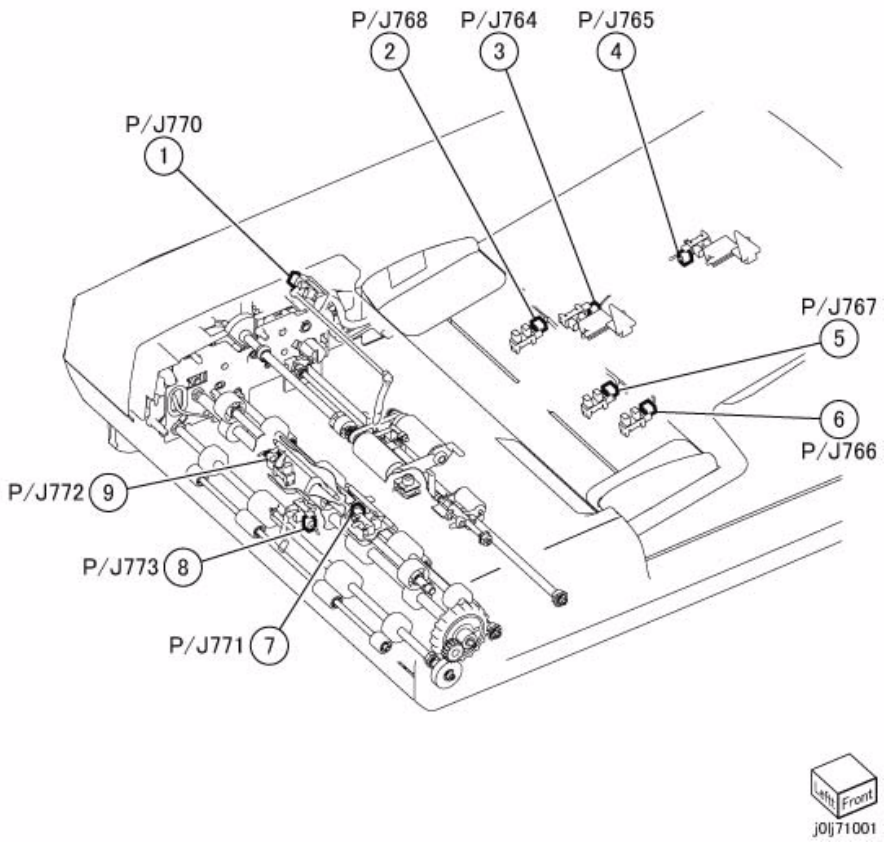


Figure 1 DADF 1 of 2 (j0lj71001)

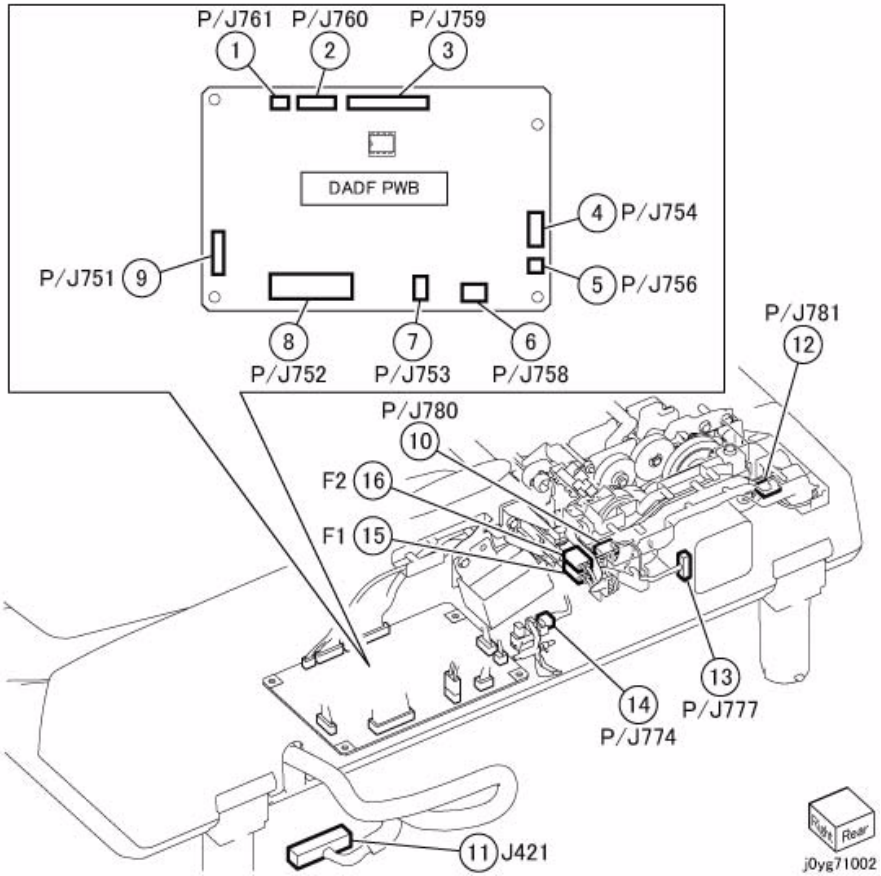


Figure 2 DADF 2 of 2 (j0yg71002)

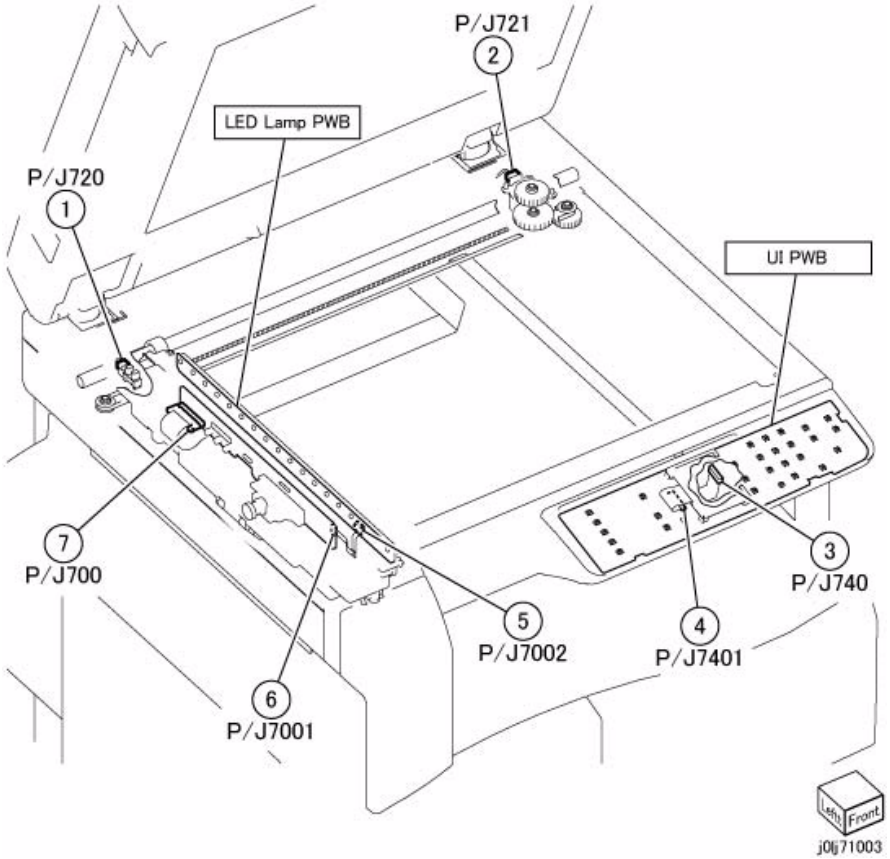


Figure 3 IIT / UI (j0lj71003)

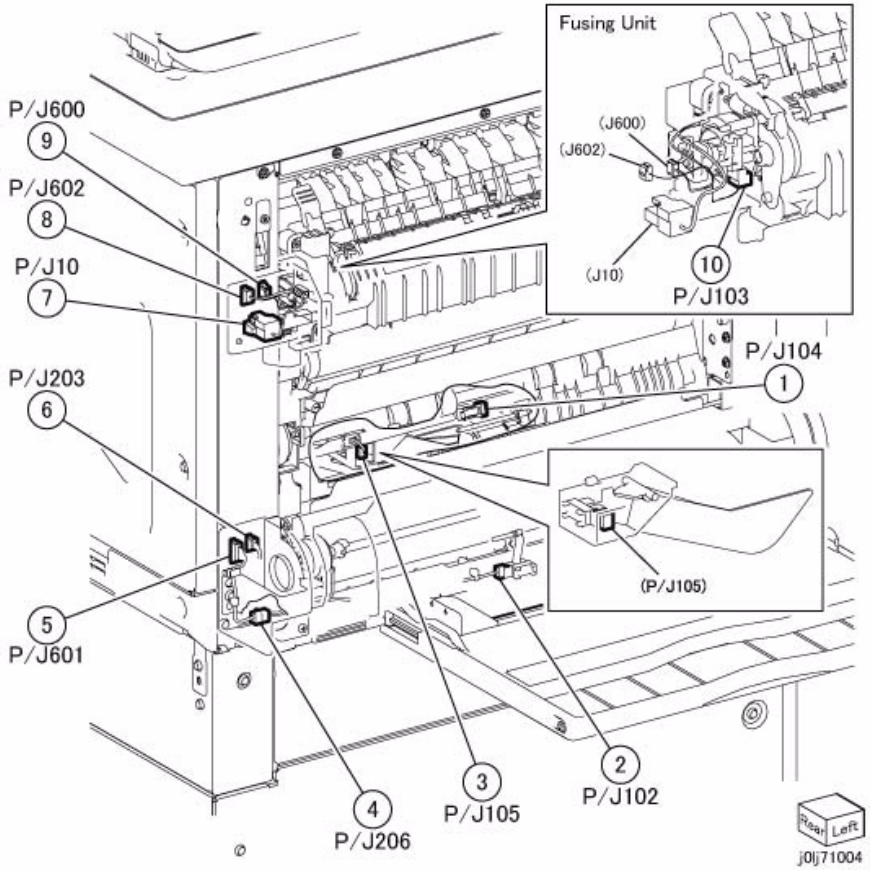


Figure 4 L/H Unit / MSI / Fusing Unit (j0lj71004)

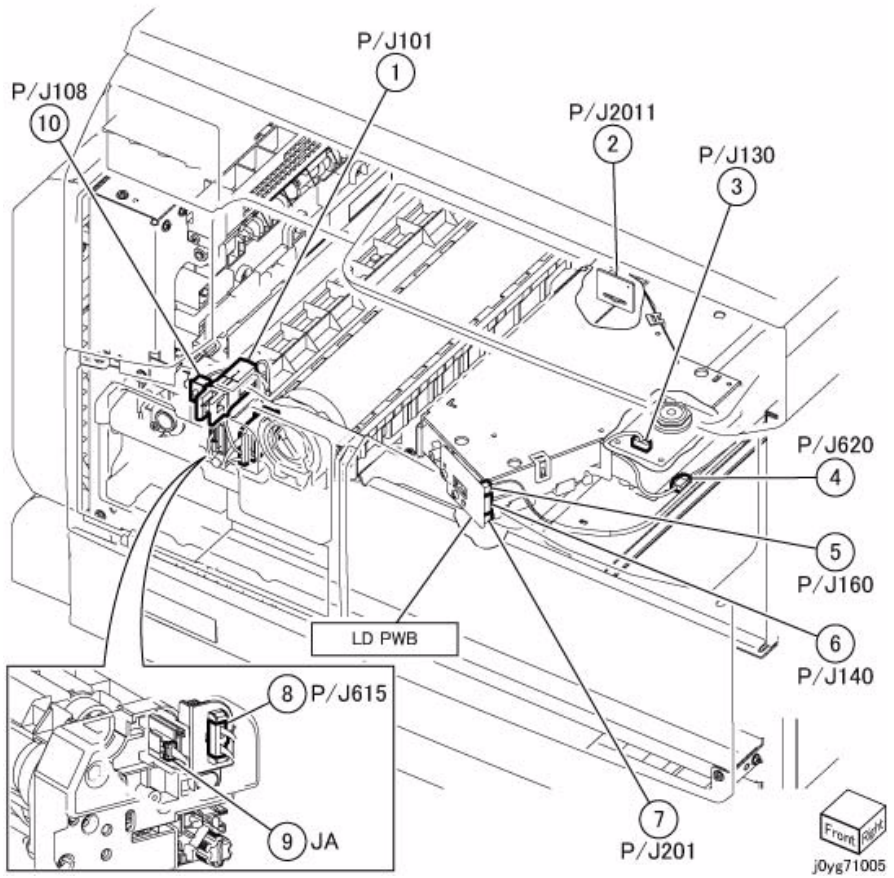


Figure 5 ROS Unit / DRUM Cartridge (j0yg71005)

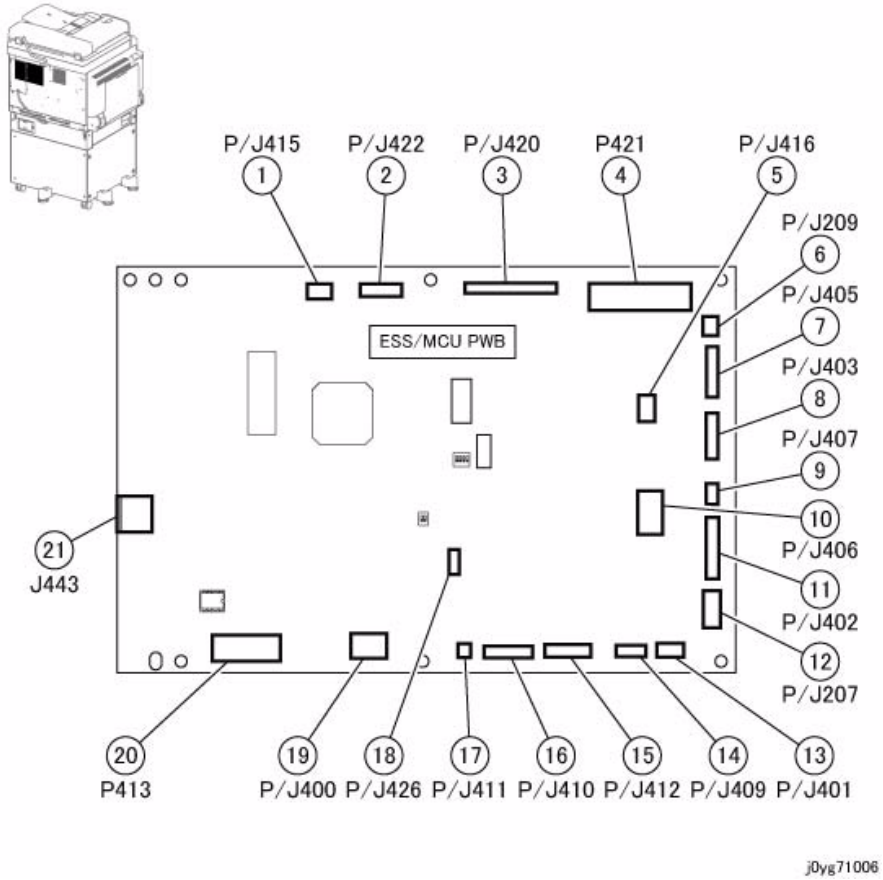


Figure 6 ESS/MCU PWB (j0yg71006)

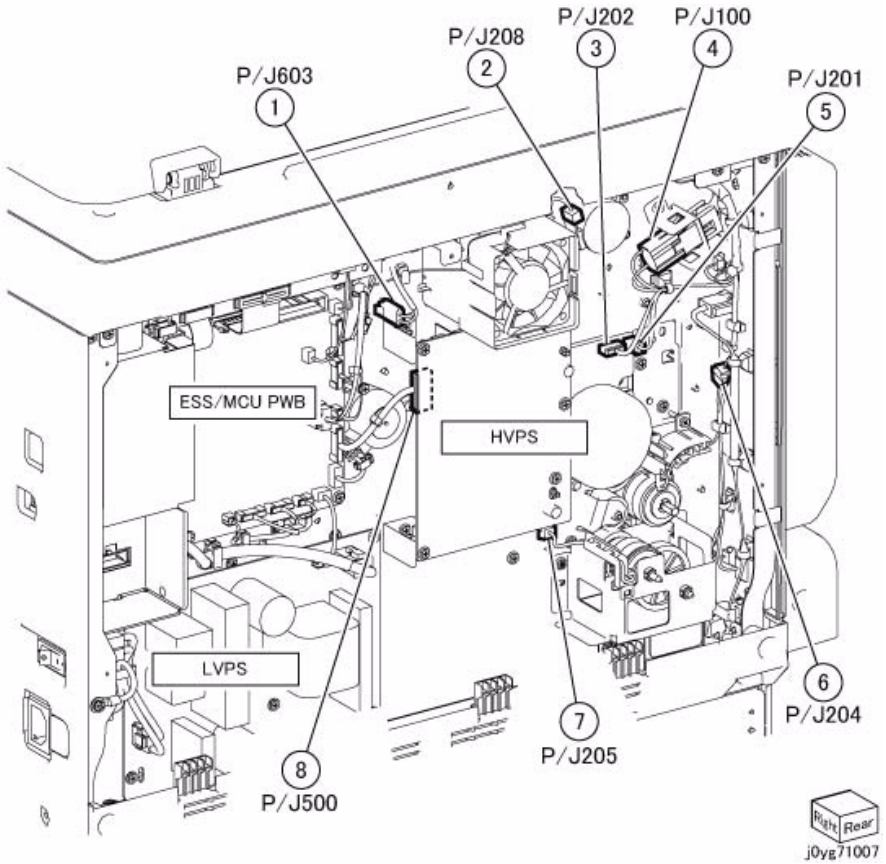


Figure 7 Rear Location 1 of 2/Net I/F PWB (Option) (j0yg71007)

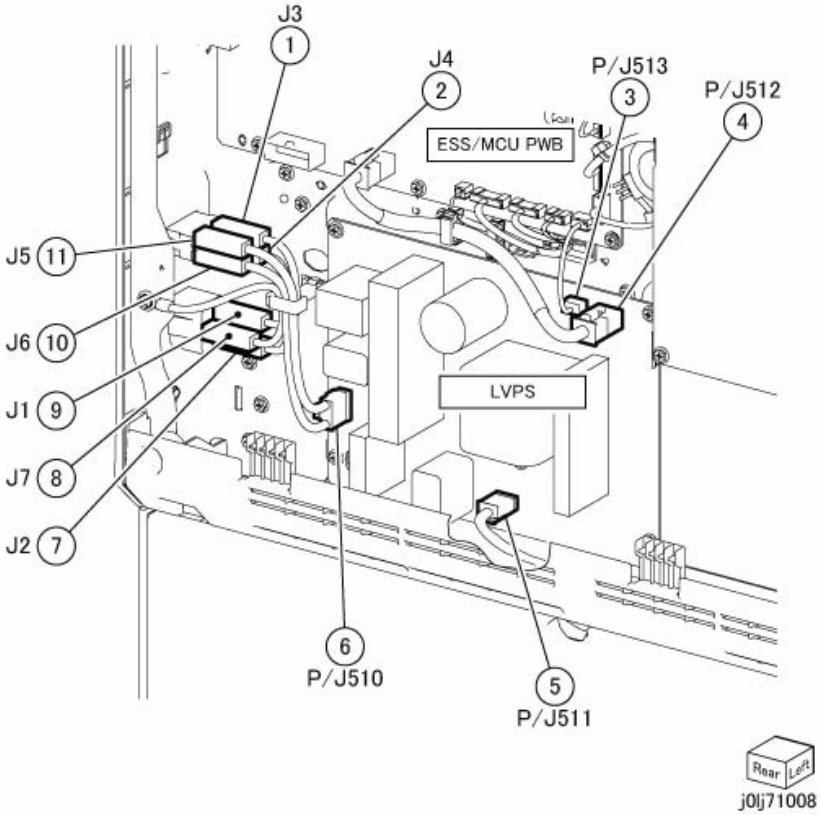


Figure 8 Rear Location 2 of 2 (j0lj71008)

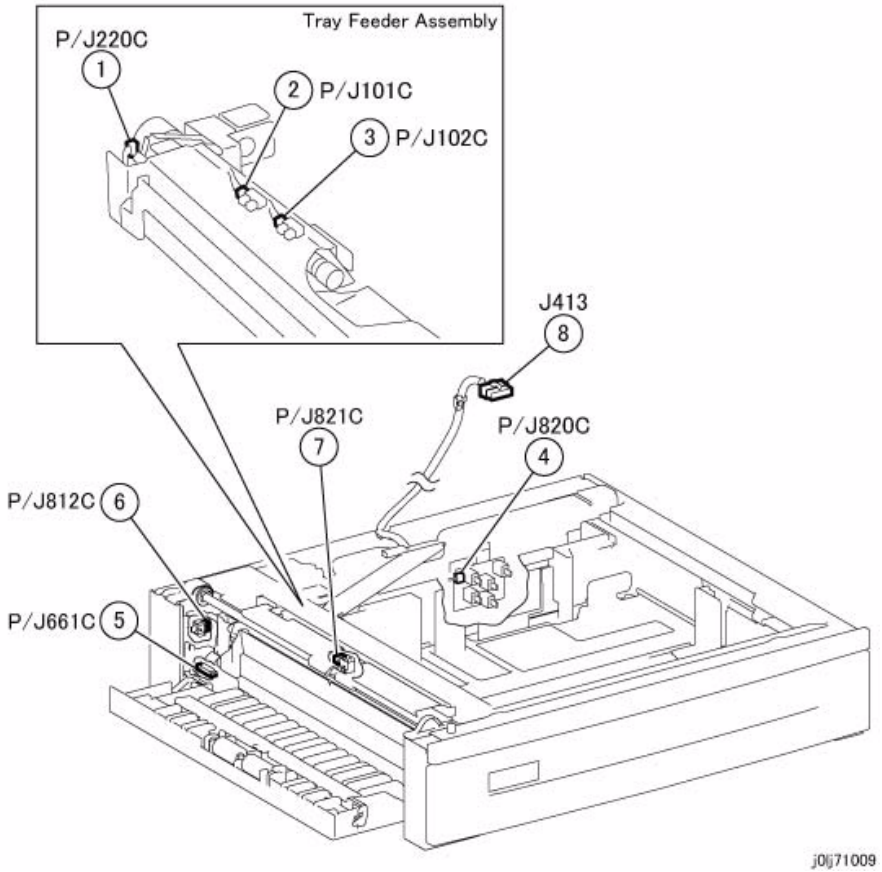


Figure 9 1TM 1 of 2 (j0lj71009)

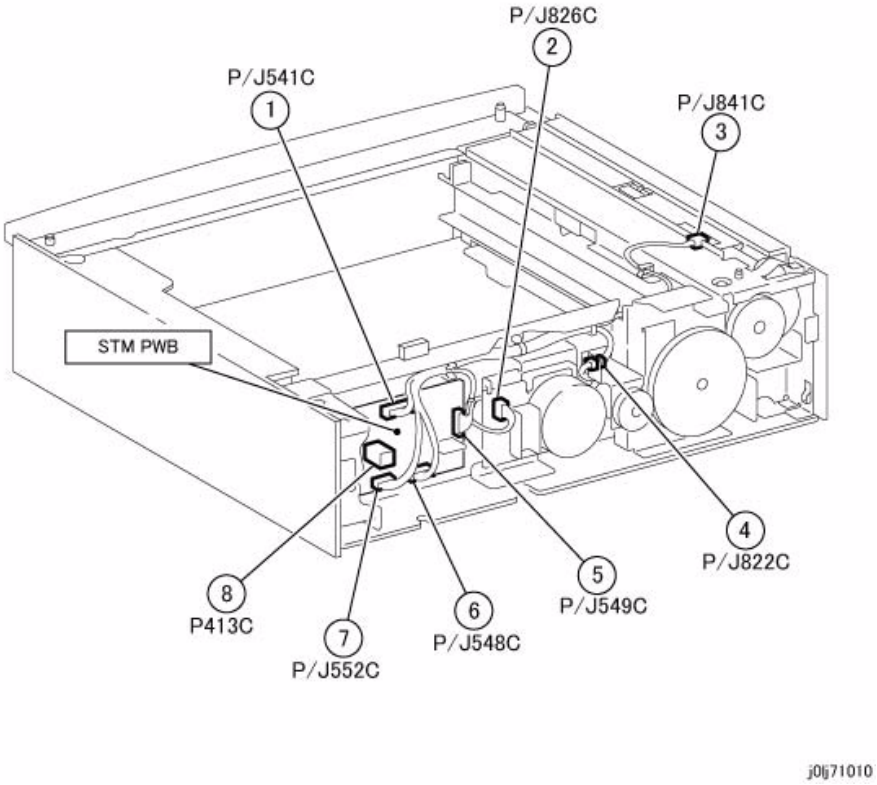


Figure 10 1TM 2 of 2 (j0lj71010)

7.2.1.1 ACH

7.2.1.1 ACH

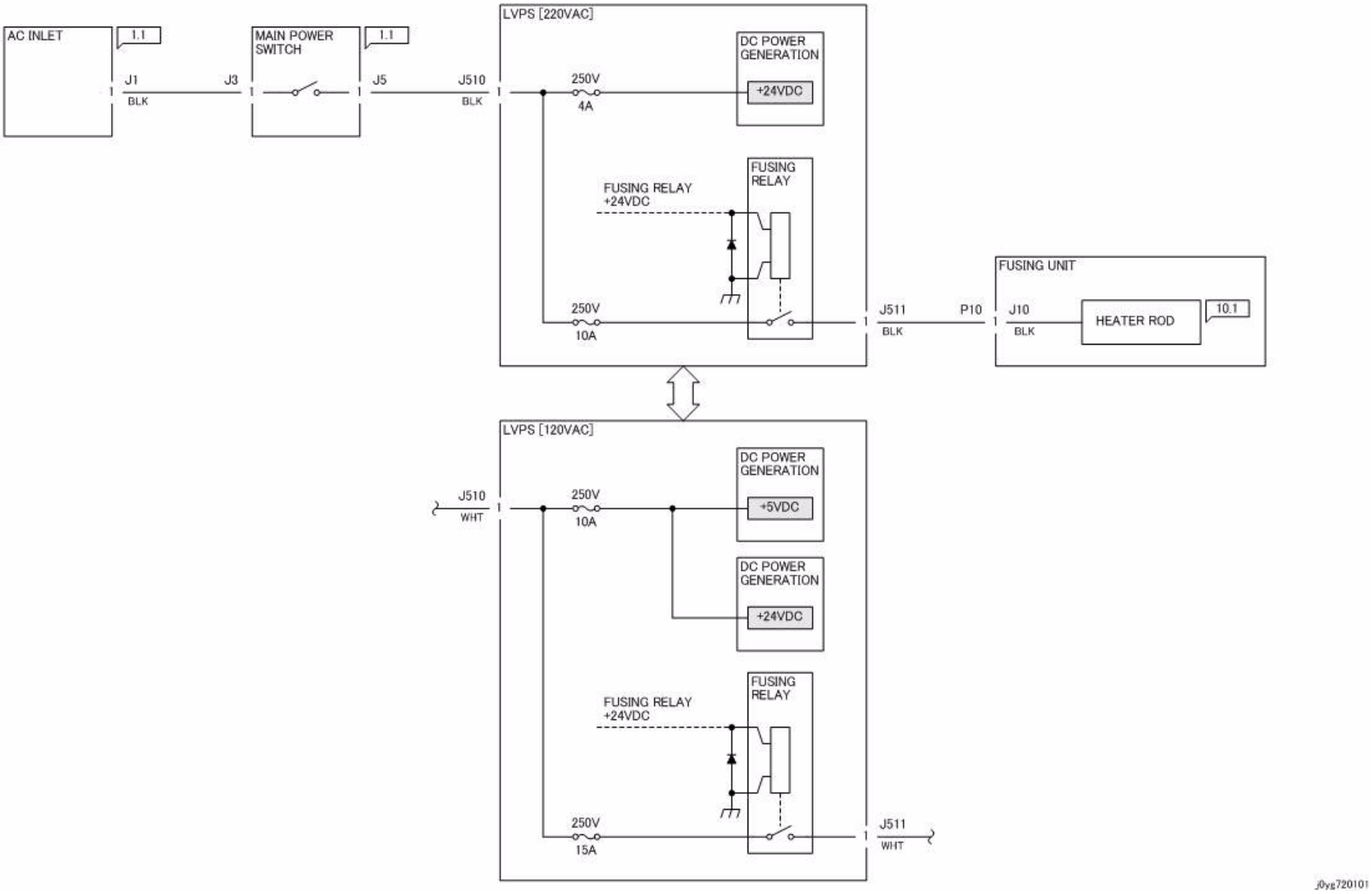


Figure 1 j0yg720101

7.2.1.2 ACN

7.2.1.2 ACN

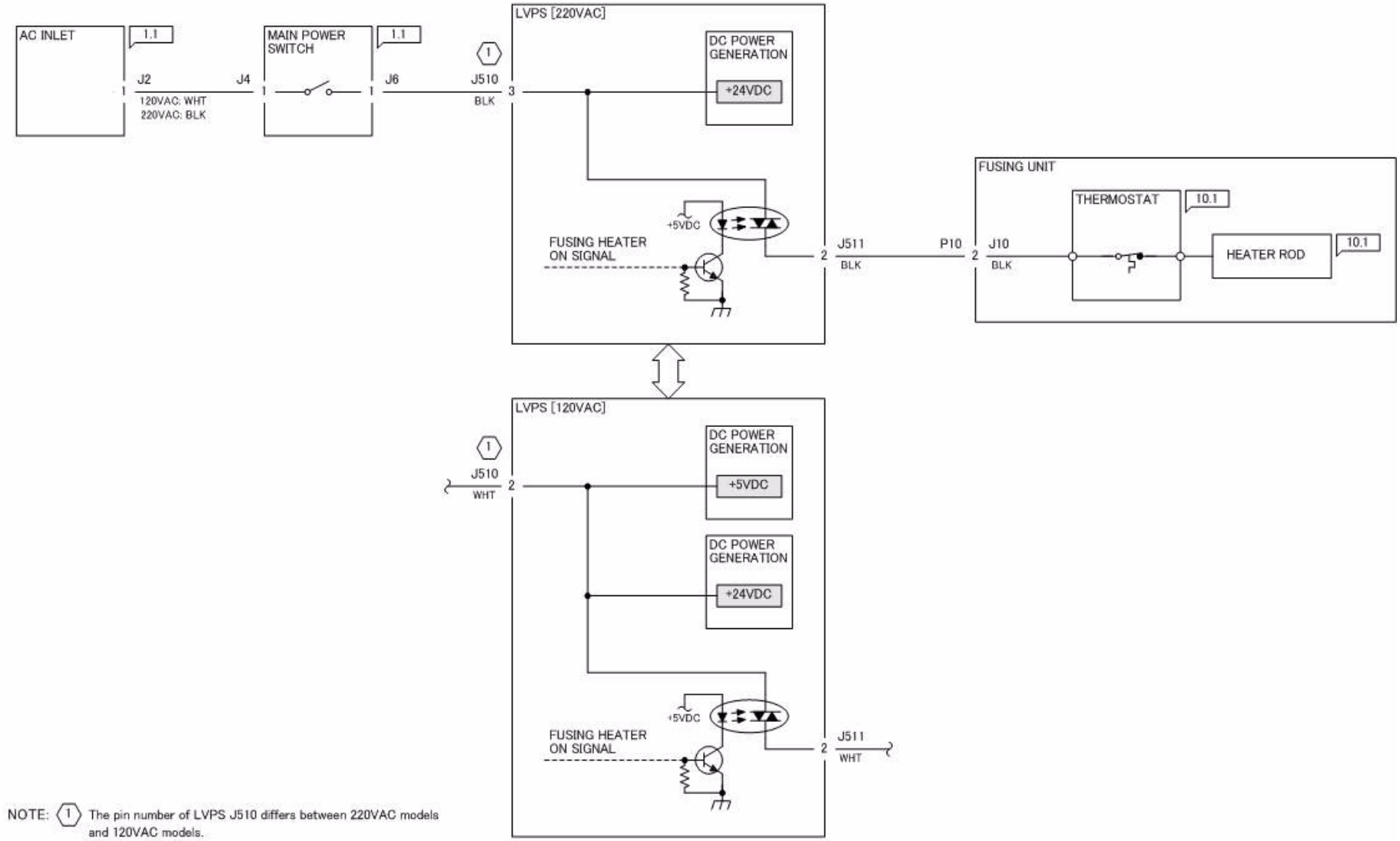
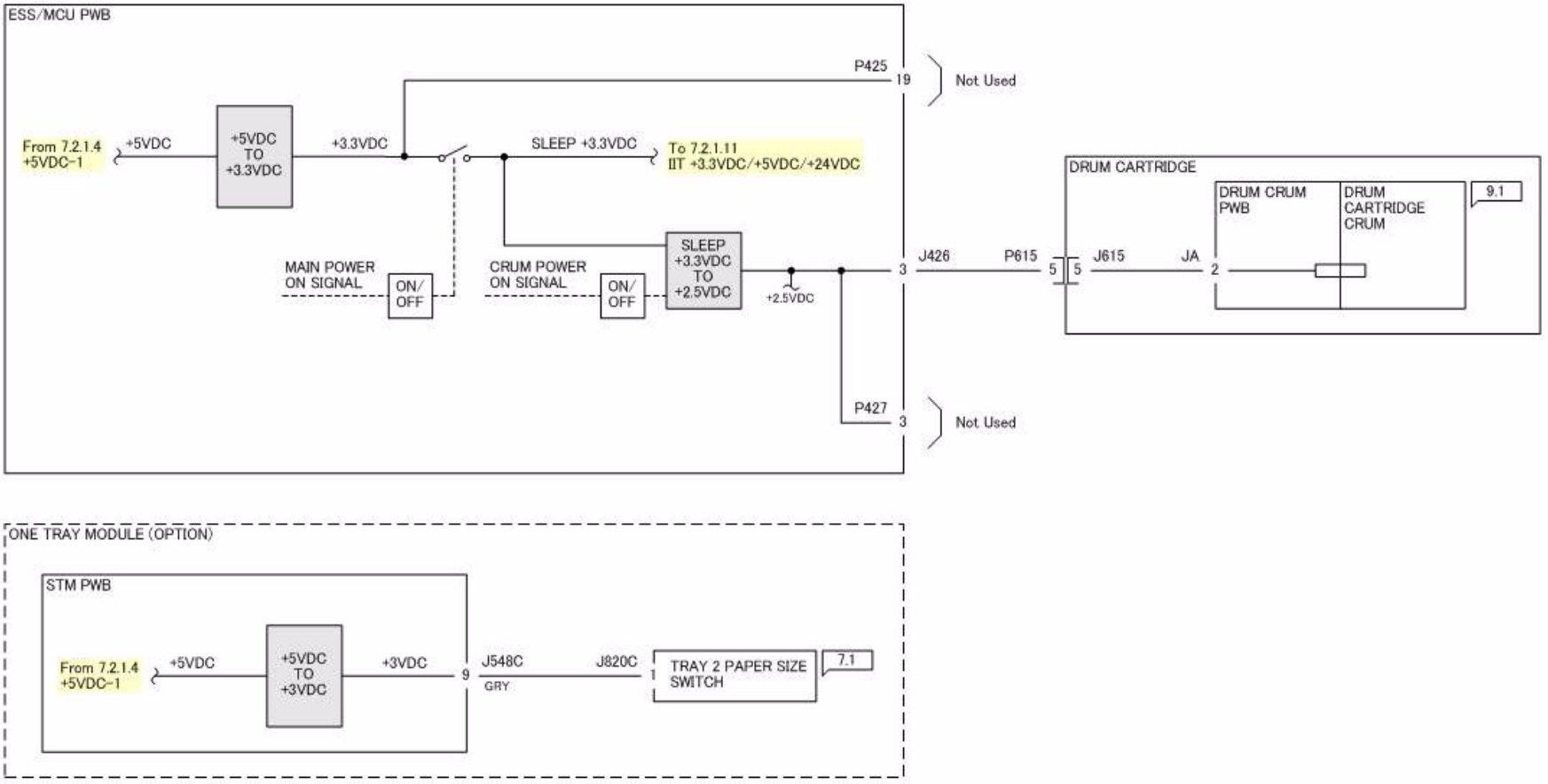


Figure 1 j0yg720102

7.2.1.3 +2.5VDC/+3.3VDC

7.2.1.3 +2.5VDC/+3.3VDC



j0yg720103

Figure 1 j0yg720103

7.2.1.4 +5VDC-1

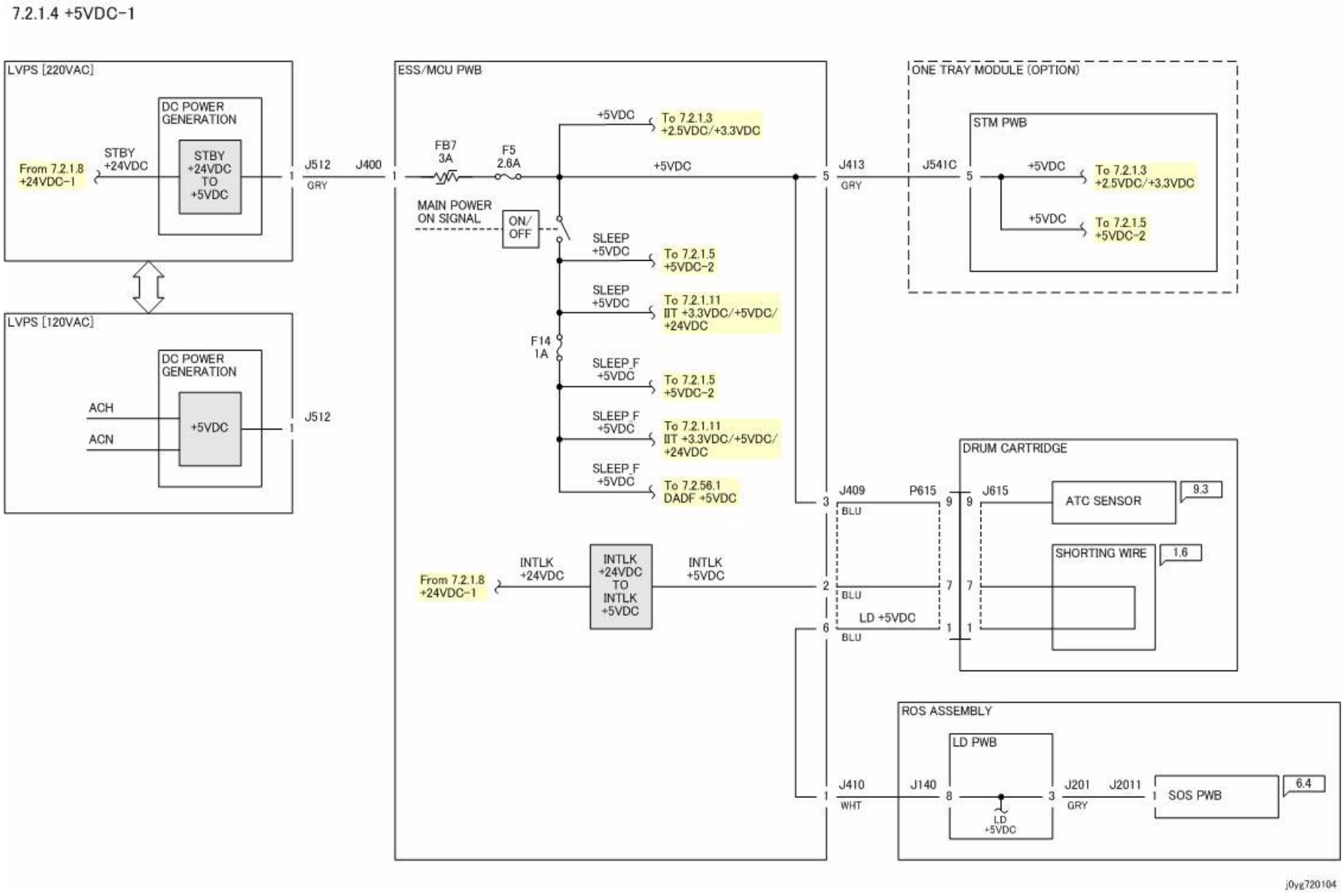


Figure 1 j0yg720104

7.2.1.5 +5VDC-2

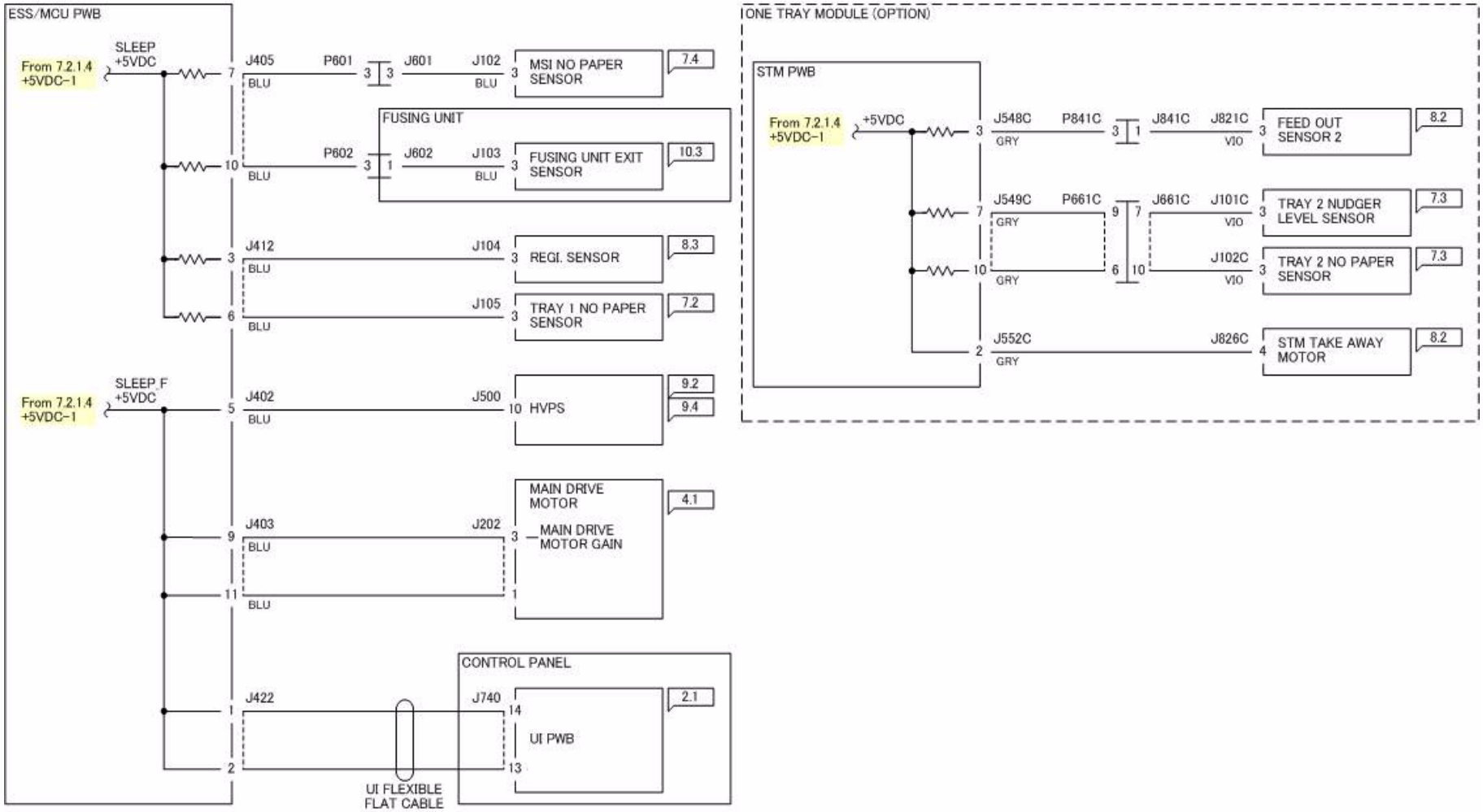


Figure 1 j0yg720105

7.2.1.6 5V RTN-1

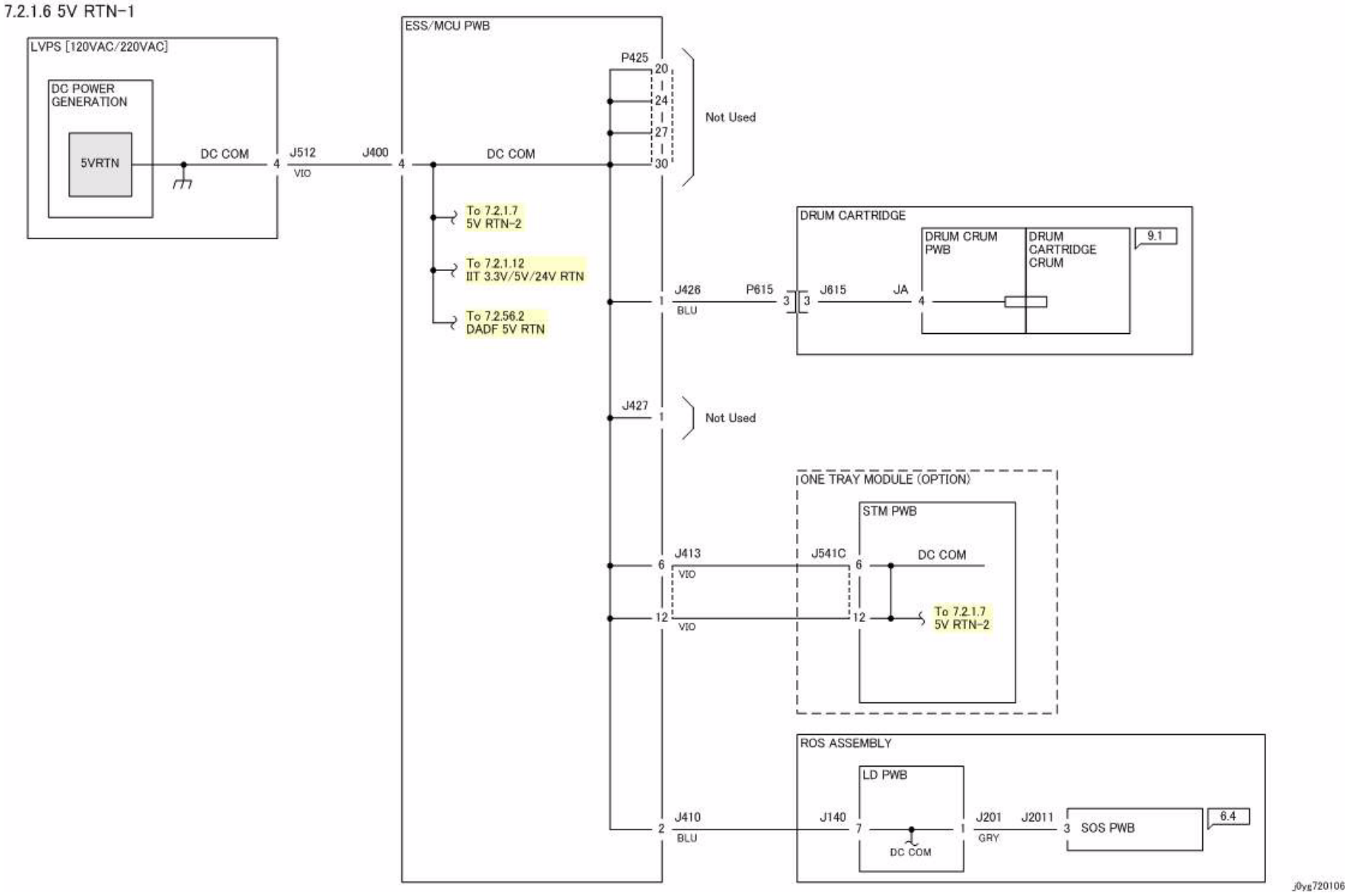


Figure 1 j0yg720106

7.2.1.7 5V RTN-2

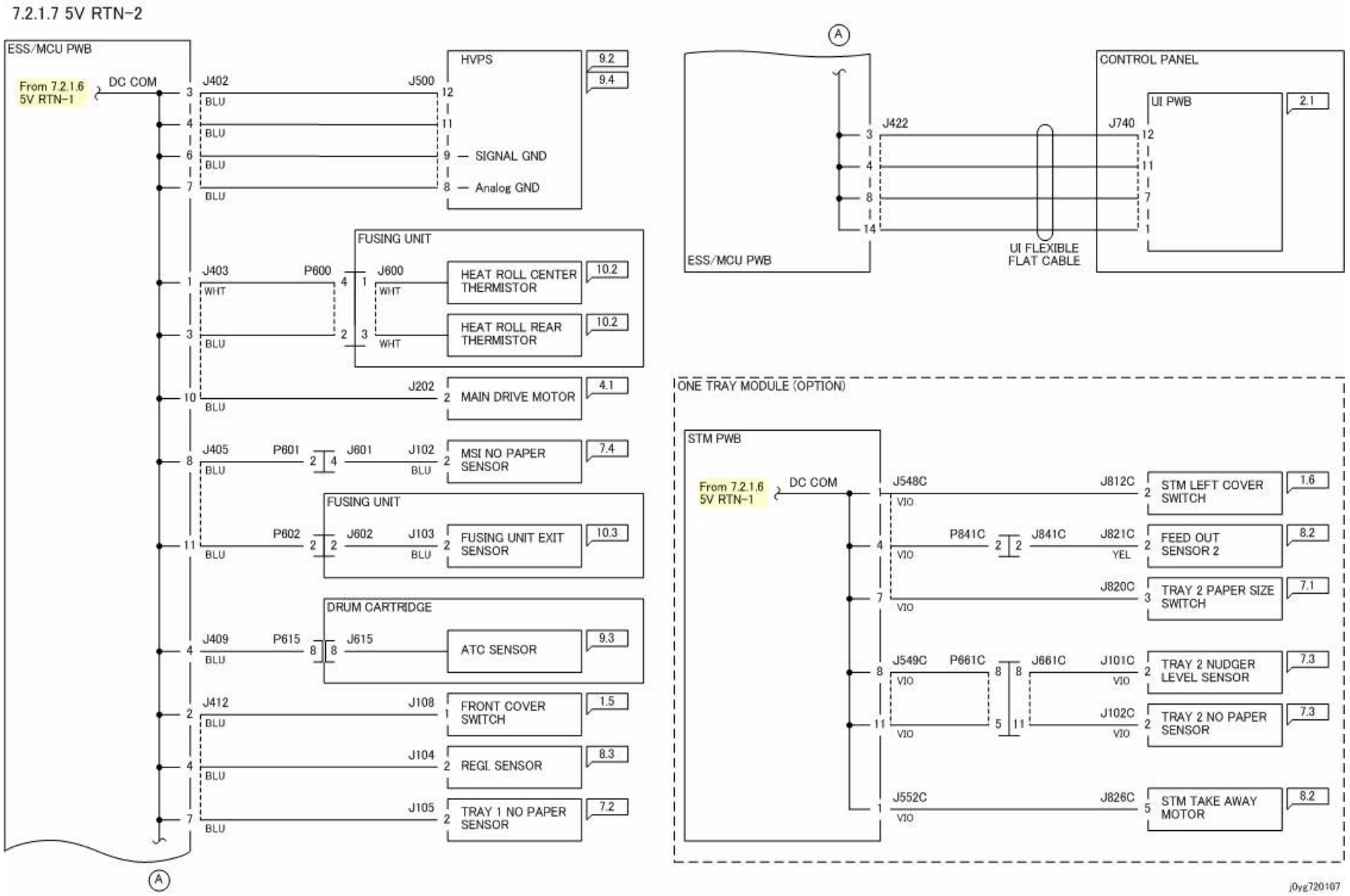


Figure 1 j0yg720107

7.2.1.8 +24VDC-1

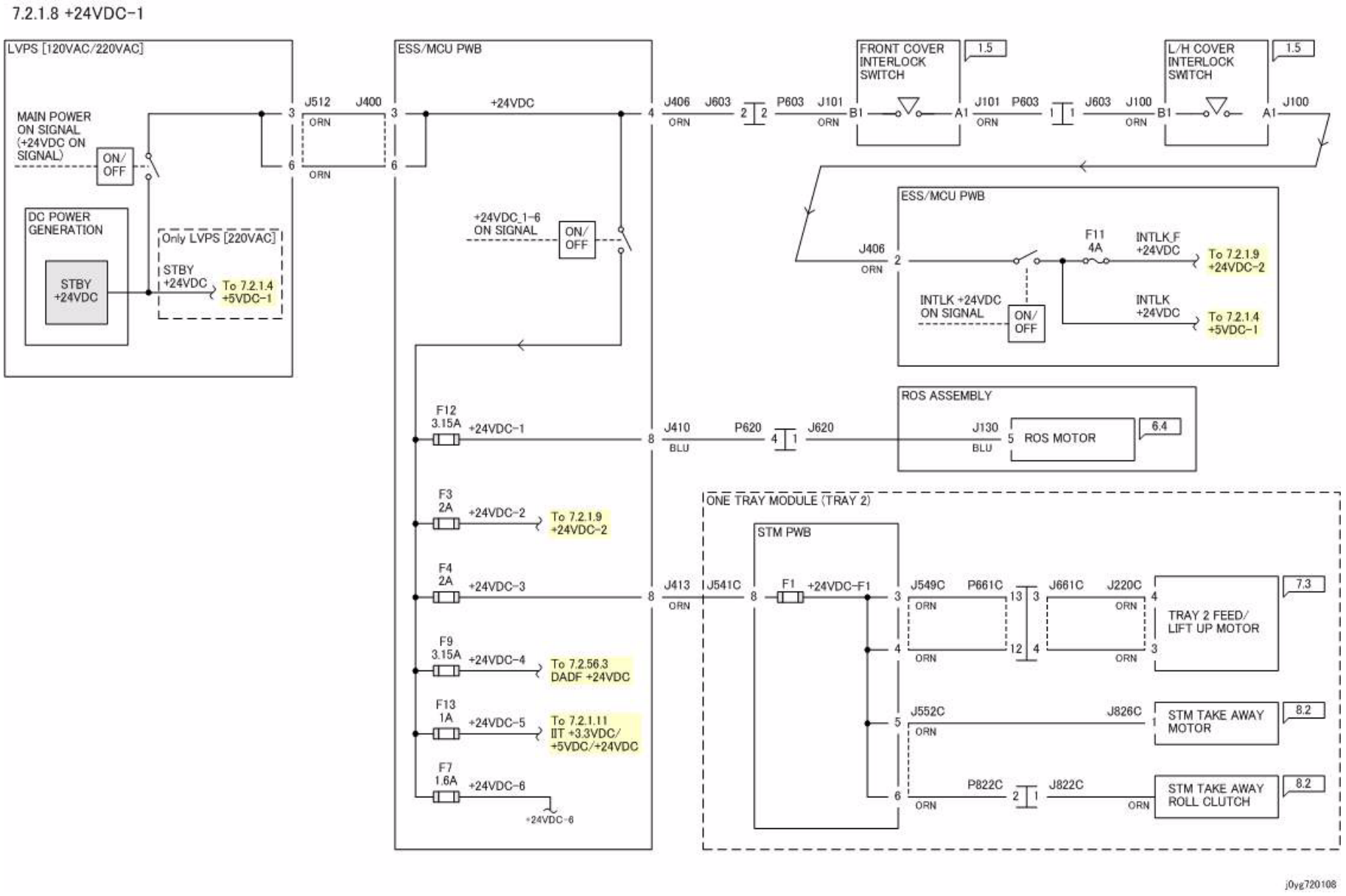
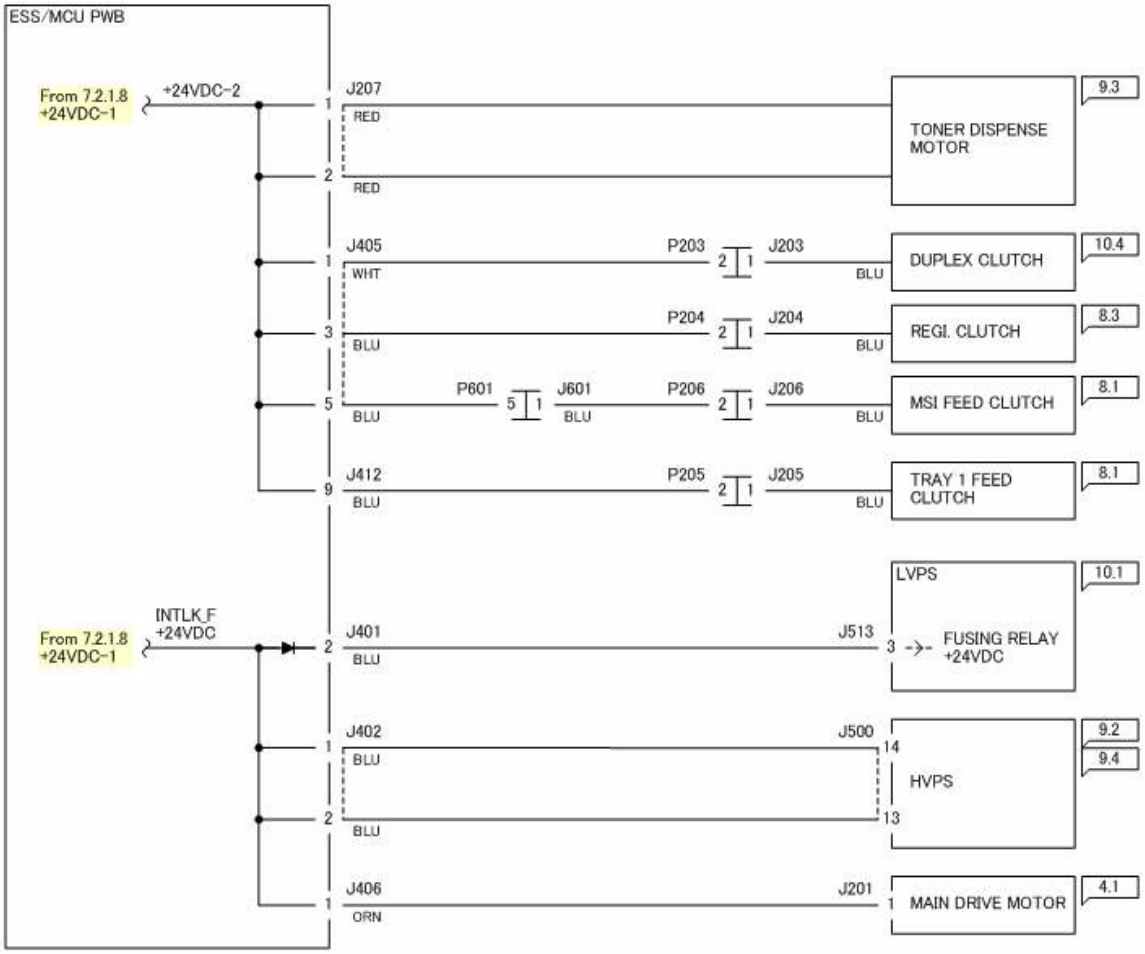


Figure 1 j0yg720108

7.2.1.9 +24VDC-2

7.2.1.9 +24VDC-2



j0yg720109

Figure 1 j0yg720109

7.2.1.10 24V RTN

7.2.1.10 24V RTN

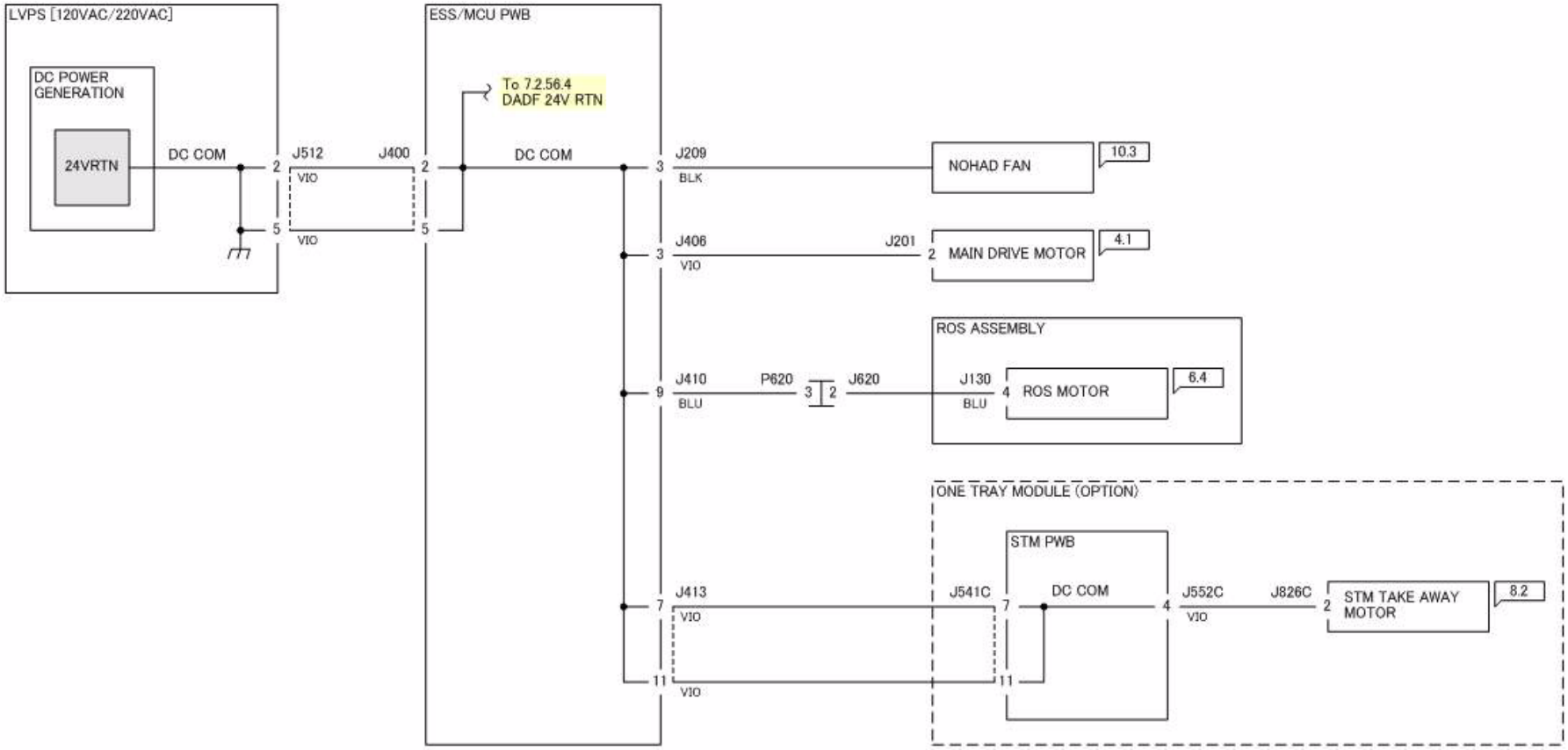
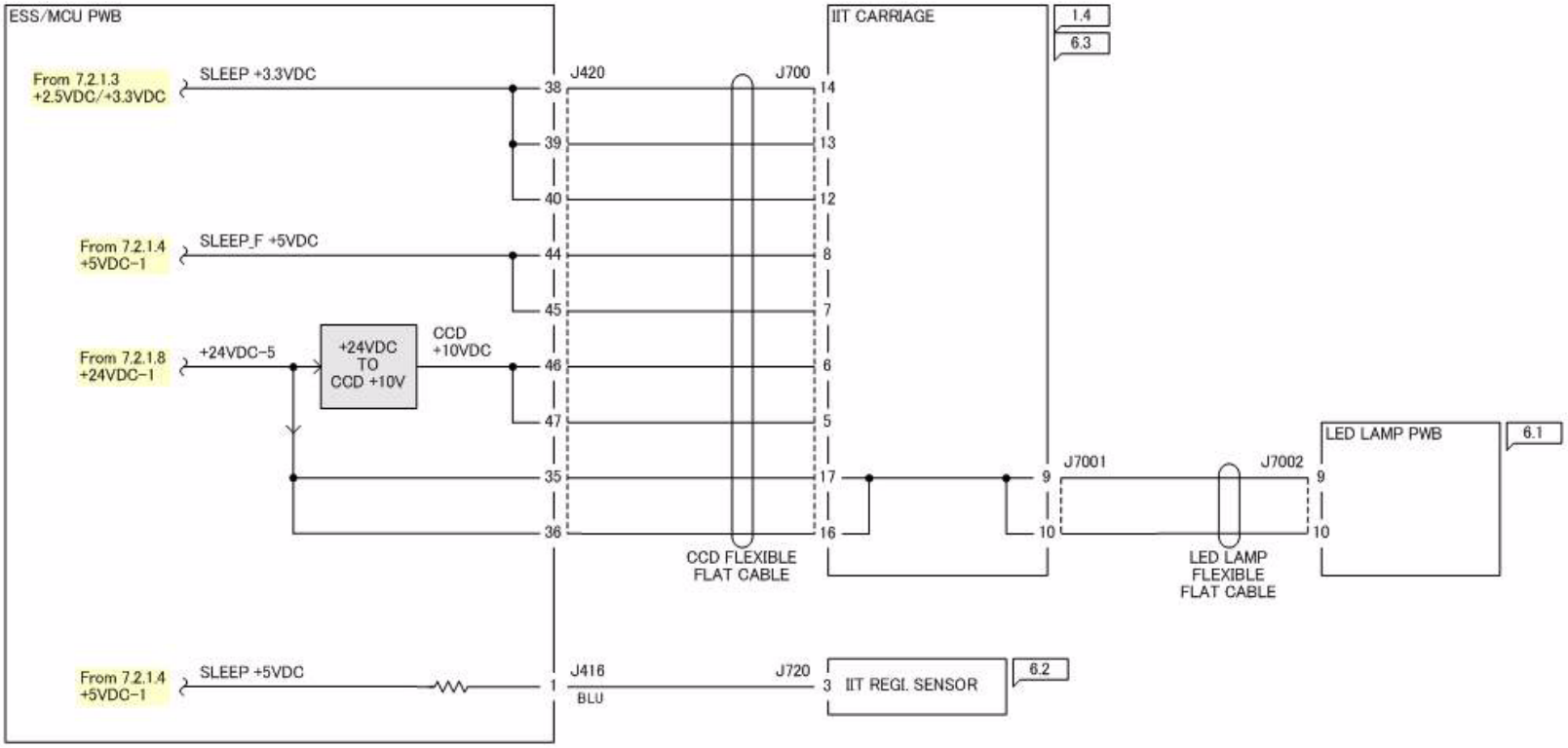


Figure 1 j0yg720110

7.2.1.11 IIT +3.3VDC/+5VDC/+24VDC

7.2.1.11 IIT +3.3VDC/+5VDC/+24VDC



j0yg720111

Figure 1 j0yg720111

7.2.1.12 IIT 3.3V/5V/24V RTN

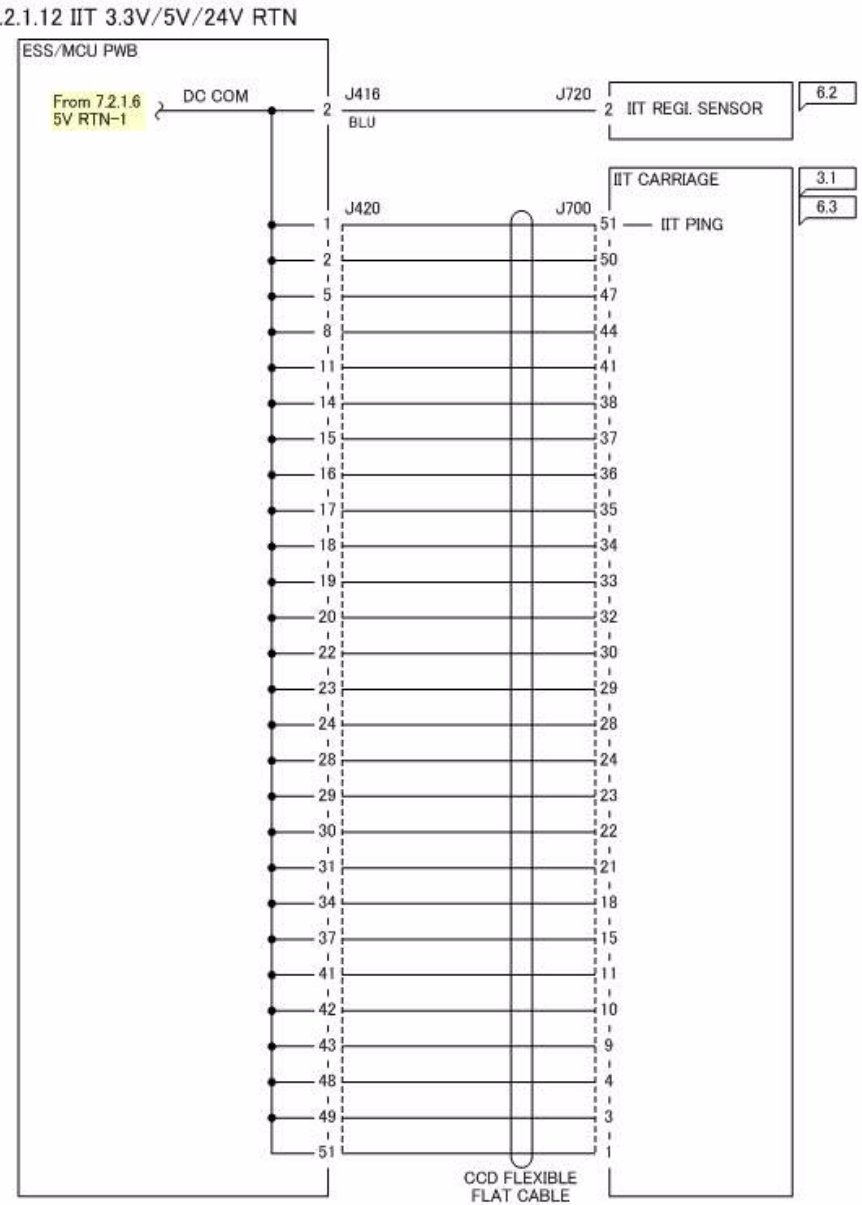


Figure 1 j0yg720112

7.2.56.1 DADF +5VDC

7.2.56.1 DADF +5VDC

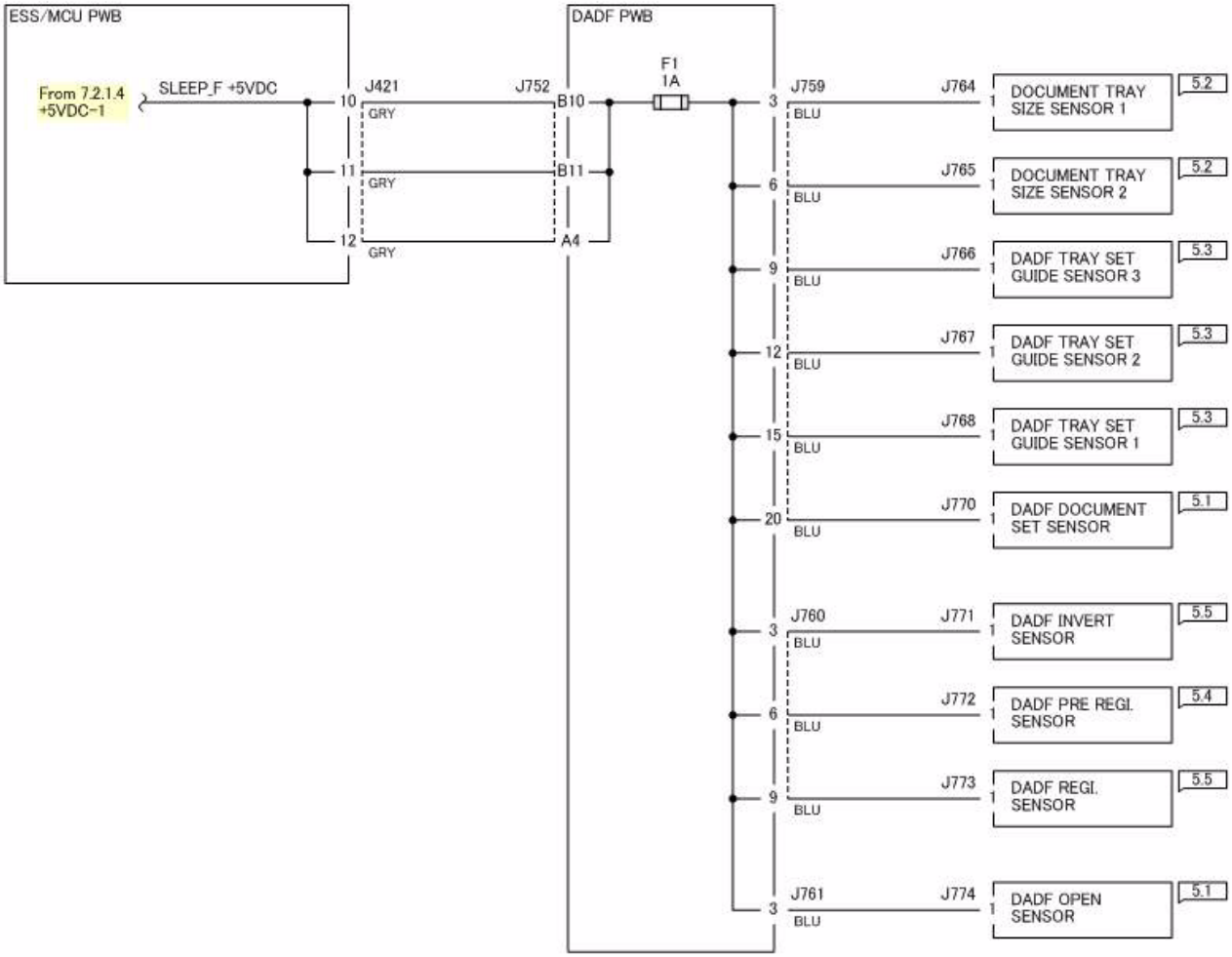
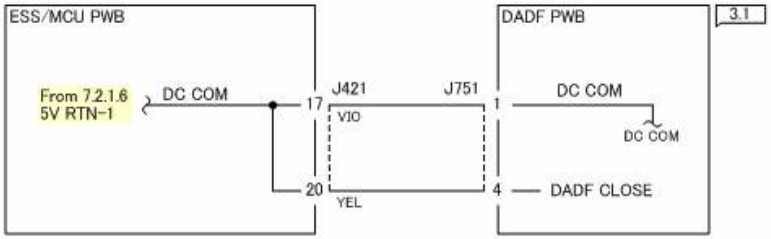


Figure 1 j0yg725601

7.2.56.2 DADF 5V RTN

7.2.56.2 DADF 5V RTN

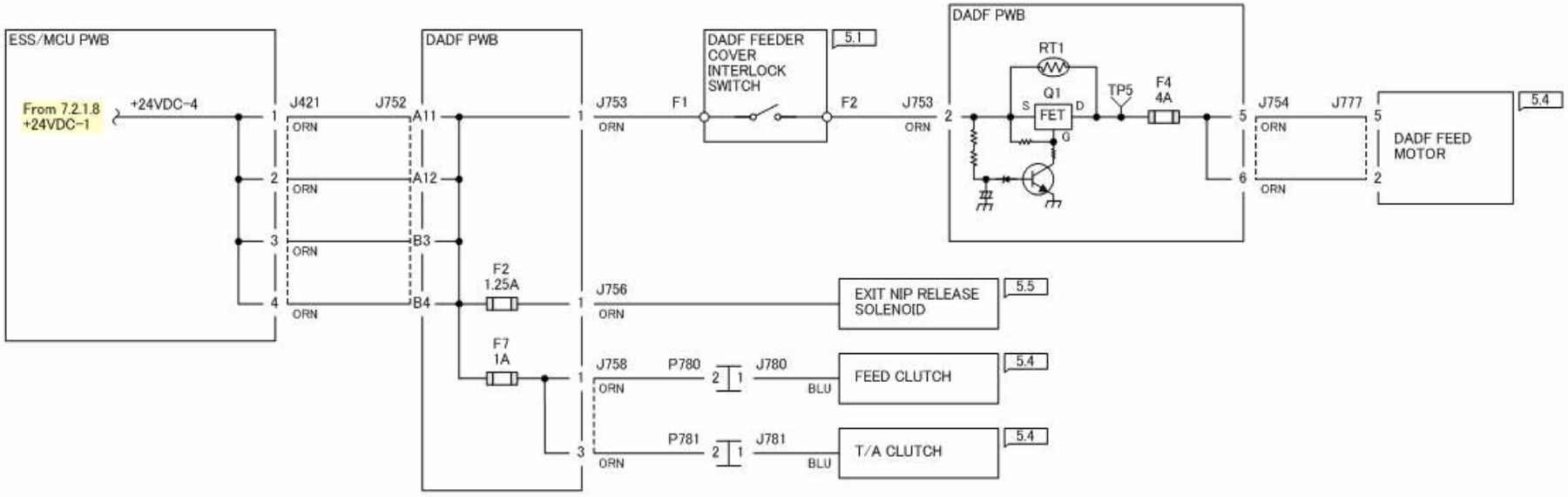


j0yg725602

Figure 1 j0yg725602

7.2.56.3 DADF +24VDC

7.2.56.3 DADF +24VDC

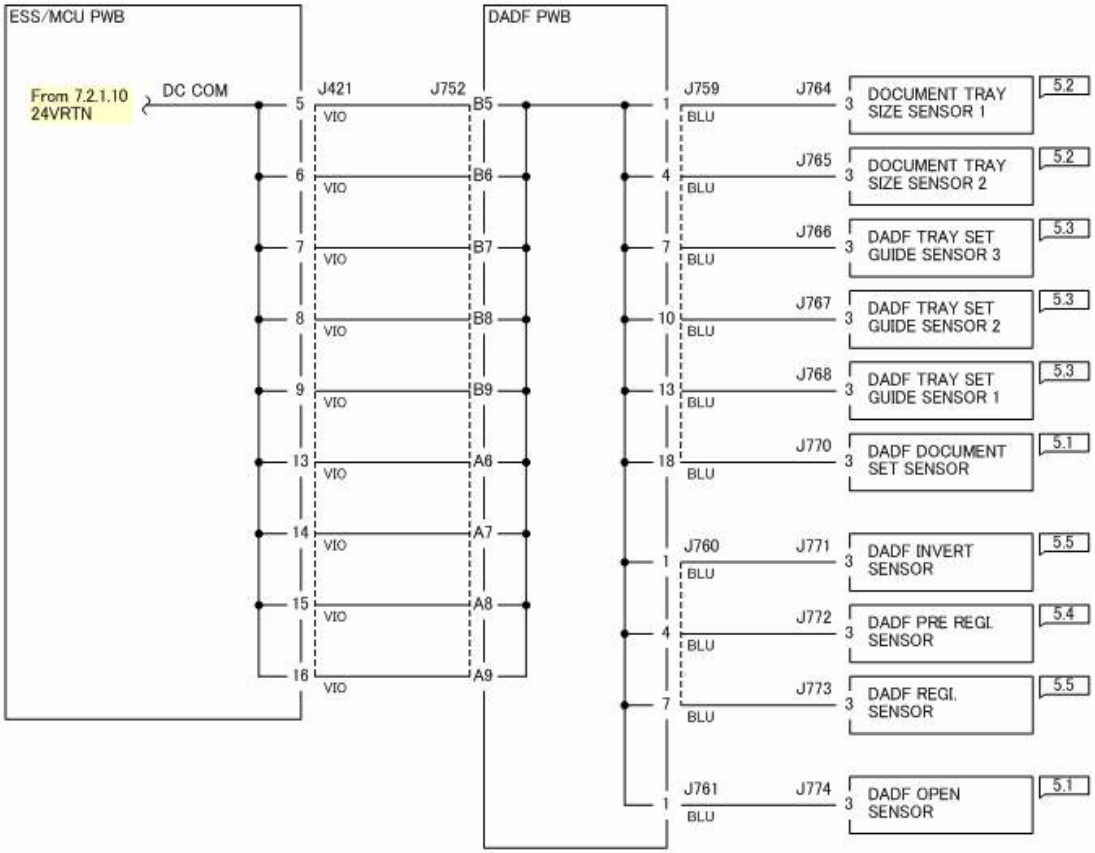


j0yg725603

Figure 1 j0yg725603

7.2.56.4 DADF 24V RTN

7.2.56.4 DADF 24V RTN



j0yg725604

Figure 1 j0yg725604

1. How to Use BSDs

1. Enter the Chain directed in the Troubleshooting chapter.
2. Or enter the appropriate Chain by referring to the contents.
3. Diagnose the failure in the appropriate Chain, using test data.
4. If where the failure has occurred can be located, refer to the Parts List No. or Adjustment No. on the location to go to the index of parts or the appropriate adjustment.

WARNING

Turn off the Main Power Switch and disconnect the Power Cord from the wall outlet before removing /installing any part.

Otherwise, there would be a danger of electrical shock or injury.

2. Explanation of Symbols

Table 1

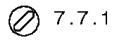
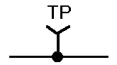
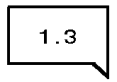
Symbol	Description
Figure 1 9050	This symbol is used to refer to Notes usually described on the same page.
Figure 2 9051	This symbol is used to refer to test data usually on the same page for reference in case the voltage value shown on the BSD id different from the measured value.
PL 7.7	This symbol is used to refer to the Parts List. PL stands for Parts List and 7.7 denotes Plate No. This shows the appropriate part is shown on the indicated plate. This symbol is added to all the replaceable parts on the BSD.
 **Figure 3 9053**	This symbol is used to refer to the adjustments in the Repair and Adjustment chapters. The number 7.7.1 shows the adjustment procedure is found as ADJ 7.7.1 in the Adjustment chapter.
Figure 4 9054	This symbol identifies a variable resistor adjustable in the field.
 **Figure 5 9061**	This symbol identifies a test point of a signal.
 **Figure 6 9055**	This symbol is used to show where the input into the functions comes from. This example shows the input comes from the Group Functions in Chain 1-3.

Table 1

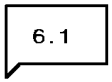
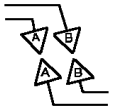
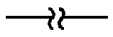
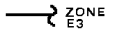
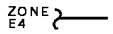
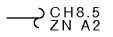
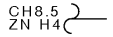
Symbol	Description
 Figure 7 9056	This symbol is used to show where the output from the functions go. This example shows the output goes to the Group Functions in Chain 6-1.
 Figure 8 9041	This symbol shows signal lines are connected vertically.
 Figure 9 9042	This symbol shows signal lines are connected horizontally.
 Figure 10 9043	This symbol shows a signal line is connected to a specific location in the same function. This example shows the destination the signal line goes to is marked in Zone (E-3).
 Figure 11 9044	This symbol shows a signal line is connected to a specific location in the same function. This example shows the location the signal line starts from is marked in Zone (E-4).
 Figure 12 9045	This symbol shows a signal line is connected to a specific location in another sheet (shown at lower right of the BSD).This example shows the destination the signal line goes to is marked in Zone (A-2) in CH8.5.
 Figure 13 9046	This symbol shows a signal line is connected to a specific location in another sheet (shown at lower right of the BSD).This example shows the location the signal line starts from is marked in Zone (H-4) in CH8.5.

Table 1

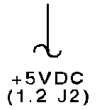
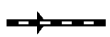
Symbol	Description
 Figure 14 9047	This symbol shows the power output line in Chain 1.
Figure 15 9025	This symbol shows frame ground.
Figure 16 9062	This symbol represents a twisted pair of wires.
Figure 17 9048	This symbol shows a signal runs from right to left in the opposite direction of the usual one.
Figure 18 9049	This represents a feedback signal.
Figure 19 9037	This symbol shows a mechanical linkage to a part.
 Figure 20 9038	This symbol represents a mechanical drive signal and shows the direction in which the signal runs.

Table 1

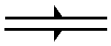
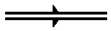
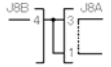
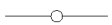
Symbol	Description
 Figure 21 9039	This symbol represents a document or paper and shows the direction in which it runs.
 Figure 22 9040	This symbol represents a heat, light or air signal and shows the direction in which it runs.
Figure 23 9063	This symbol shows Control Logic.
Figure 24 9064	This symbol shows a double plug connector.
Figure 25 9065	This symbol shows a drawer plug connector.
 Figure 26 9066	This symbol shows a shorting plug connector.
 Figure 27 9028	This symbol shows the fasten is used for connection.

Table 1

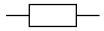
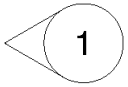
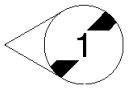
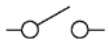
Symbol	Description
 Figure 28 9067	This symbol shows that an electrically conductive material such as a leaf spring and a plate is used for connection.
 Figure 29 4001	This symbol shows the part the arrow points to has been modified by 1V.
 Figure 30 4002	This symbol shows the part the arrow points to has not been modified by 1V. It still has the previous configuration.
Figure 31 5005	This symbol shows the whole figure or the framed illustration is modified by 1V.
Figure 32 5006	This symbol shows the whole figure or the framed illustration has not been modified by 1V. The area still has the previous configuration.
Figure 33 9074	This symbol shows derection the air flows.
 Figure 34 9075	This symbol shows switch and is also used as Interlock Switch.

Table 1

Symbol	Description
Figure 35 9076	This symbol shows the Cheater type of Interlock Switch.
Figure 36 9077	This symbol shows the Chip Fuse.

3. Signal Name

Signal Name Structure

- Input Component

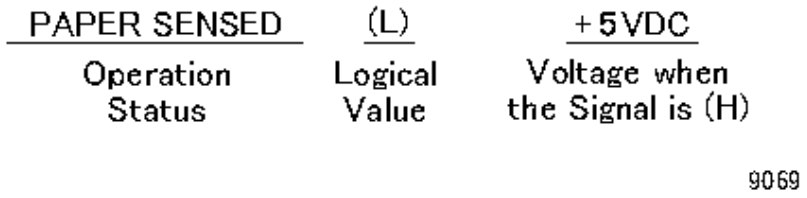


Figure 1 9069

The example indicates that when paper is sensed, the signal level is (L) and that when paper is not sensed, the signal level is (H) with the voltage +5VDC.

- Output Component

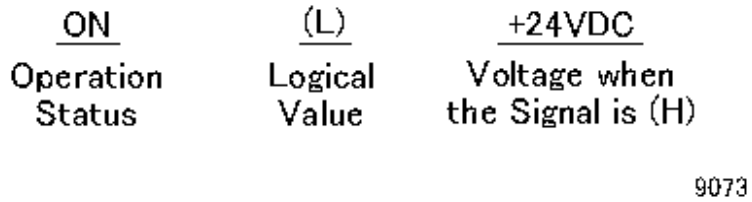


Figure 2 9073

The example indicates that when the component is ON, the signal level is (L) and that when it is OFF, the signal level is (H) with the voltage +24VDC.

4. DC Voltage

A measurement of DC voltage is made between the particular test point and the frame unless otherwise specified by note and test data. The measured DC voltage is in the range below:

Table 1

LVPS	Voltage	Level	Range
LVPS	+5VDC (Always On)	(H)	+4.75 - +5.25VDC
	+24VDC	(H)	+22.8 - +25.2VDC

5. Other Descriptions

DC330 Input Component Voltage Level

The voltage levels (H/L) shown on the BSDs are the levels that are measured by the tester.

Some of them are therefore different from H/L displayed on the PSW.

Wire Color

Wires are distinguished by color in port of the BSDs for this model.

The colors of wires are shown below the signal lines in their respective abbreviations listed below:

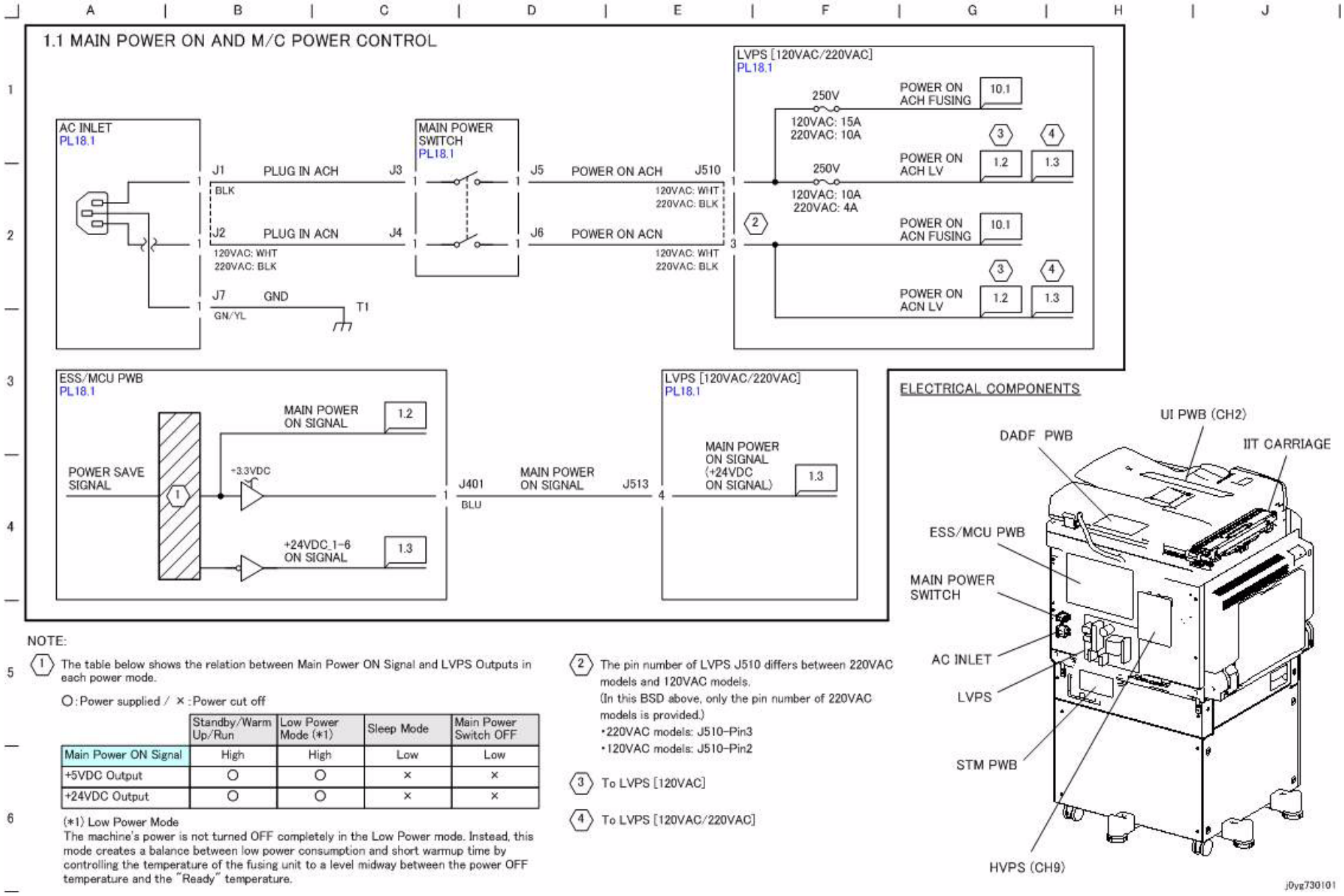
Table 1

Abbreviation	Color
BRN	BROWN
RED	RED
ORN	ORANGE
YEL	YELLOW
GRN	GREEN
BLU	BLUE
VIO	VIOLET
GRY	GRAY
WHT	WHITE
BLK	BLACK
GN/YL	GREEN/YELLOW
PNK	PINK
SKY	SKY

Figures on the BSDs

The grayed-out portion of the figure shows the path from Motoror Solenoid to parts to drive.

CH1.1 Main Power On and M/C Power Control



NOTE:

(1) The table below shows the relation between Main Power ON Signal and LVPS Outputs in each power mode.

○: Power supplied / ×: Power cut off

	Standby/Warm Up/Run	Low Power Mode (*1)	Sleep Mode	Main Power Switch OFF
Main Power ON Signal	High	High	Low	Low
+5VDC Output	○	○	×	×
+24VDC Output	○	○	×	×

(*1) Low Power Mode
The machine's power is not turned OFF completely in the Low Power mode. Instead, this mode creates a balance between low power consumption and short warmup time by controlling the temperature of the fusing unit to a level midway between the power OFF temperature and the "Ready" temperature.

(2) The pin number of LVPS J510 differs between 220VAC models and 120VAC models.
(In this BSD above, only the pin number of 220VAC models is provided.)
- 220VAC models: J510-Pin3
- 120VAC models: J510-Pin2

(3) To LVPS [120VAC]

(4) To LVPS [120VAC/220VAC]

Figure 1 j0yg730101

CH1.2 DC Power Generation (+5VDC)

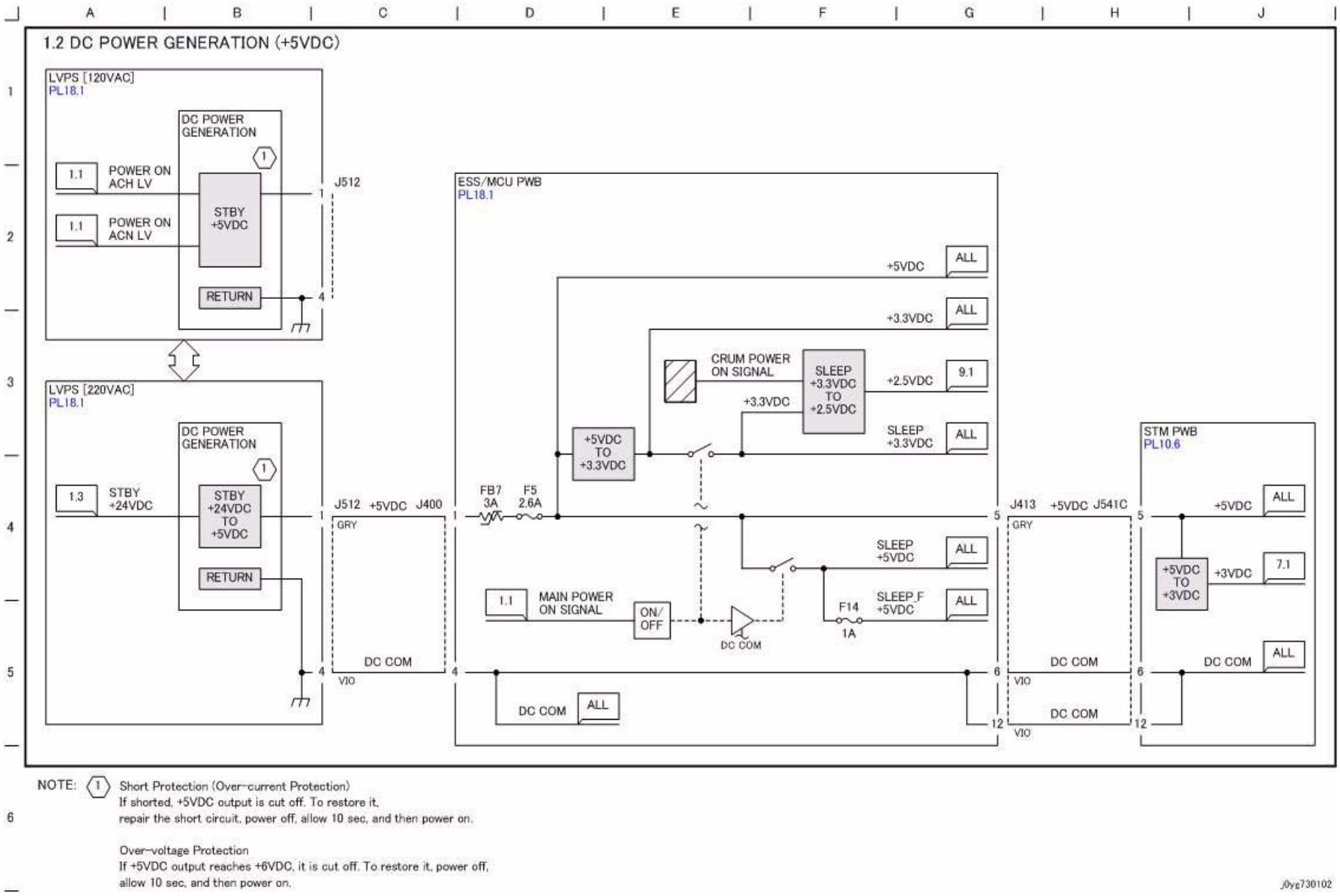


Figure 1 j0yg730102

CH1.3 DC Power Generation (+24VDC)

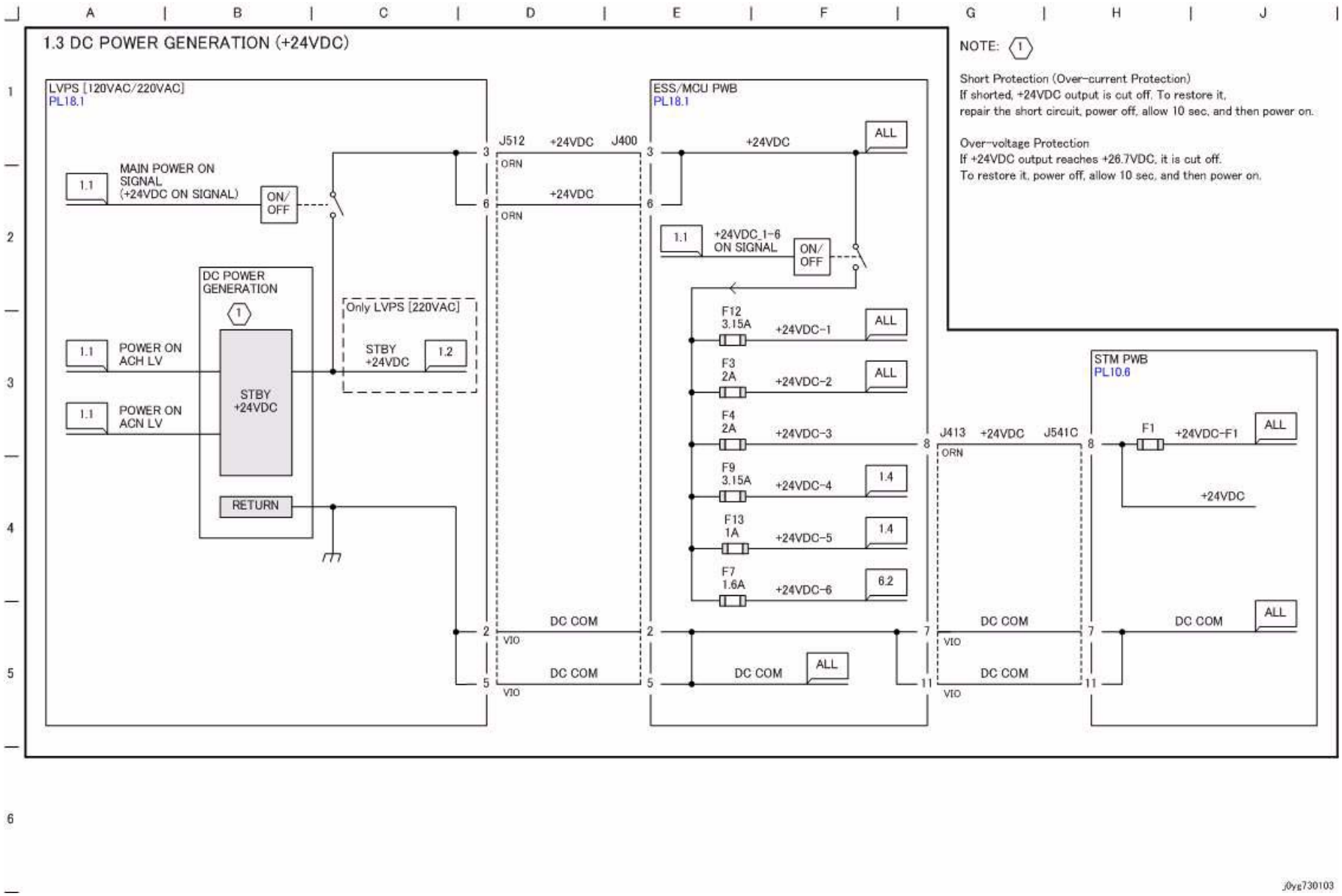


Figure 1 j0yg730103

CH1.4 IIT/DADF DC Power Distribution

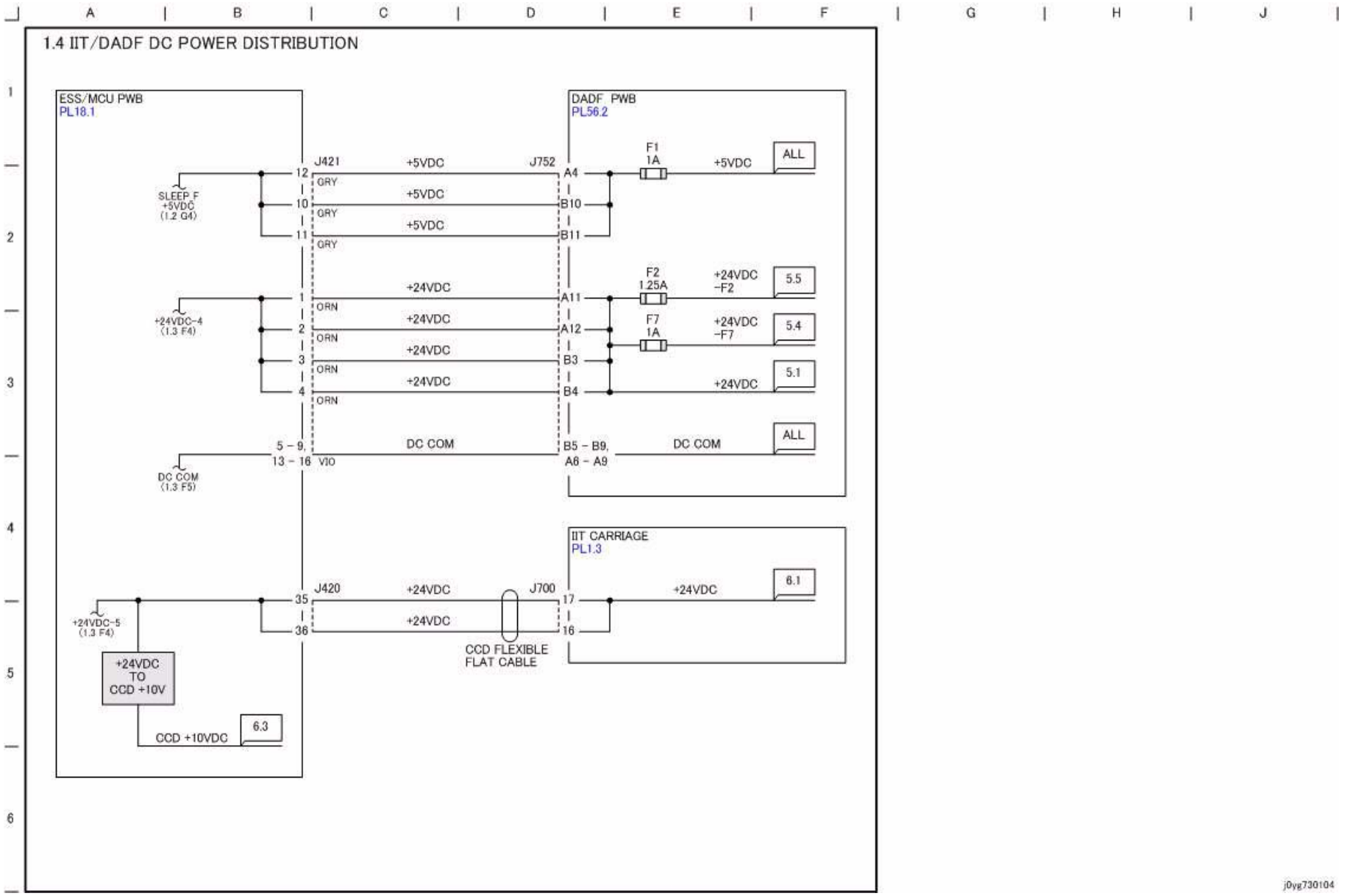
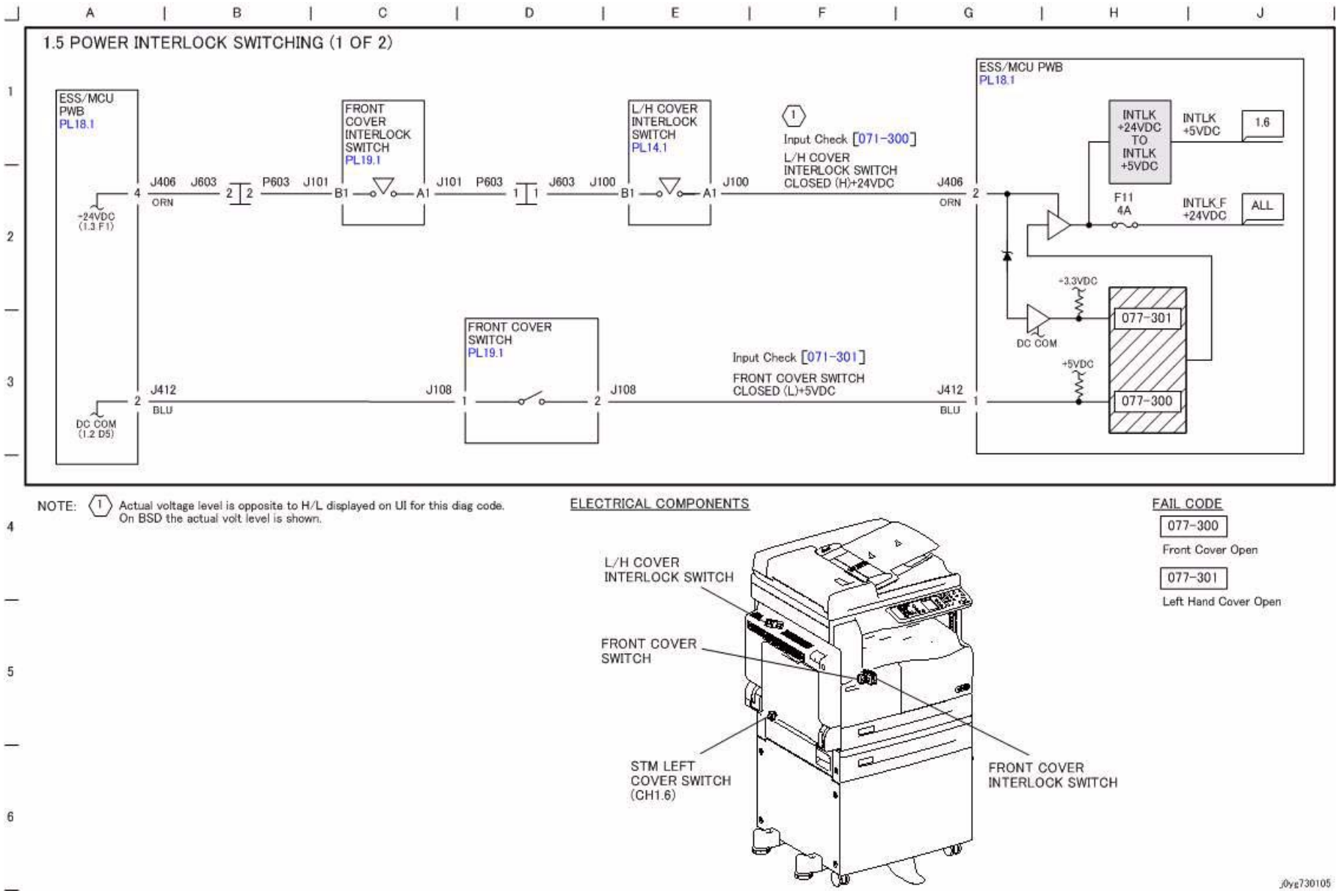


Figure 1 j0yg730104

CH1.5 Power Interlock Switching (1 of 2)



NOTE: (1) Actual voltage level is opposite to H/L displayed on UI for this diag code. On BSD the actual volt level is shown.

ELECTRICAL COMPONENTS

FAIL CODE

077-300
Front Cover Open

077-301
Left Hand Cover Open

j0yg730105

Figure 1 j0yg730105

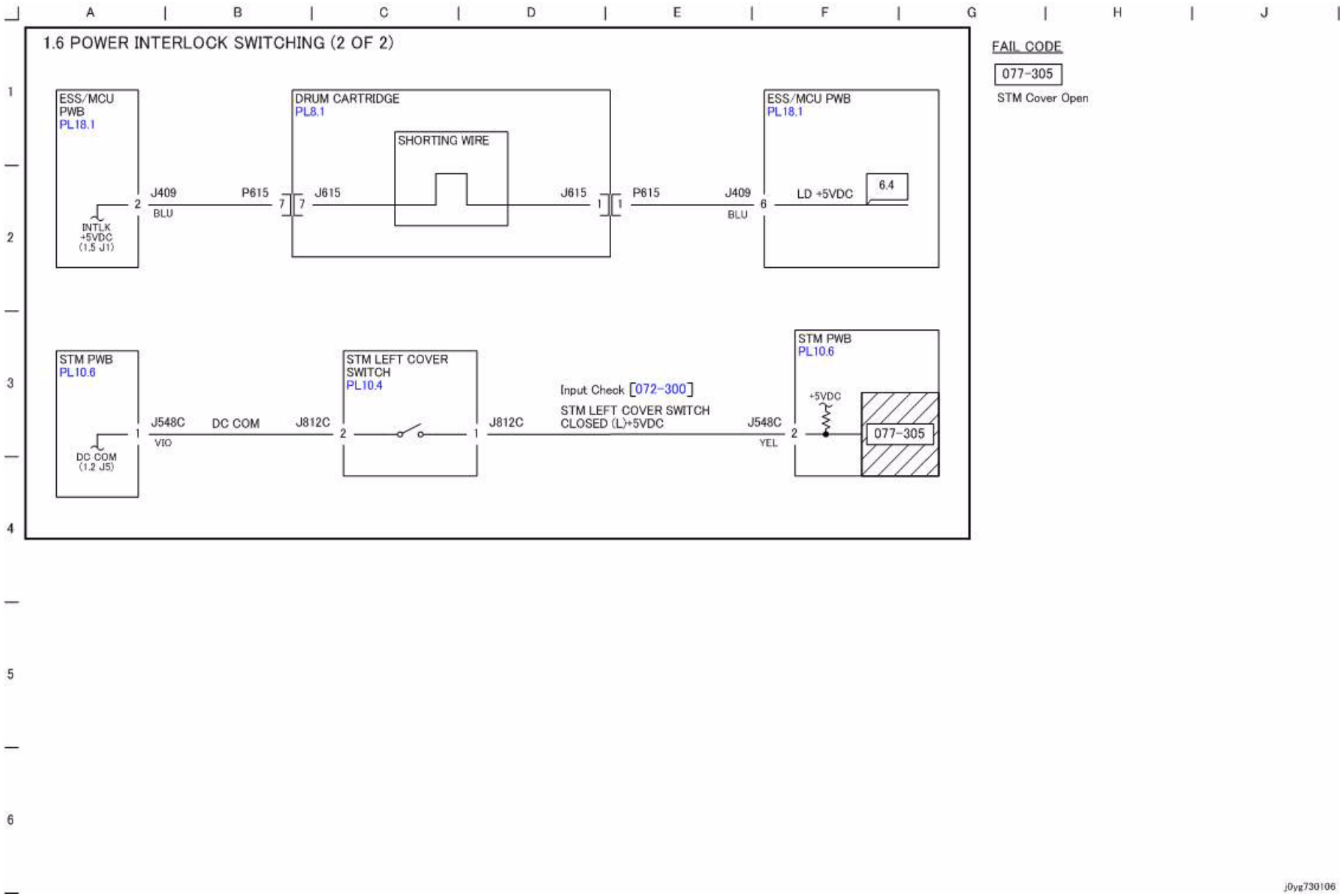


Figure 1 j0yg730106

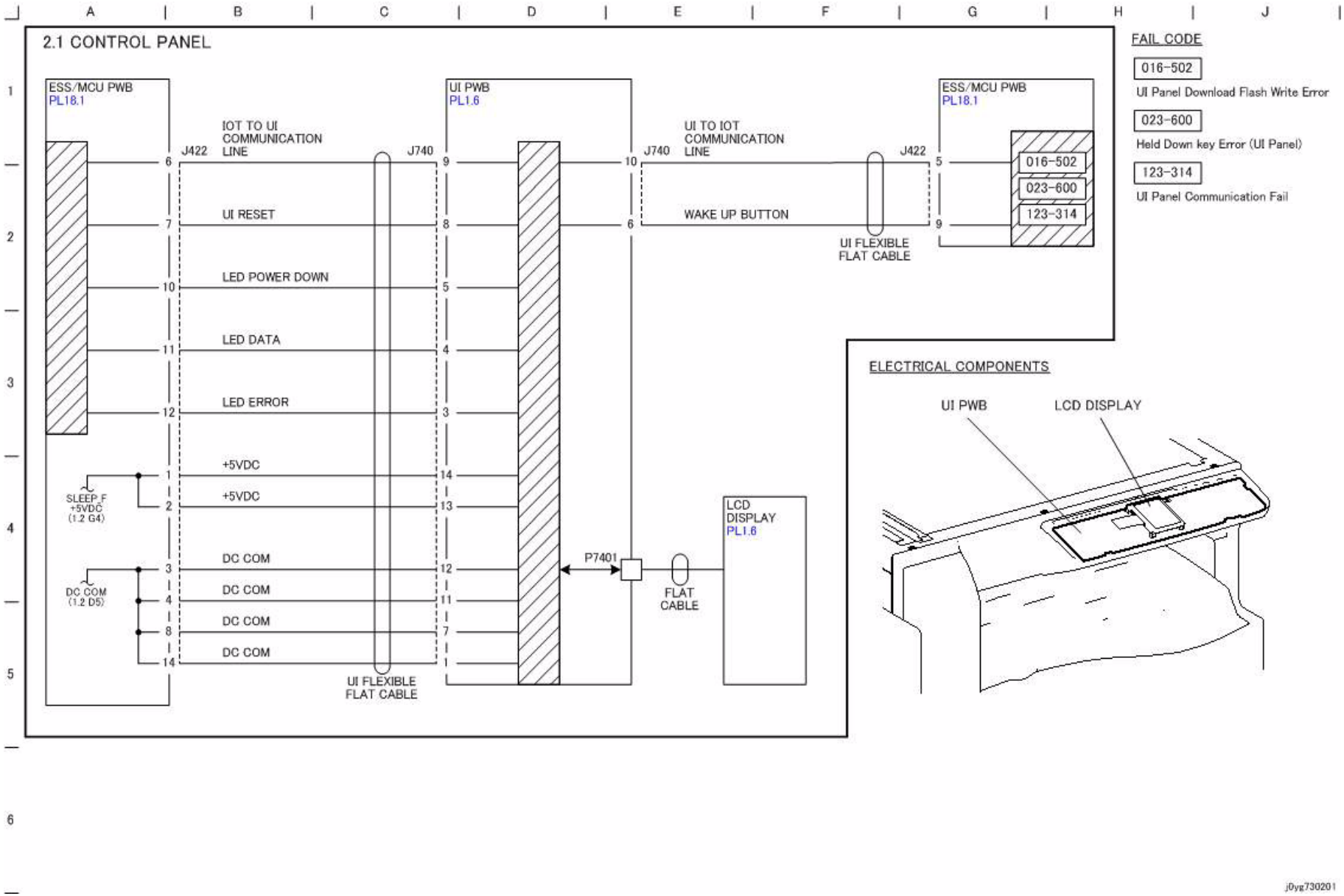


Figure 1 j0yg730201

CH3.1 PWB Communication (ESS/MCU-IIT and ESS/MCU-DADF)

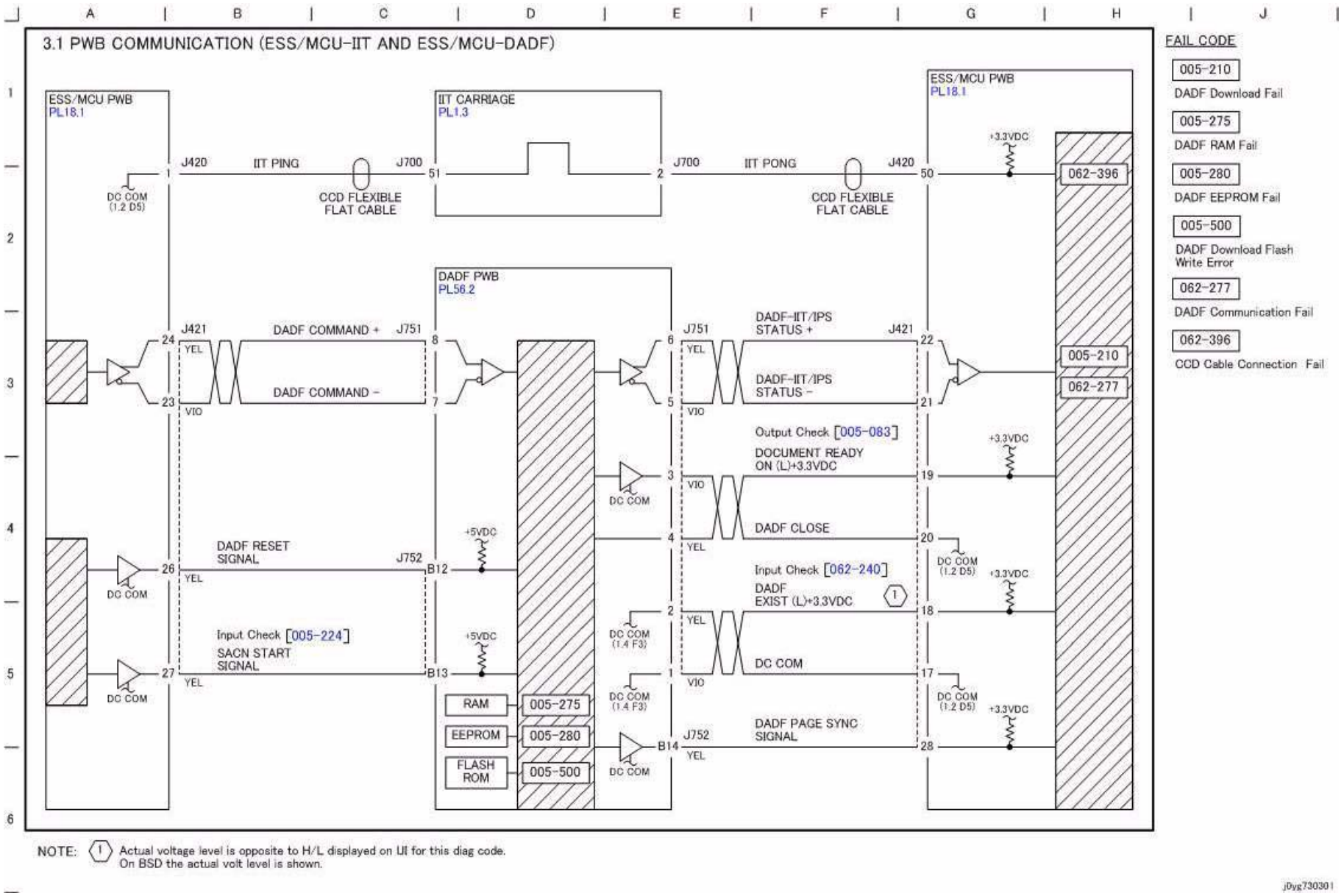


Figure 1 j0yg730301

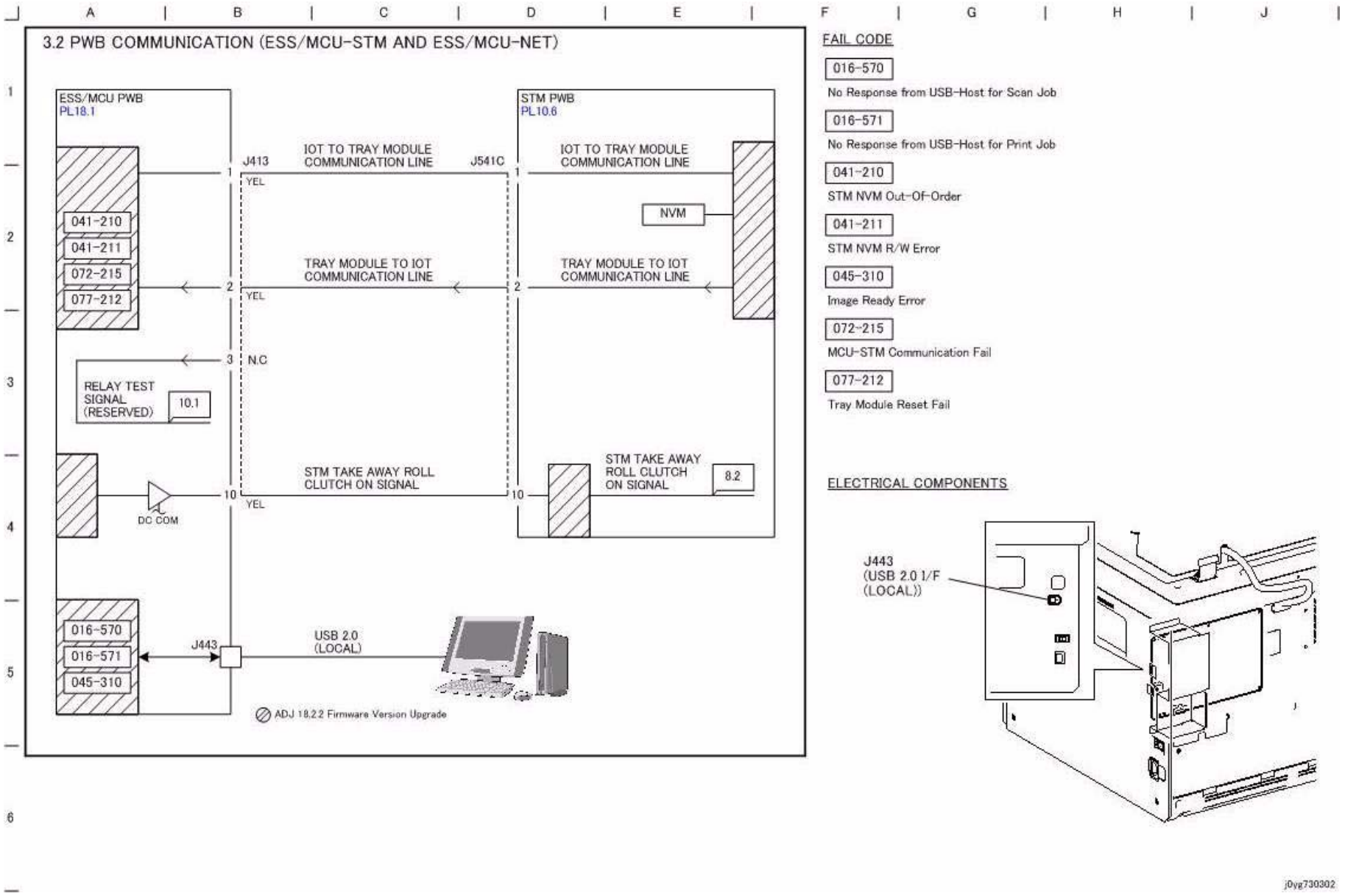


Figure 1 j0yg730302

CH3.3 Electric Billing

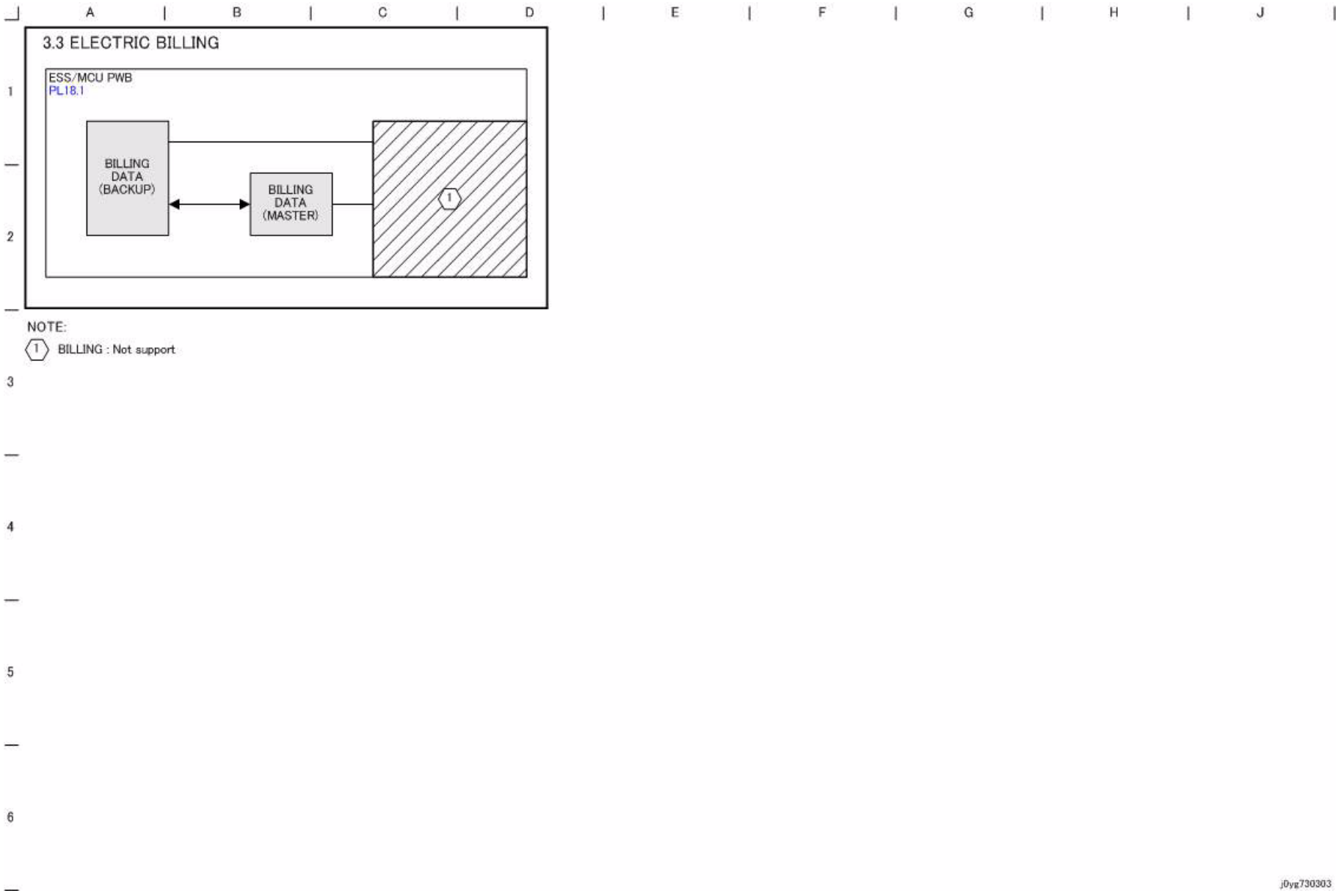


Figure 1 j0yg730303

CH4.1 Main Drive Control

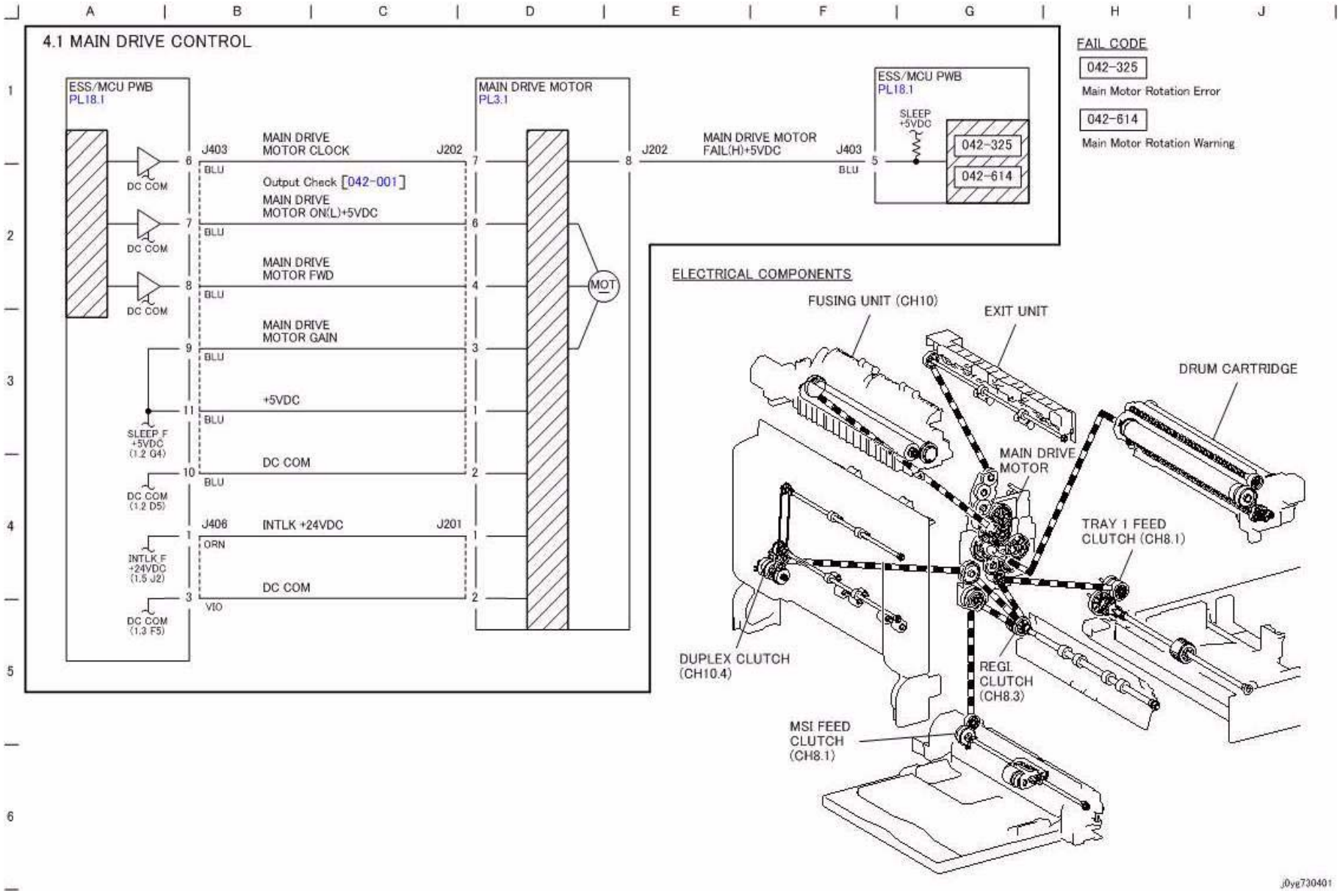
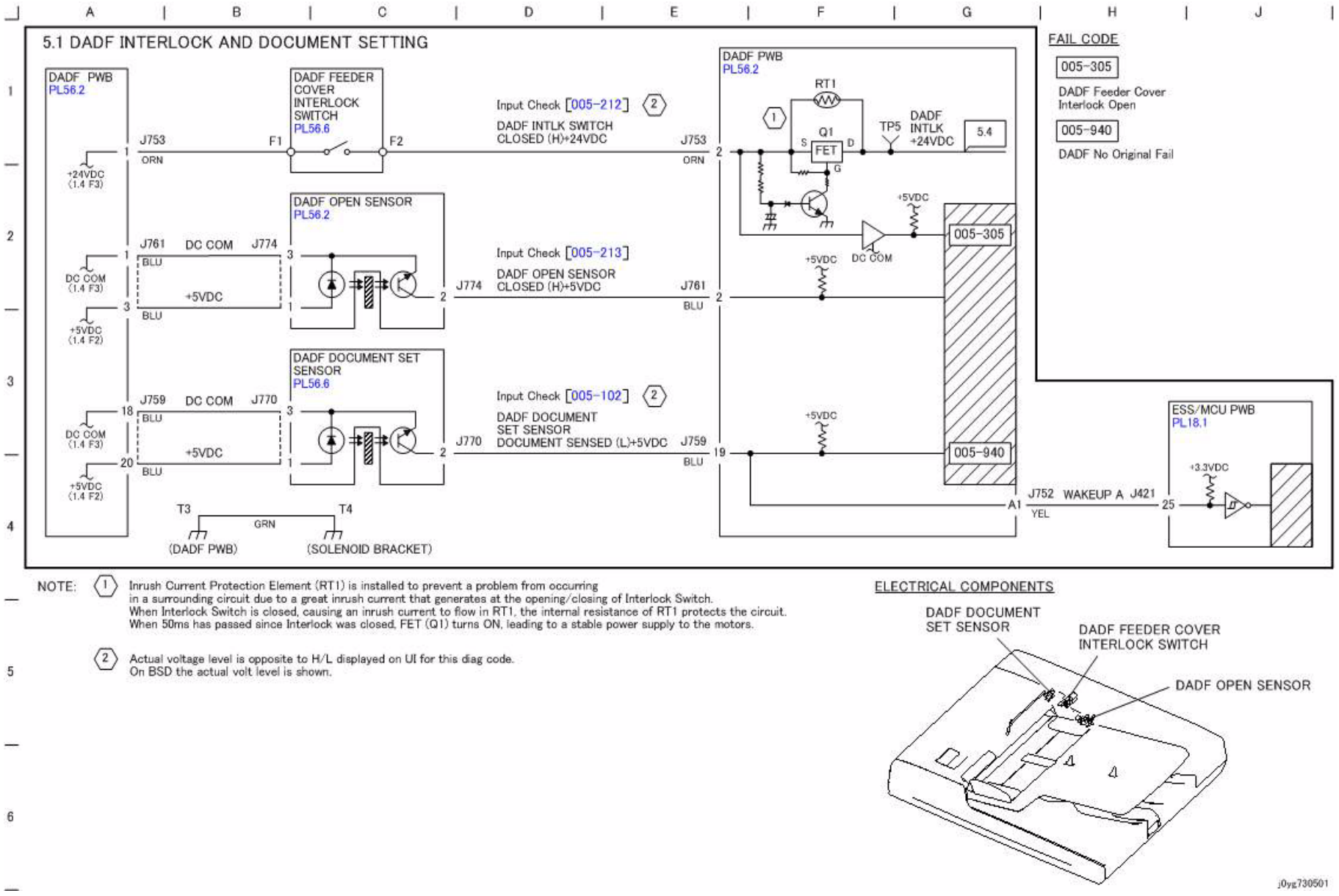


Figure 1 j0yg730401

CH5.1 DADF Interlock and Document Setting



NOTE:

(1) Inrush Current Protection Element (RT1) is installed to prevent a problem from occurring in a surrounding circuit due to a great inrush current that generates at the opening/closing of Interlock Switch. When Interlock Switch is closed, causing an inrush current to flow in RT1, the internal resistance of RT1 protects the circuit. When 50ms has passed since Interlock was closed, FET (Q1) turns ON, leading to a stable power supply to the motors.

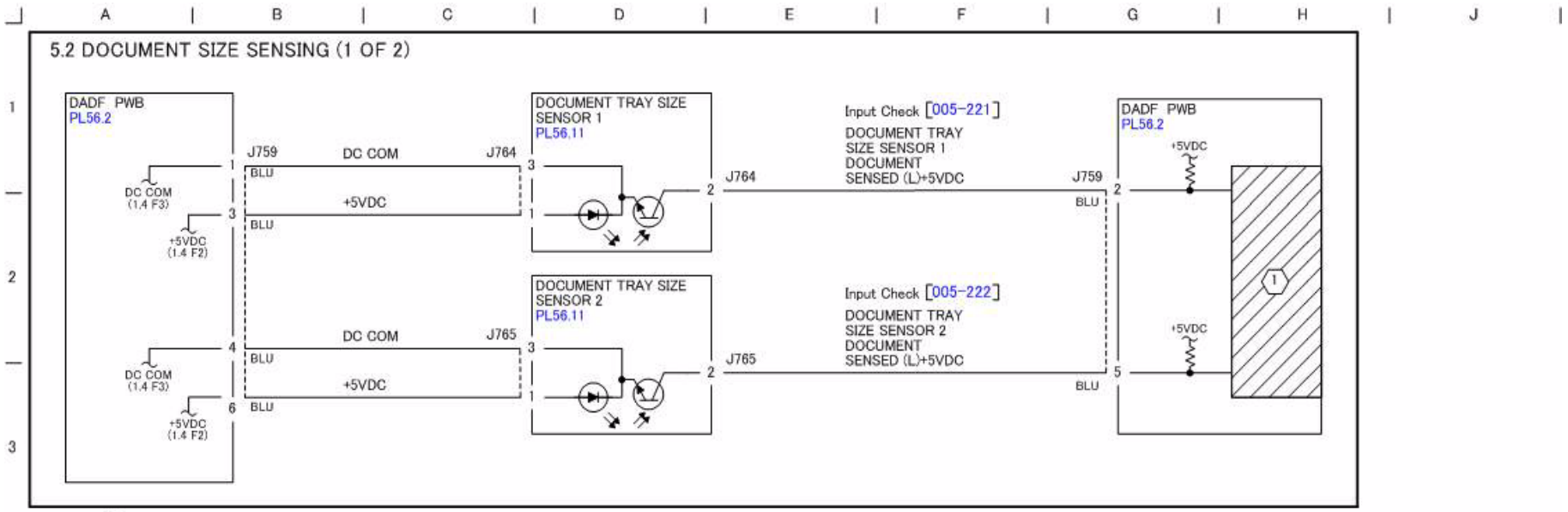
(2) Actual voltage level is opposite to H/L displayed on UI for this diag code. On BSD the actual volt level is shown.

ELECTRICAL COMPONENTS

j0yg730501

Figure 1 j0yg730501

CH5.2 Document Size Sensing (1 of 2)



NOTE: (1) The following table shows the relation between the combination of outputs from the sensors and the document size.

Document Size	Fast Scan Direction			Slow Scan Direction	
	DADF TRAY SET GUIDE SENSOR 1 (CH5.3)	DADF TRAY SET GUIDE SENSOR 2 (CH5.3)	DADF TRAY SET GUIDE SENSOR 3 (CH5.3)	DOCUMENT TRAY SIZE SENSOR 1	DOCUMENT TRAY SIZE SENSOR 2
5.5" x 8.5" S	OFF	OFF	ON	ON	OFF
A4 S	OFF	ON	OFF	ON	OFF
8.5" x 11" S	OFF	ON	ON	ON	OFF
8.5" x 14" S	OFF	ON	ON	ON	ON
B5 L	ON	OFF	ON	OFF	OFF
B4 S	ON	OFF	ON	ON	ON
8.5" x 11" L	ON	ON	OFF	ON	OFF
11" x 17" S	ON	ON	OFF	ON	ON
A4 L	ON	ON	ON	ON	OFF
A3 S	ON	ON	ON	ON	ON

ELECTRICAL COMPONENTS

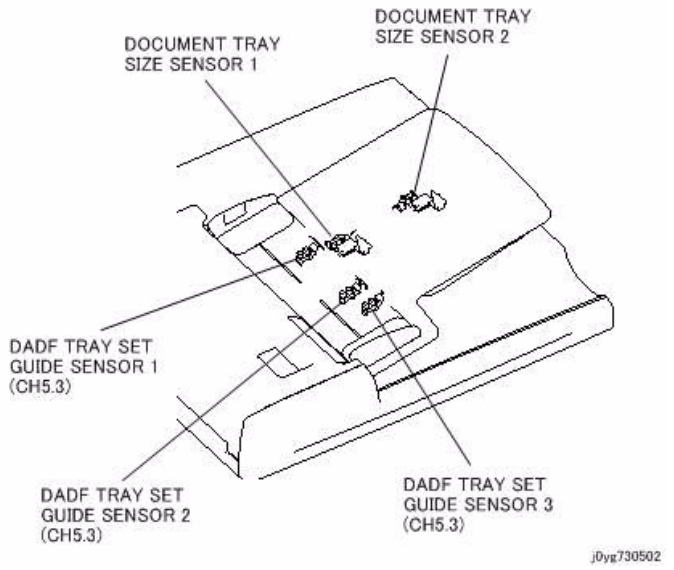


Figure 1 j0yg730502

CH5.3 Document Size Sensing (2 of 2)

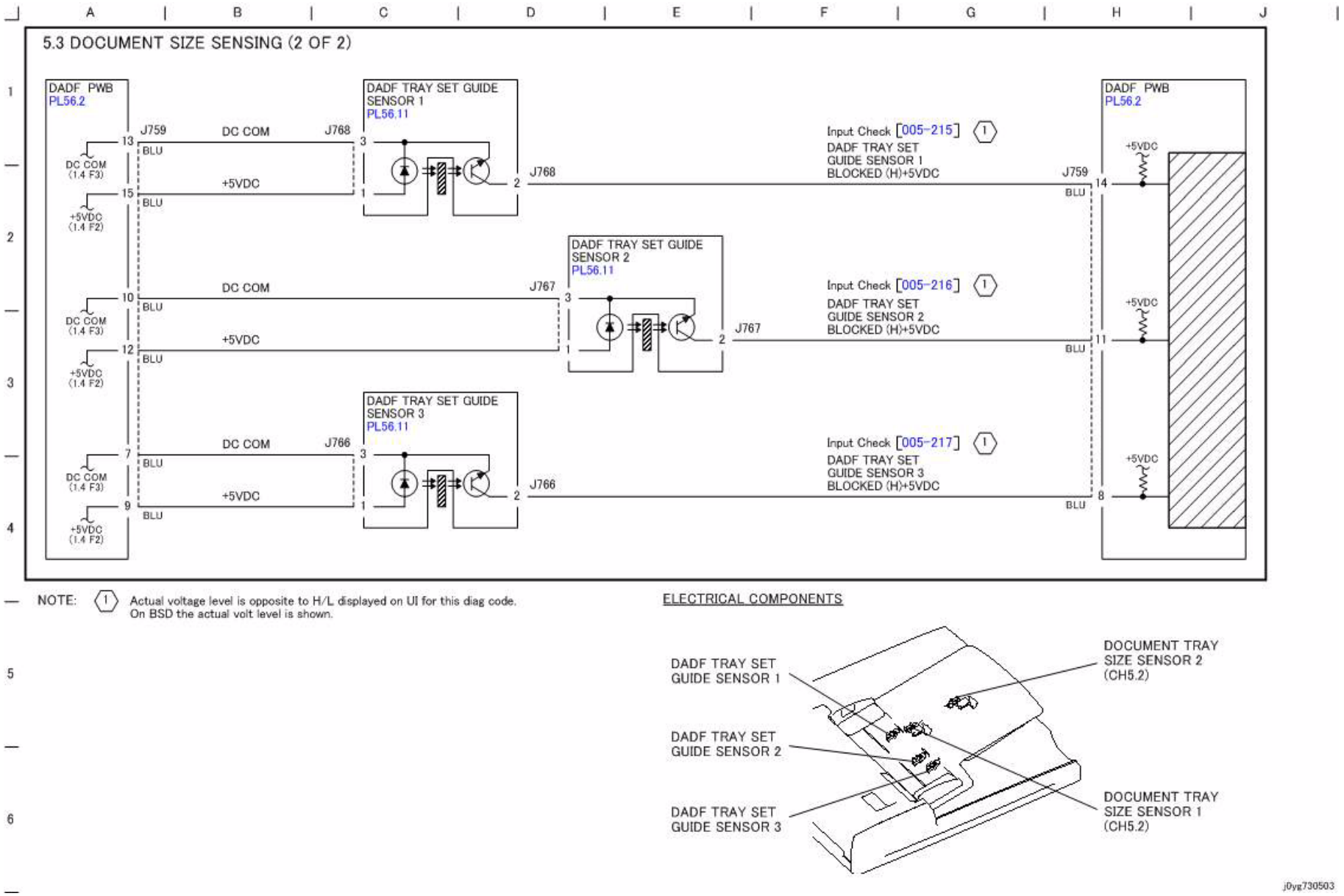
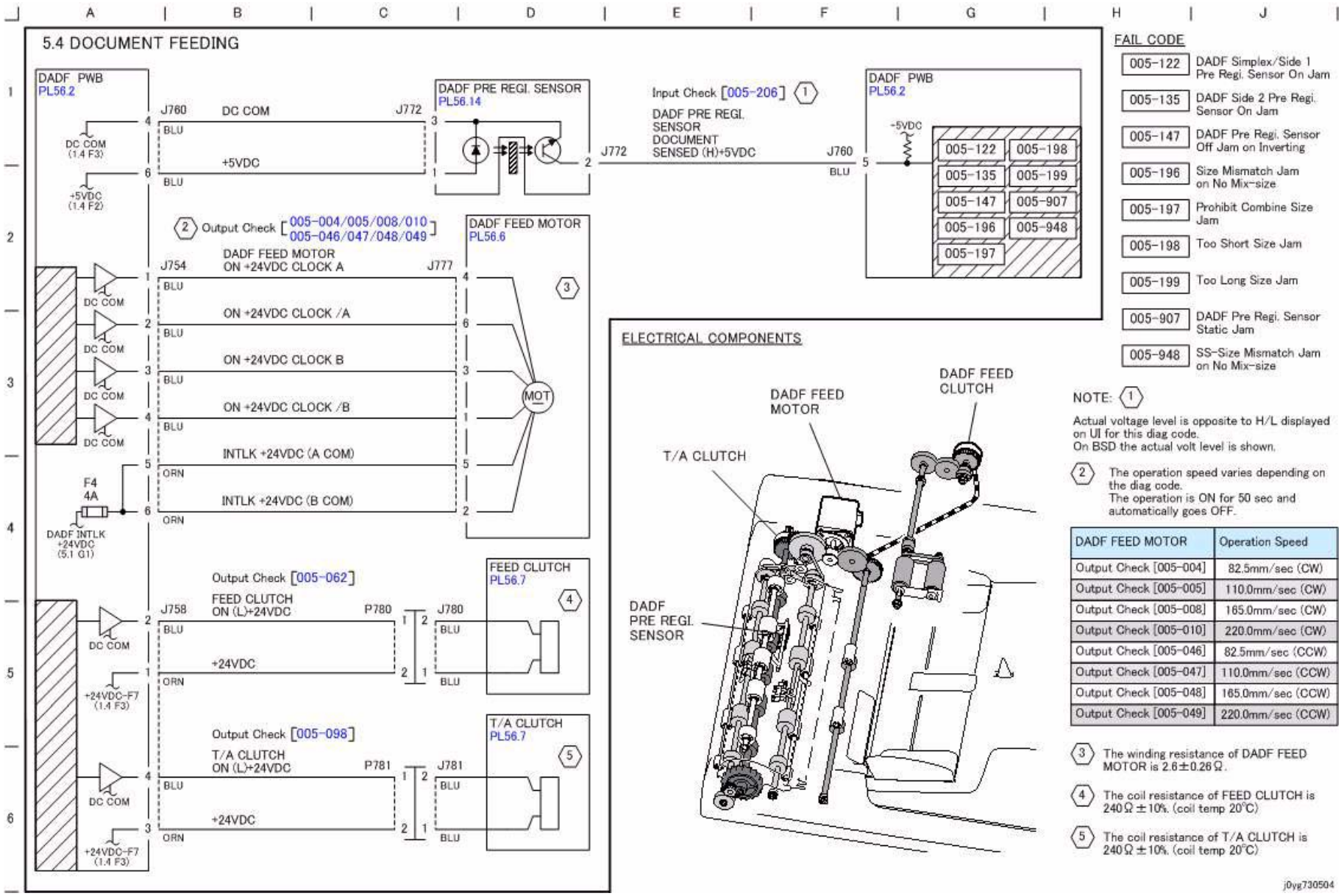
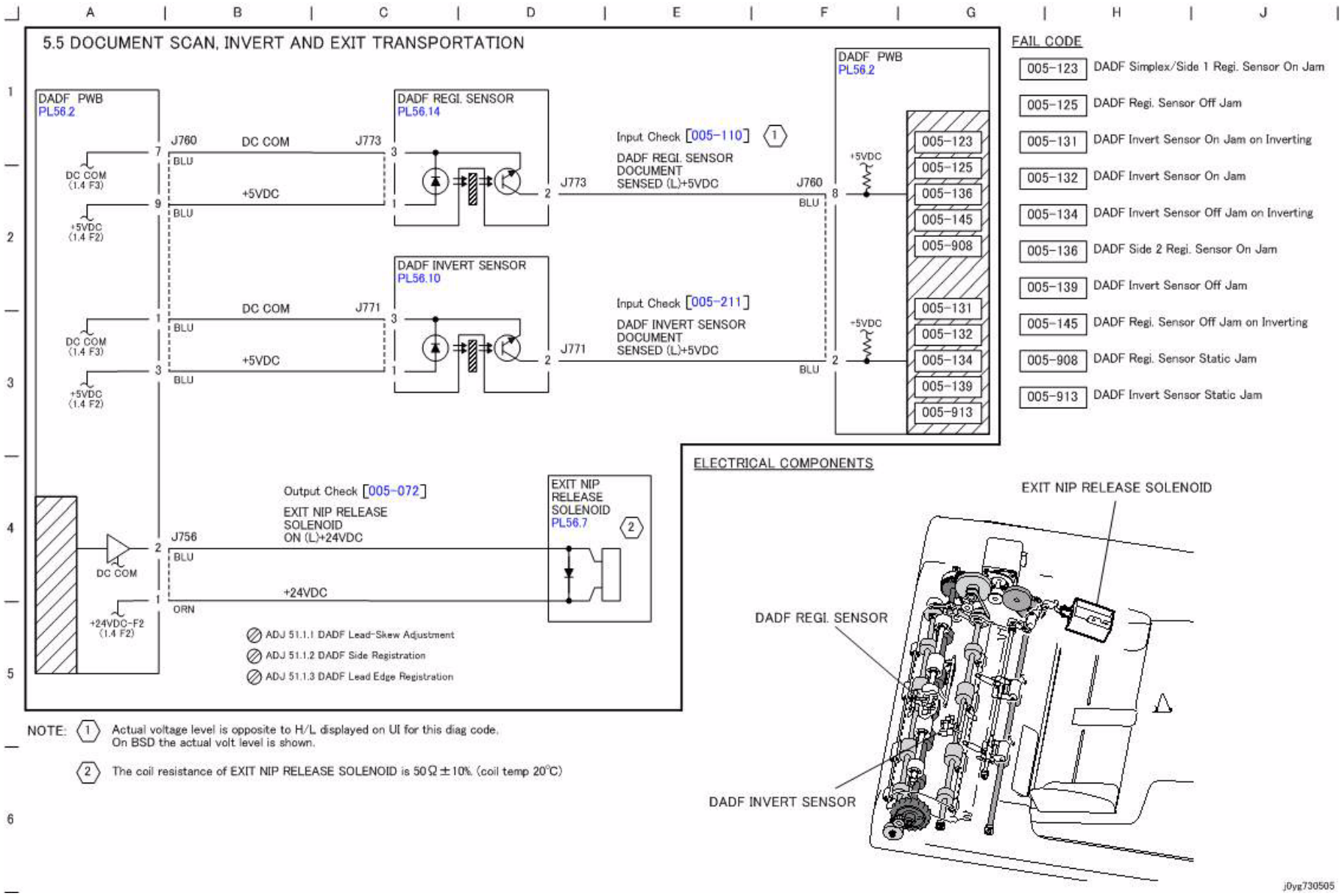


Figure 1 j0yg730503



DADF FEED MOTOR	Operation Speed
Output Check [005-004]	82.5mm/sec (CW)
Output Check [005-005]	110.0mm/sec (CW)
Output Check [005-008]	165.0mm/sec (CW)
Output Check [005-010]	220.0mm/sec (CW)
Output Check [005-046]	82.5mm/sec (CCW)
Output Check [005-047]	110.0mm/sec (CCW)
Output Check [005-048]	165.0mm/sec (CCW)
Output Check [005-049]	220.0mm/sec (CCW)

Figure 1 j0yg730504

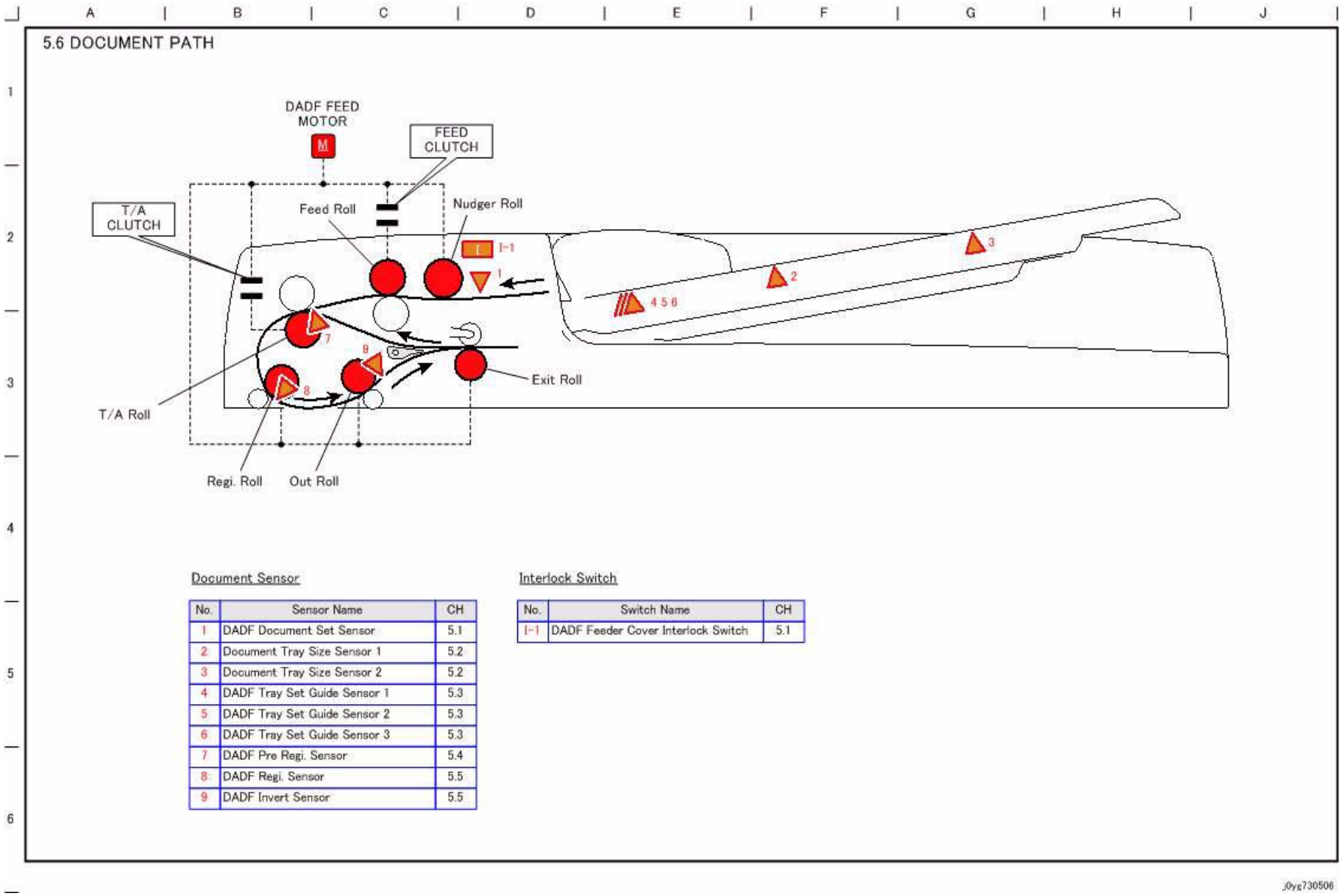


NOTE: (1) Actual voltage level is opposite to H/L displayed on UI for this diag code. On BSD the actual volt level is shown.

(2) The coil resistance of EXIT NIP RELEASE SOLENOID is 50Ω ± 10% (coil temp 20°C)

Figure 1 j0yg730505

CH5.6 Document Path



Document Sensor

No.	Sensor Name	CH
1	DADF Document Set Sensor	5.1
2	Document Tray Size Sensor 1	5.2
3	Document Tray Size Sensor 2	5.2
4	DADF Tray Set Guide Sensor 1	5.3
5	DADF Tray Set Guide Sensor 2	5.3
6	DADF Tray Set Guide Sensor 3	5.3
7	DADF Pre Regi. Sensor	5.4
8	DADF Regi. Sensor	5.5
9	DADF Invert Sensor	5.5

Interlock Switch

No.	Switch Name	CH
I-1	DADF Feeder Cover Interlock Switch	5.1

Figure 1 j0yg730506

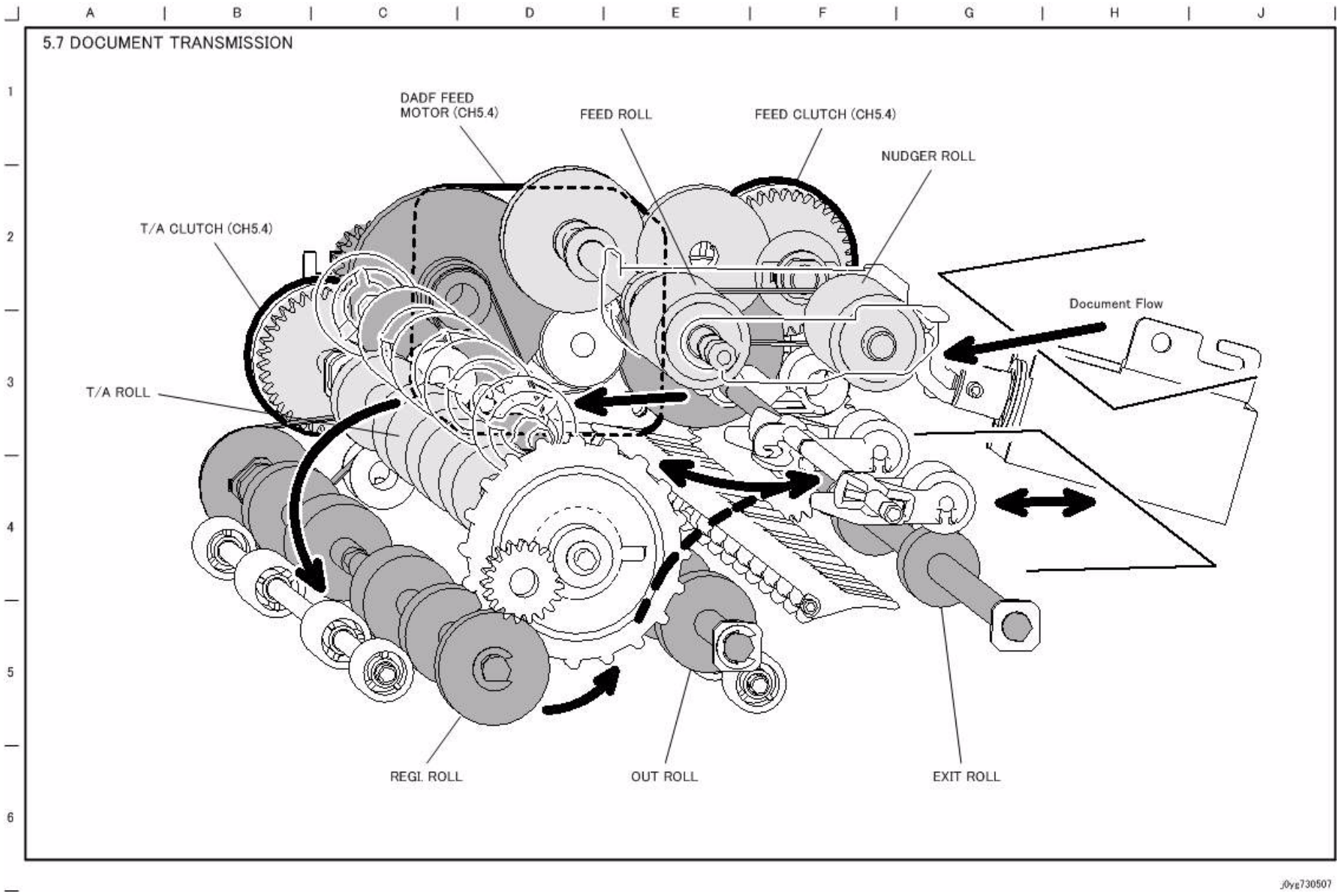


Figure 1 j0yg730507

CH6.1 Document Illumination

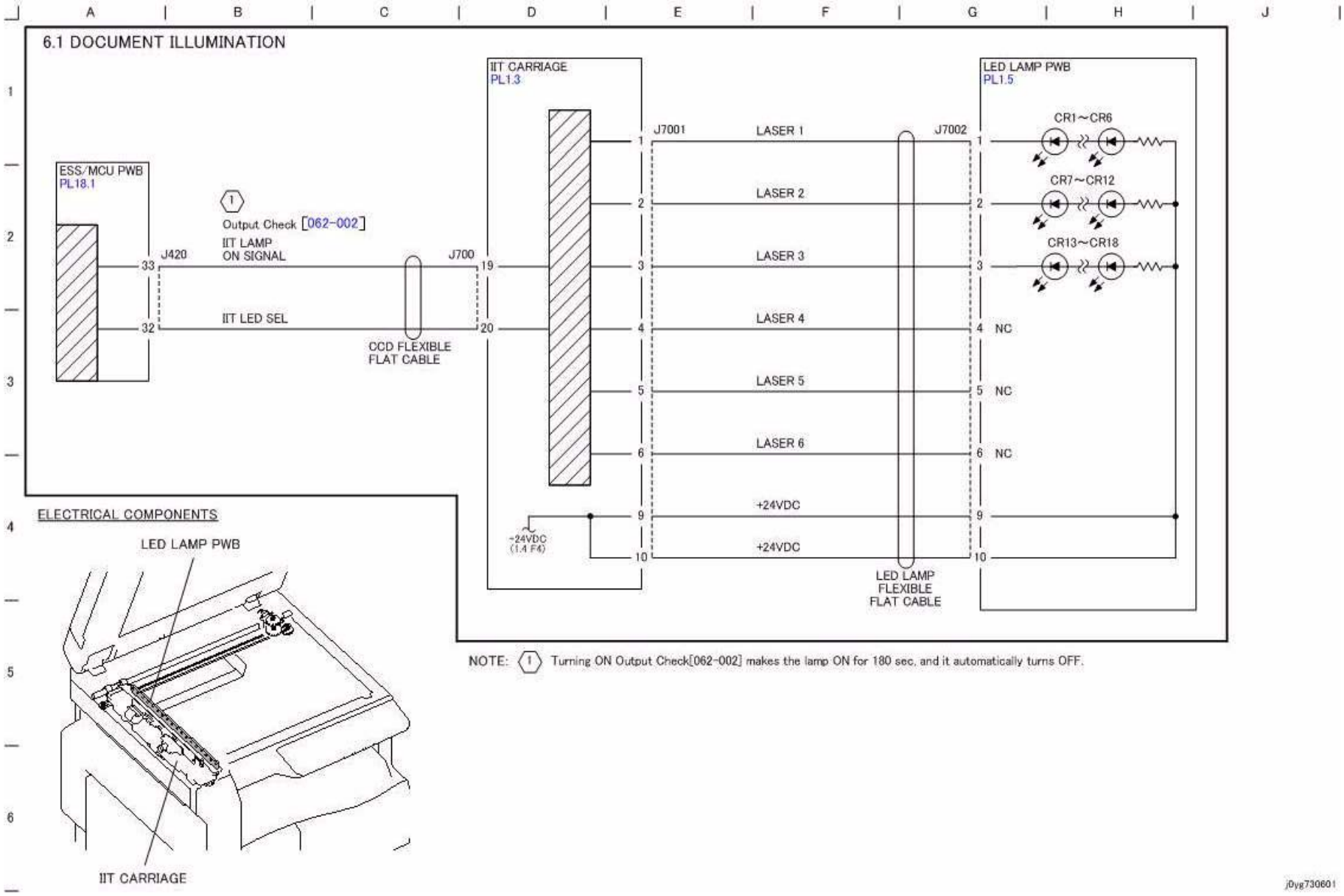
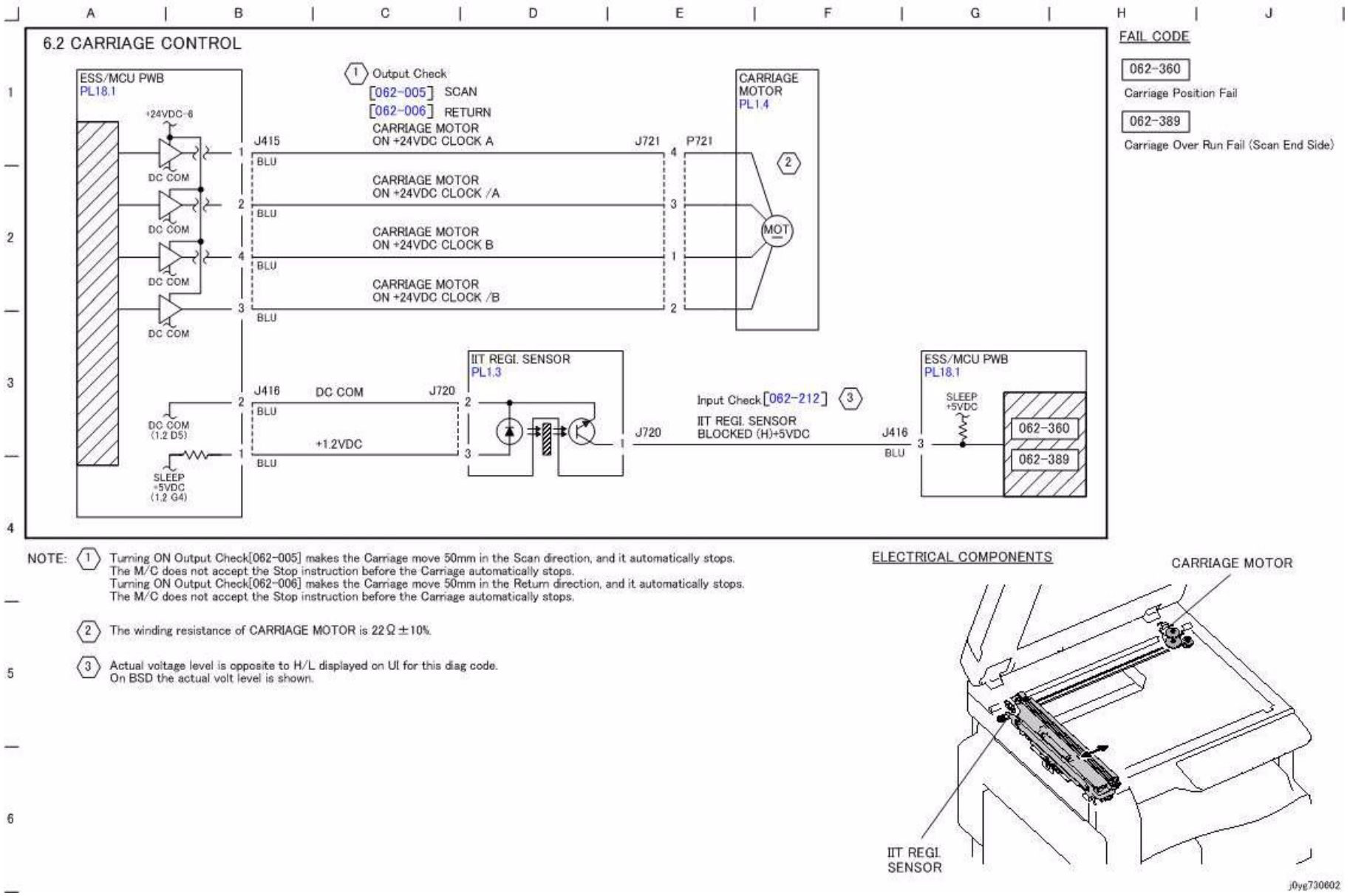


Figure 1 j0yg730601



NOTE: (1) Turning ON Output Check[062-005] makes the Carriage move 50mm in the Scan direction, and it automatically stops.
The M/C does not accept the Stop instruction before the Carriage automatically stops.
Turning ON Output Check[062-006] makes the Carriage move 50mm in the Return direction, and it automatically stops.
The M/C does not accept the Stop instruction before the Carriage automatically stops.

(2) The winding resistance of CARRIAGE MOTOR is 22Ω ±10%.

(3) Actual voltage level is opposite to H/L displayed on UI for this diag code.
On BSD the actual volt level is shown.

ELECTRICAL COMPONENTS

Figure 1 j0yg730602

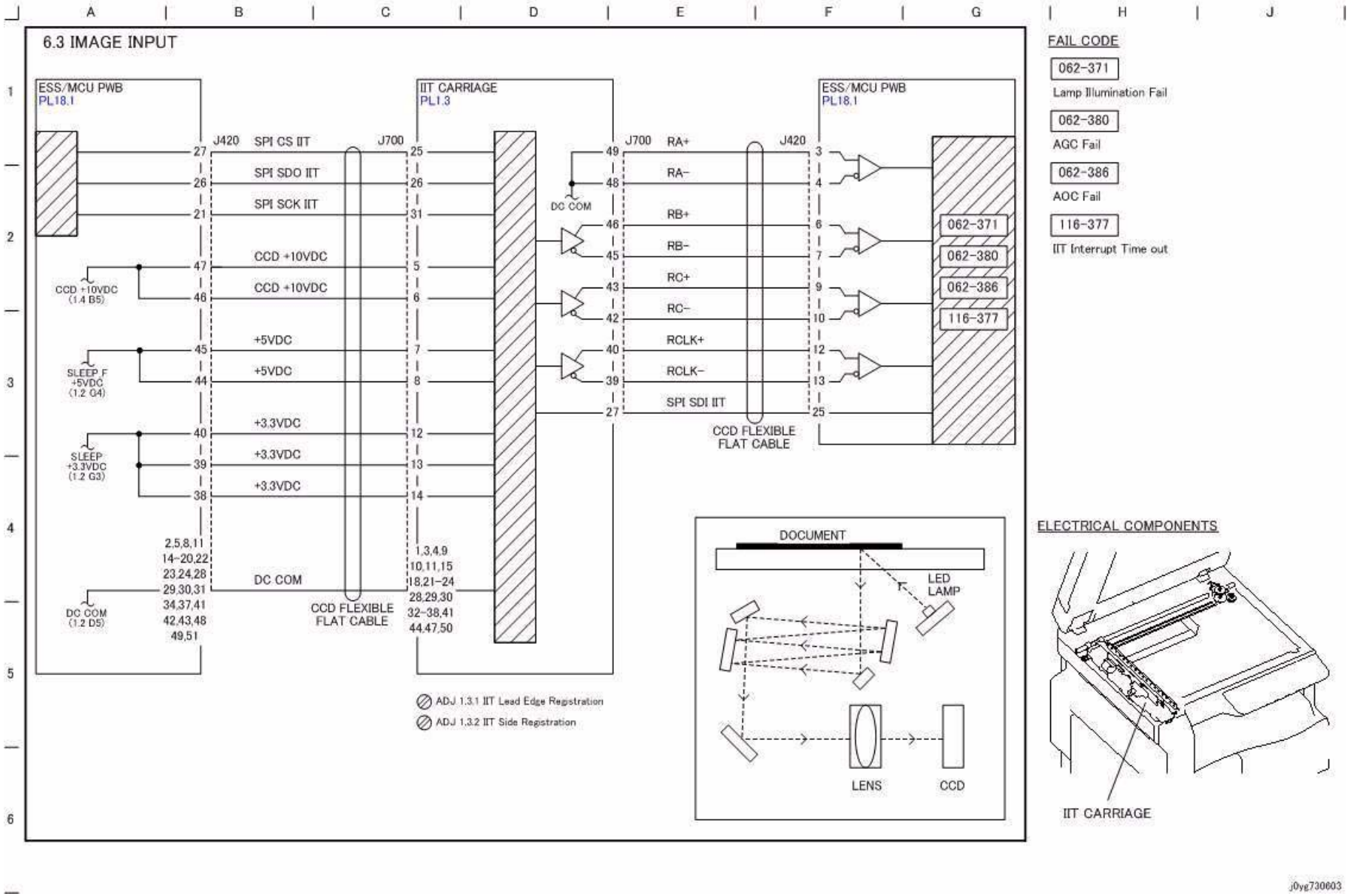


Figure 1 j0yg730603

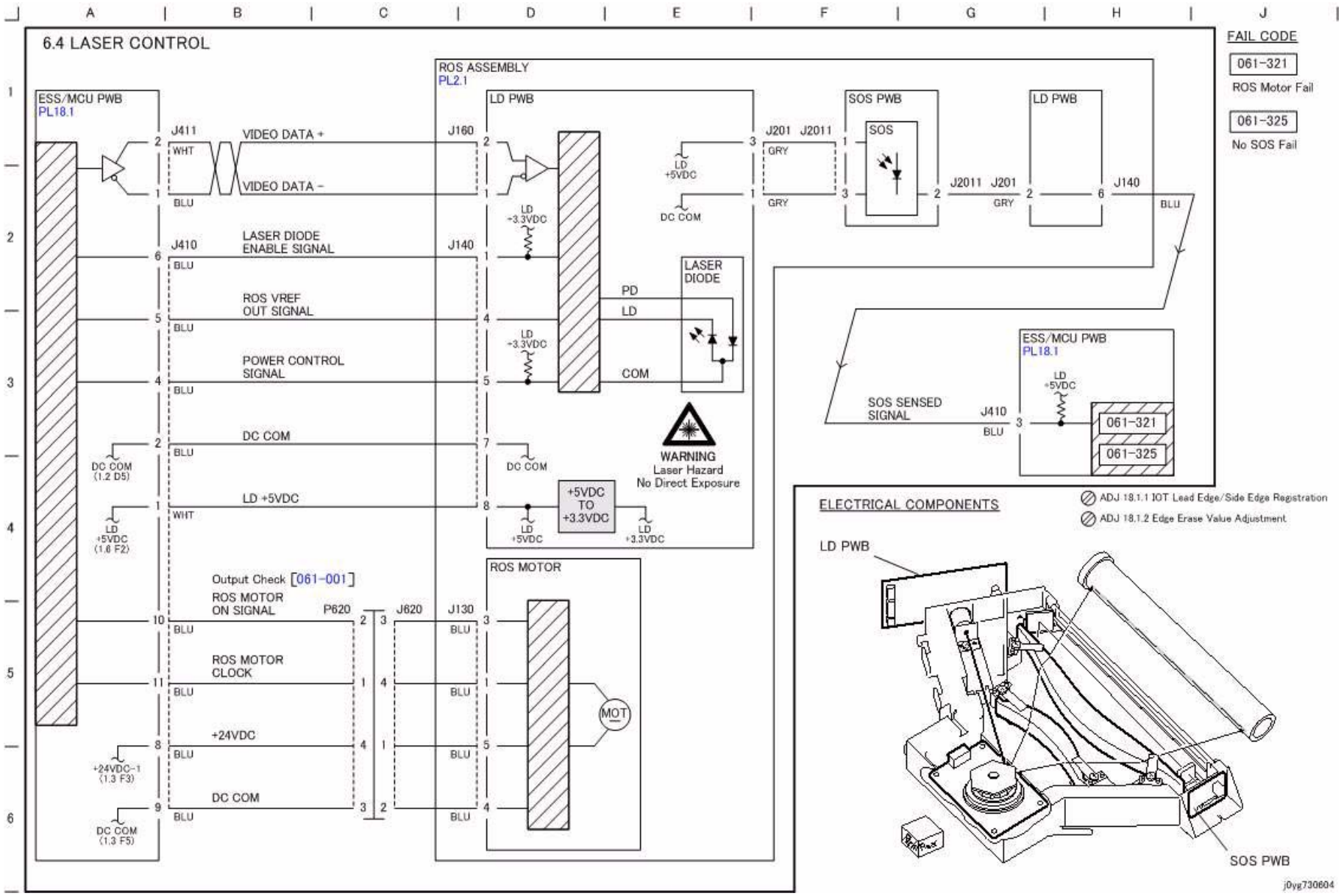
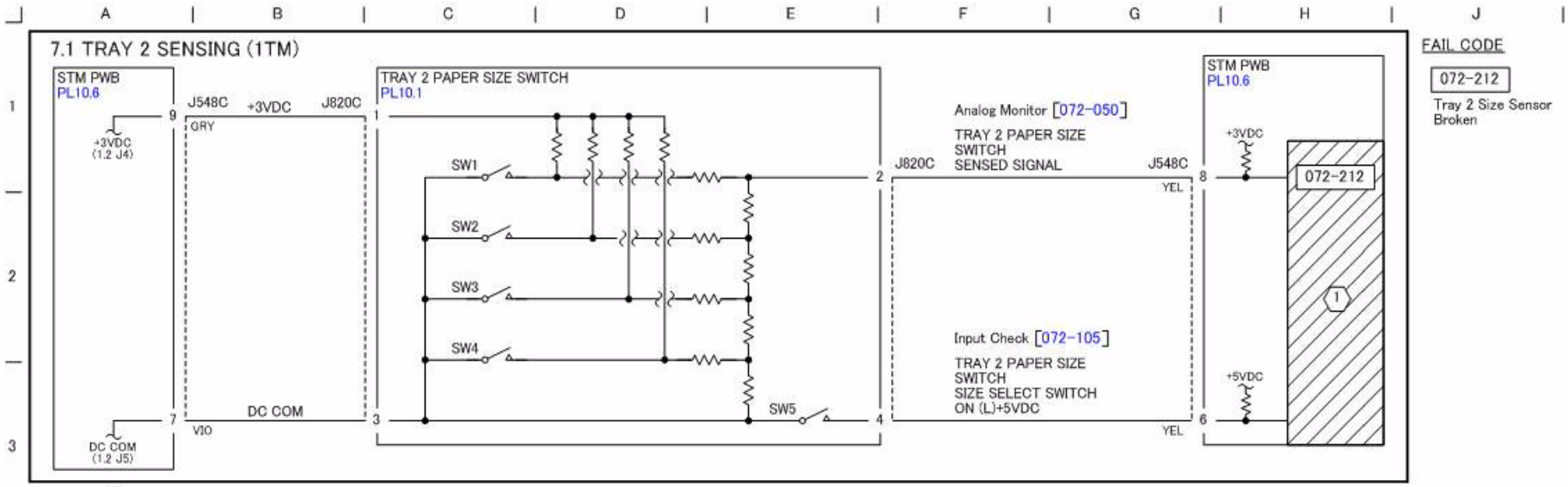


Figure 1 j0yg730604

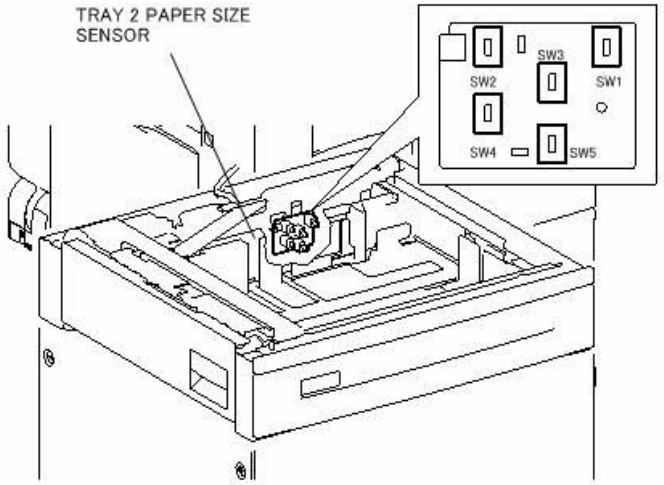
CH7.1 Tray 2 Sensing (1TM)



NOTE: (1) This device uses the Paper Size Switch only to detect the presence of the Tray 2. Although the detection method is the same as the previous models (Analog Monitor[072-050] and Input Check[072-105]), only whether the Tray 2 is installed or not is detected (the paper size detection feature is not provided).
For reference, the table below shows the ON/OFF status of the switches, voltage, and AD value corresponding to each paper size.

Paper Size	SW1	SW2	SW3	SW4	SW5	Voltage (V) (J548C-8)	AD Value Analog Monitor[072-050]		
							Min	Typ	Max
NO TRAY	OFF	OFF	OFF	OFF	OFF	2.78±0.03	231	239	247
5.5" x 8.5" S	OFF	OFF	ON	OFF	OFF	2.41±0.03	199	207	214
B5 S	OFF	OFF	ON	ON	ON	2.23±0.03	184	191	198
8.5" x 13" S	OFF	ON	OFF	ON	OFF	1.86±0.03	153	160	167
8.5" x 14" S	OFF	ON	OFF	ON	ON				
A4 S	OFF	ON	ON	OFF	OFF	1.68±0.03	137	145	152
8.5" x 11" S	OFF	ON	ON	OFF	ON				
A4 L	ON	OFF	ON	OFF	OFF	0.97±0.03	77	84	91
A3 S	ON	OFF	ON	ON	OFF	0.79±0.03	61	69	76
7.25" x 10.5" L	ON	ON	OFF	OFF	ON	0.62±0.03	46	54	60
B4 S	ON	ON	OFF	ON	ON	0.45±0.03	31	39	45
8.5" x 11" L	ON	ON	ON	OFF	OFF	0.26±0.03	16	24	30
7.25" x 10.5" L	ON	ON	ON	OFF	ON				
11" x 17" S	ON	ON	ON	ON	ON	0.09±0.03	0	9	15

ELECTRICAL COMPONENTS



j0yg730701

Figure 1 j0yg730701

CH7.2 Tray 1 Paper Stacking

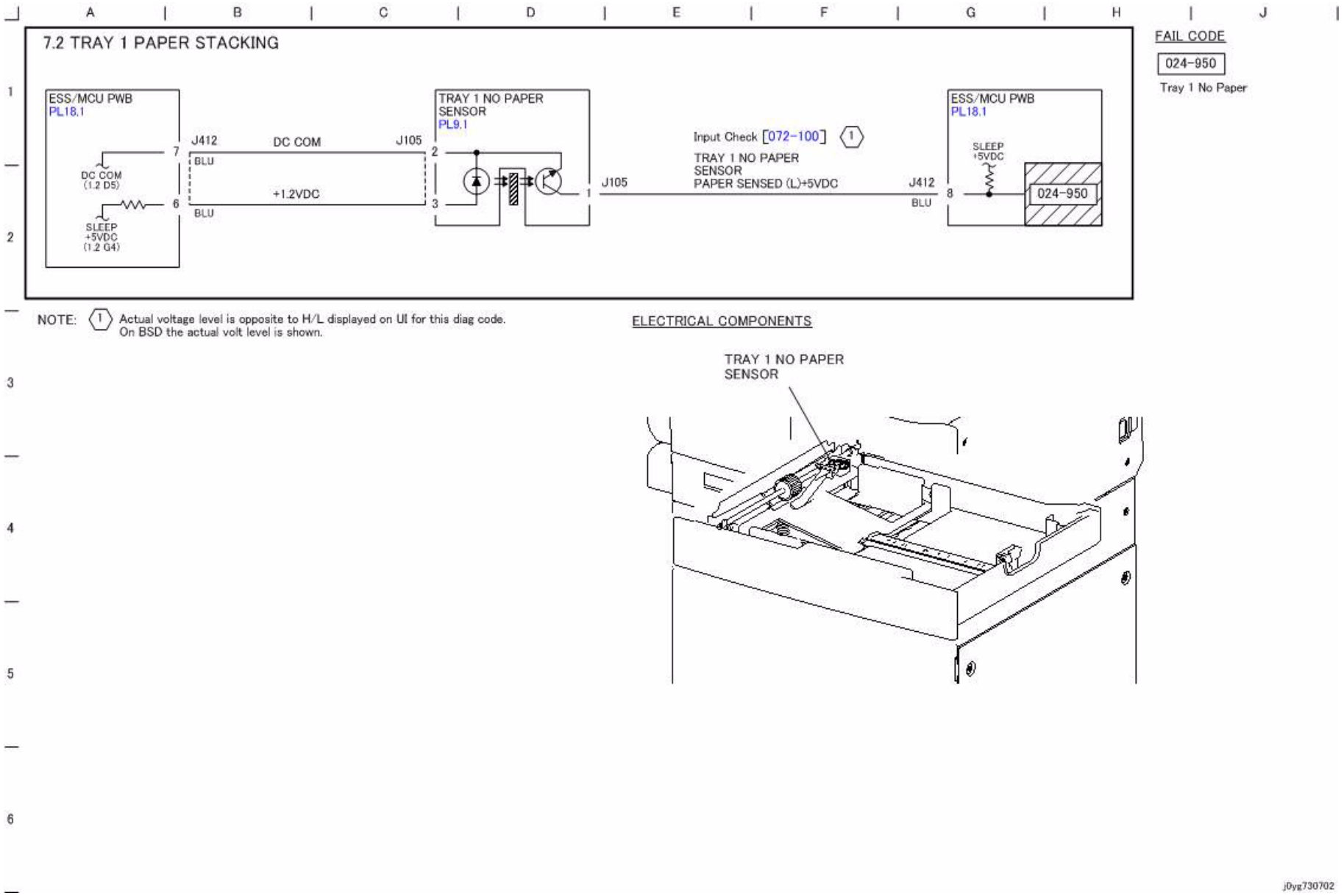


Figure 1 j0yg730702

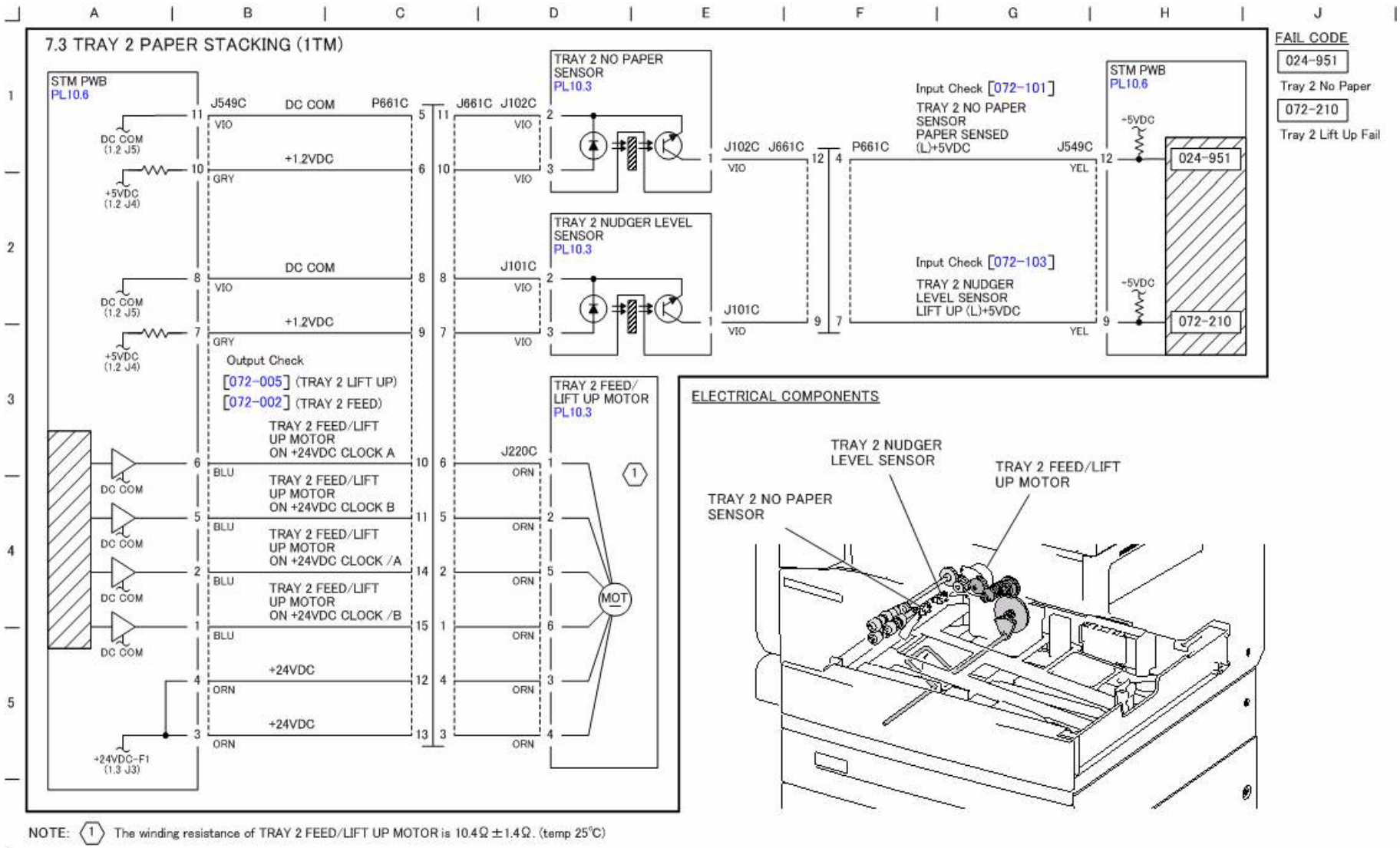


Figure 1 j0yg730703

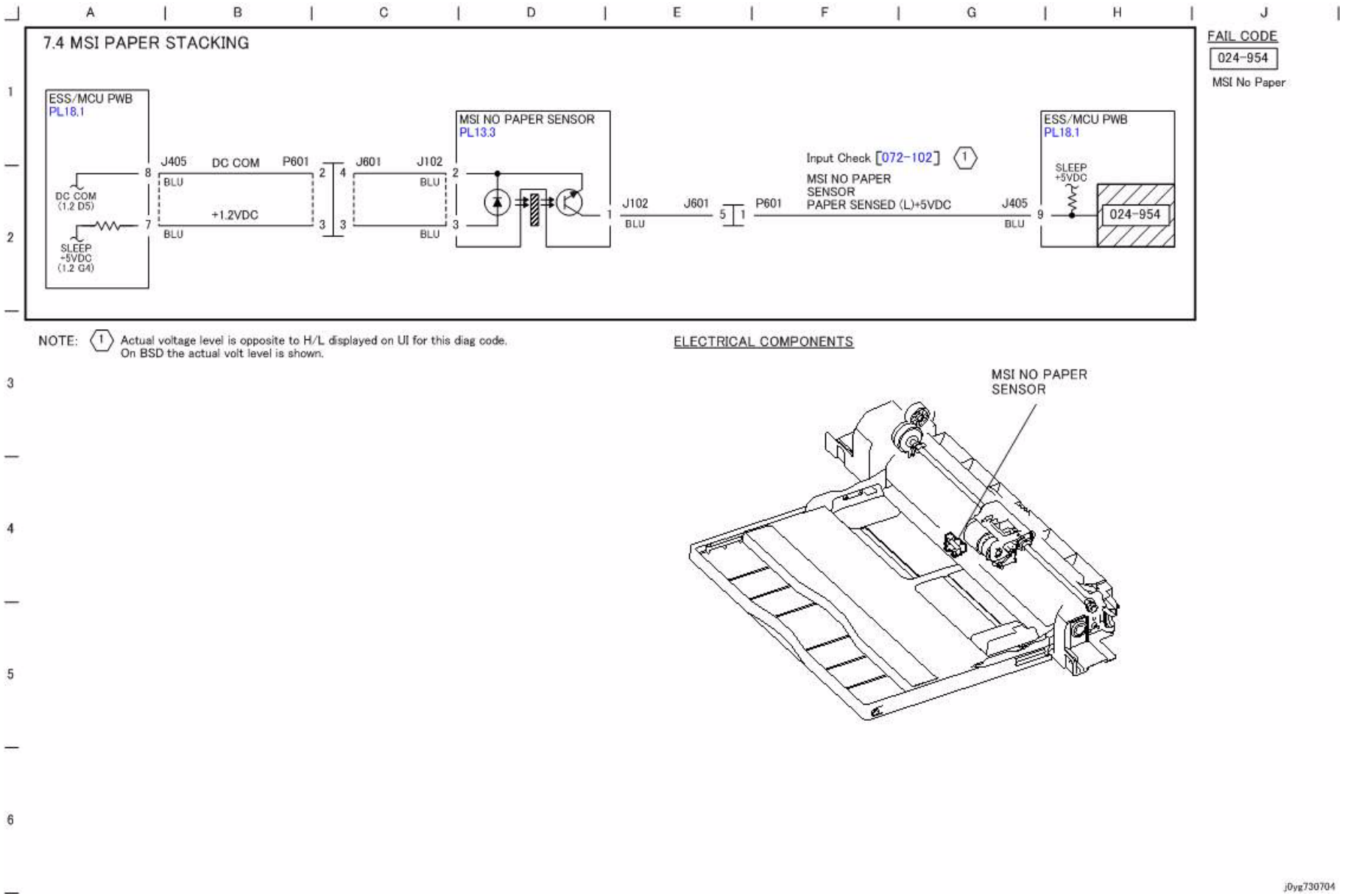


Figure 1 j0yg730704

CH8.1 Tray 1 and MSI Paper Transportation

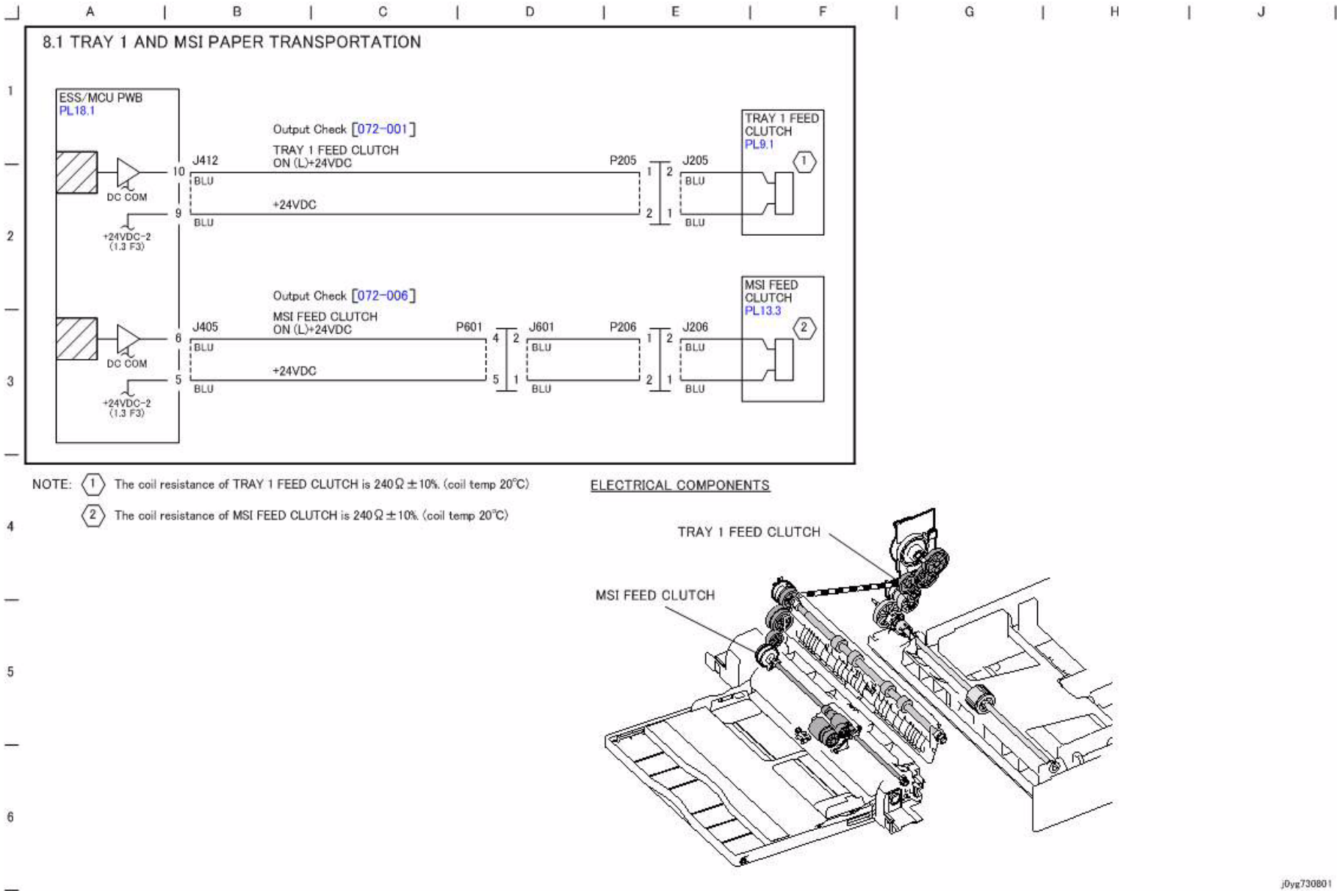


Figure 1 j0yg730801

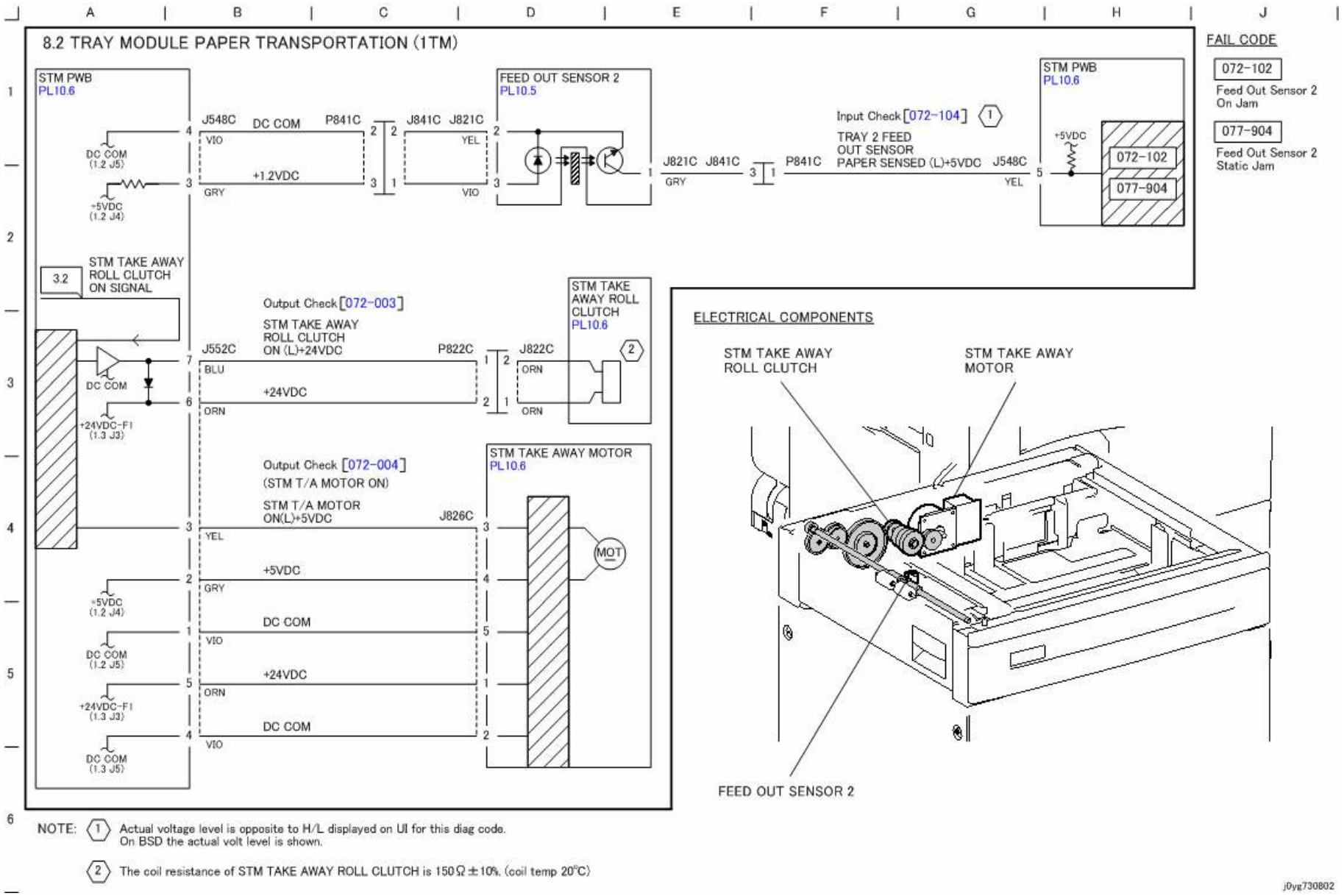


Figure 1 j0yg730802

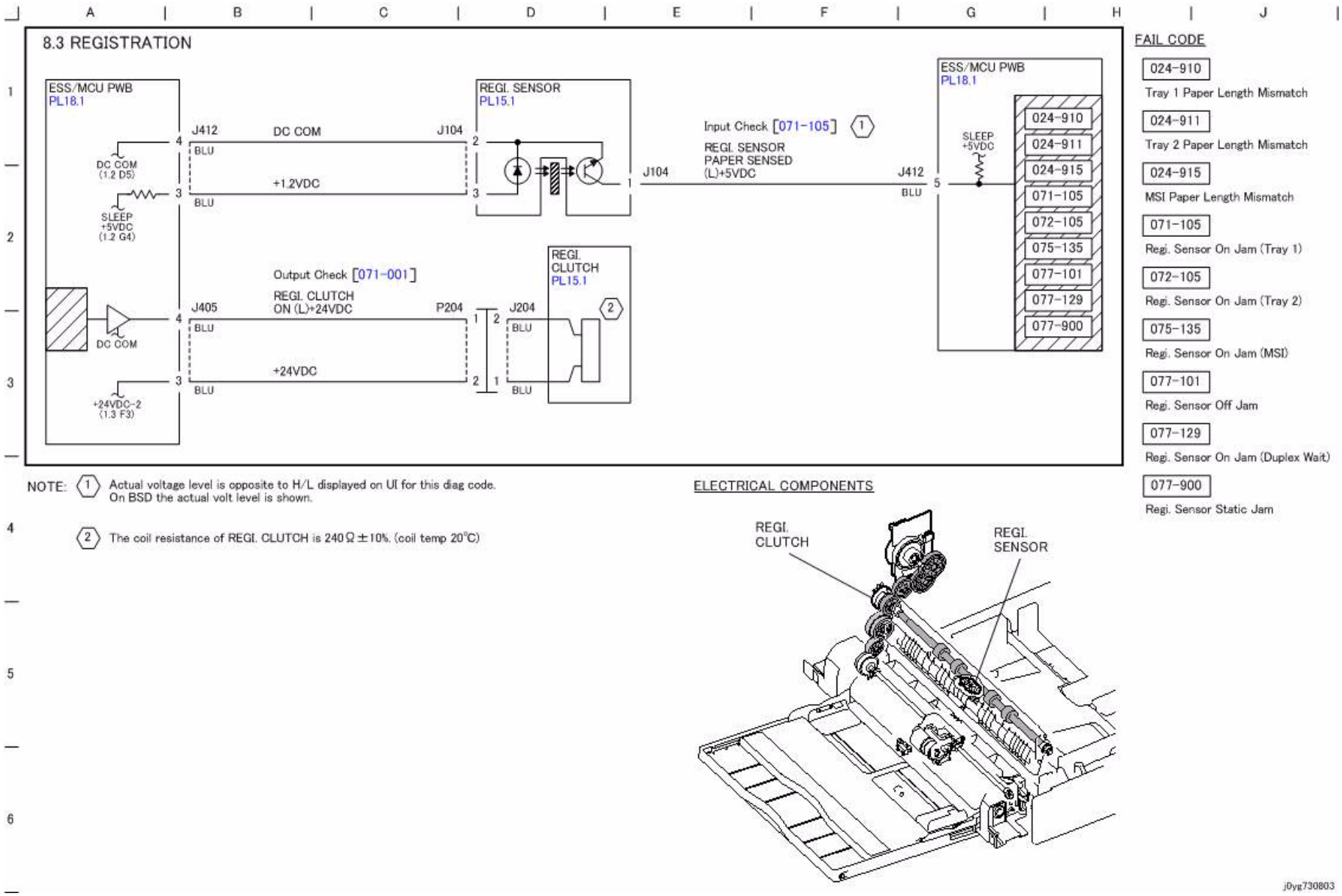
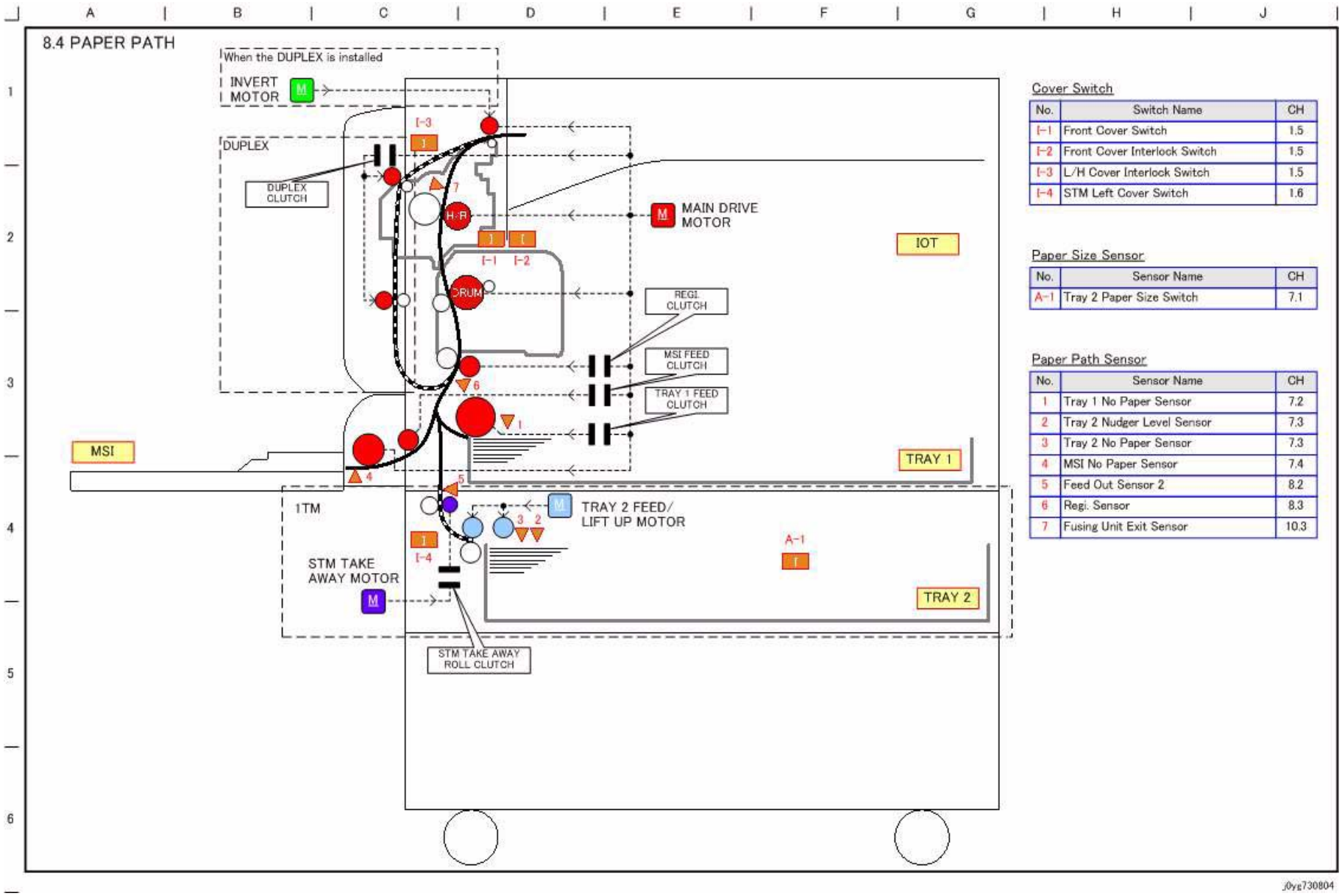


Figure 1 j0yg730803



Cover Switch

No.	Switch Name	CH
I-1	Front Cover Switch	1.5
I-2	Front Cover Interlock Switch	1.5
I-3	L/H Cover Interlock Switch	1.5
I-4	STM Left Cover Switch	1.6

Paper Size Sensor

No.	Sensor Name	CH
A-1	Tray 2 Paper Size Switch	7.1

Paper Path Sensor

No.	Sensor Name	CH
1	Tray 1 No Paper Sensor	7.2
2	Tray 2 Nudger Level Sensor	7.3
3	Tray 2 No Paper Sensor	7.3
4	MSI No Paper Sensor	7.4
5	Feed Out Sensor 2	8.2
6	Regi. Sensor	8.3
7	Fusing Unit Exit Sensor	10.3

Figure 1 j0yg730804

CH9.1 Xero Life Control

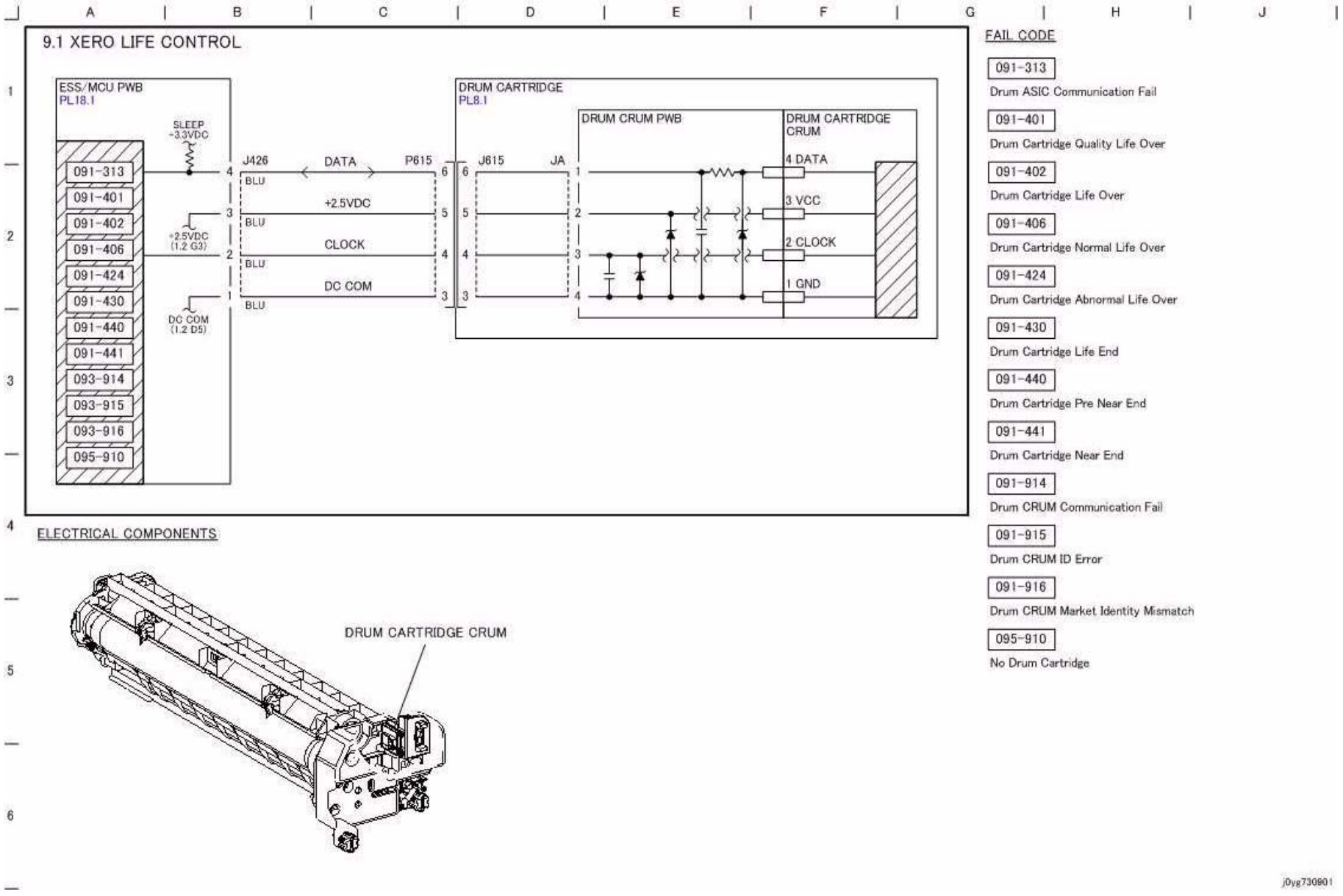


Figure 1 j0yg730901

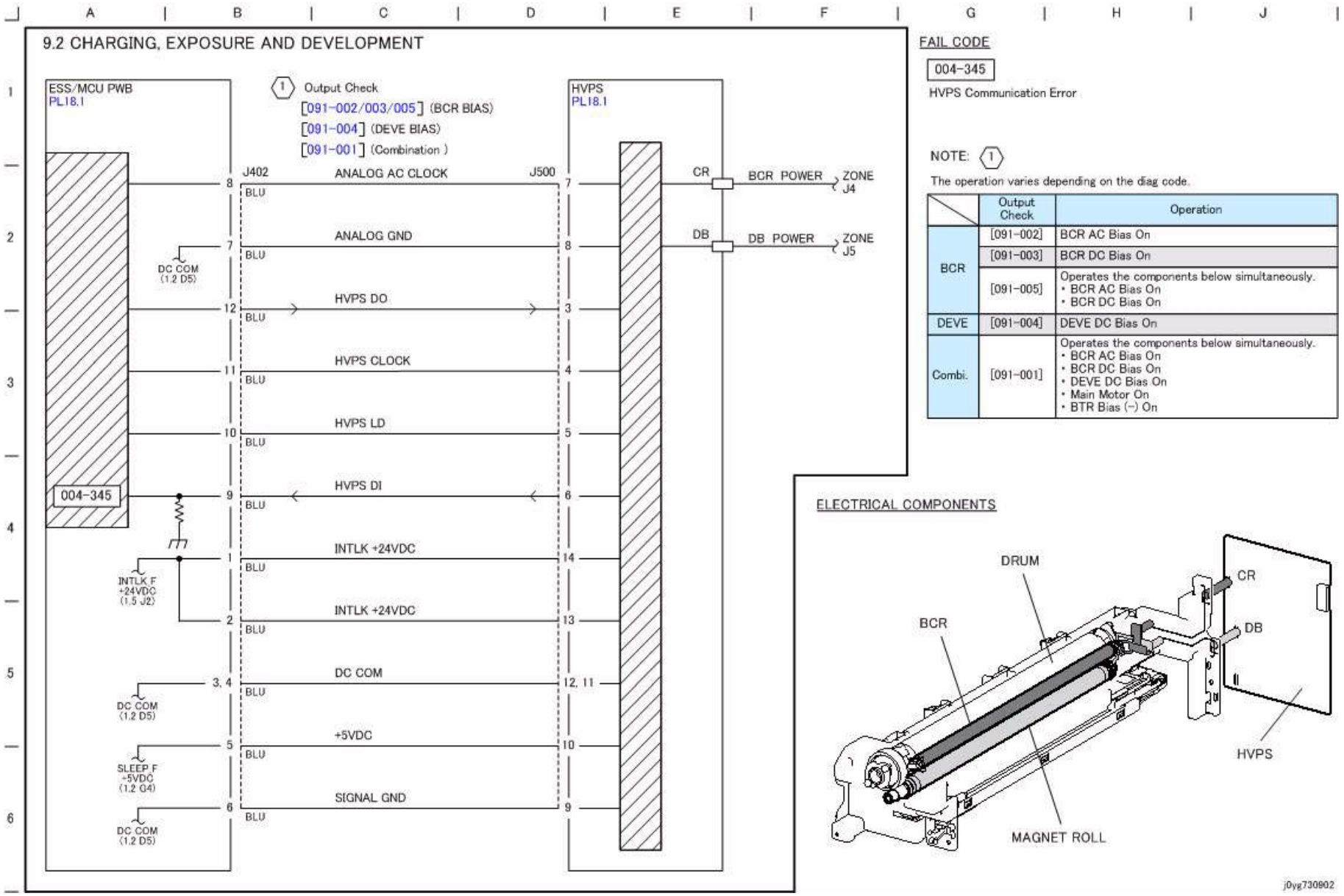


Figure 1 j0yg730902

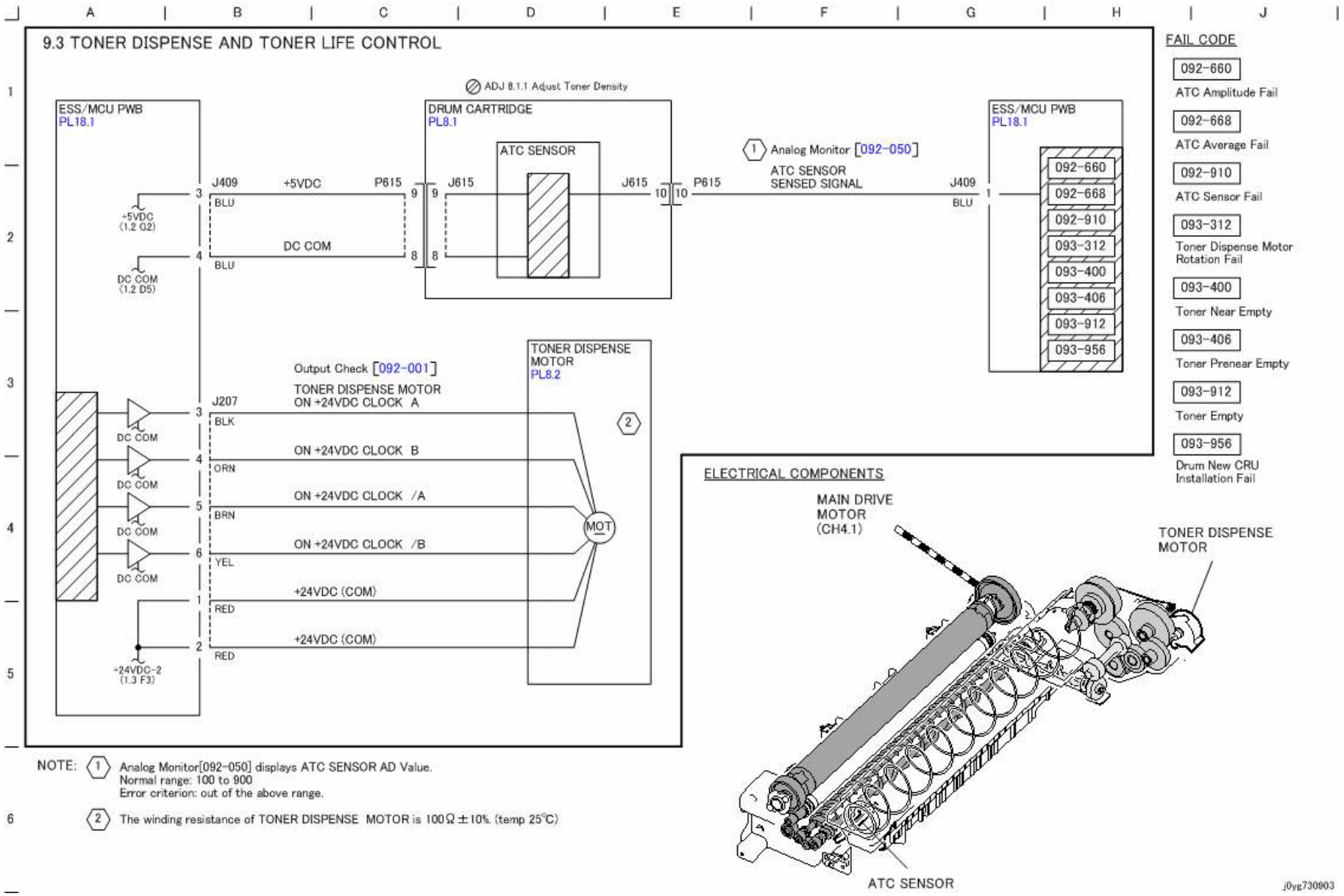
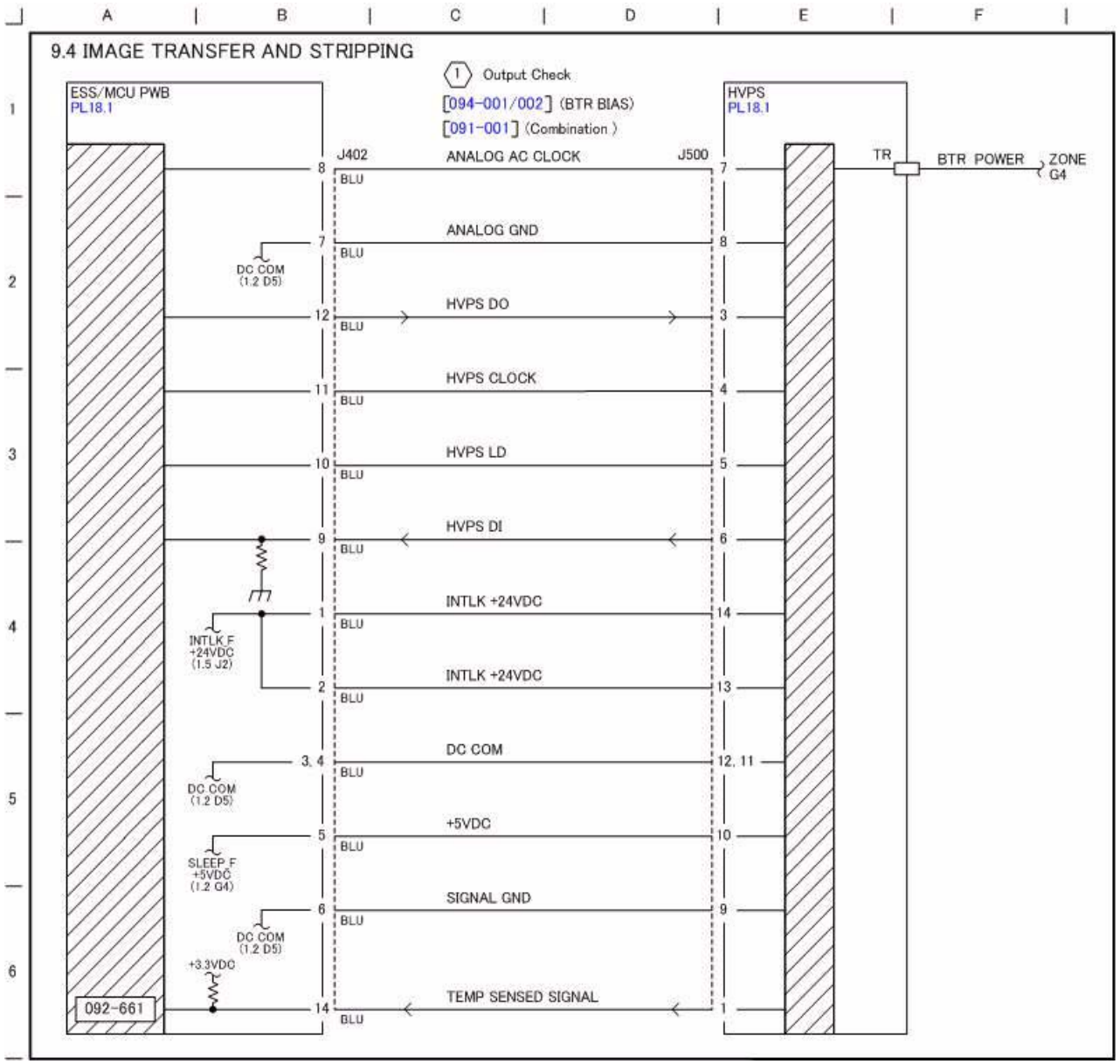


Figure 1 j0yg730903



FAIL CODE

092-661

Temperature Sensor Fail

NOTE: 1

The operation varies depending on the diag code.

Output Check	Operation
[094-001]	BTR (+) Bias On
[094-002]	BTR (-) Bias On
[091-001]	Operates the components below simultaneously. • BCR AC Bias On • BCR DC Bias On • DEVE DC Bias On • Main Motor On • BTR (-) Bias On

ELECTRICAL COMPONENTS

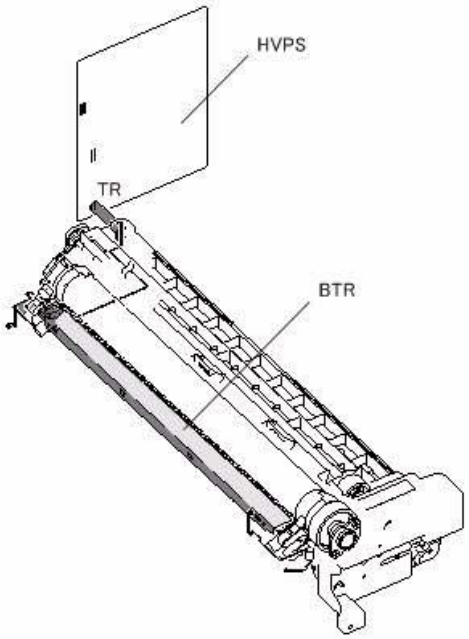


Figure 1 j0yg730904

CH10.1 Fusing Heat Control (1 of 2)

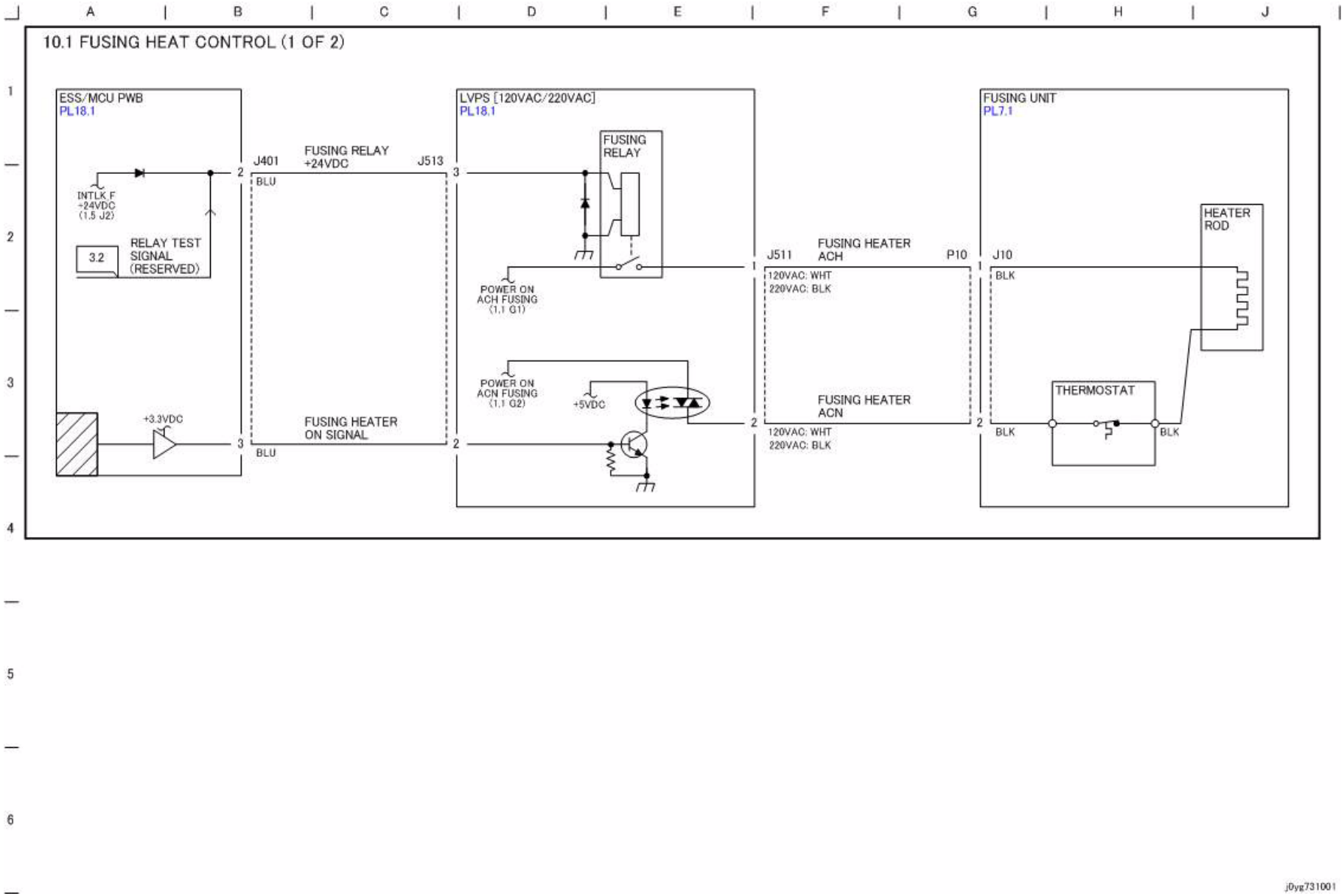
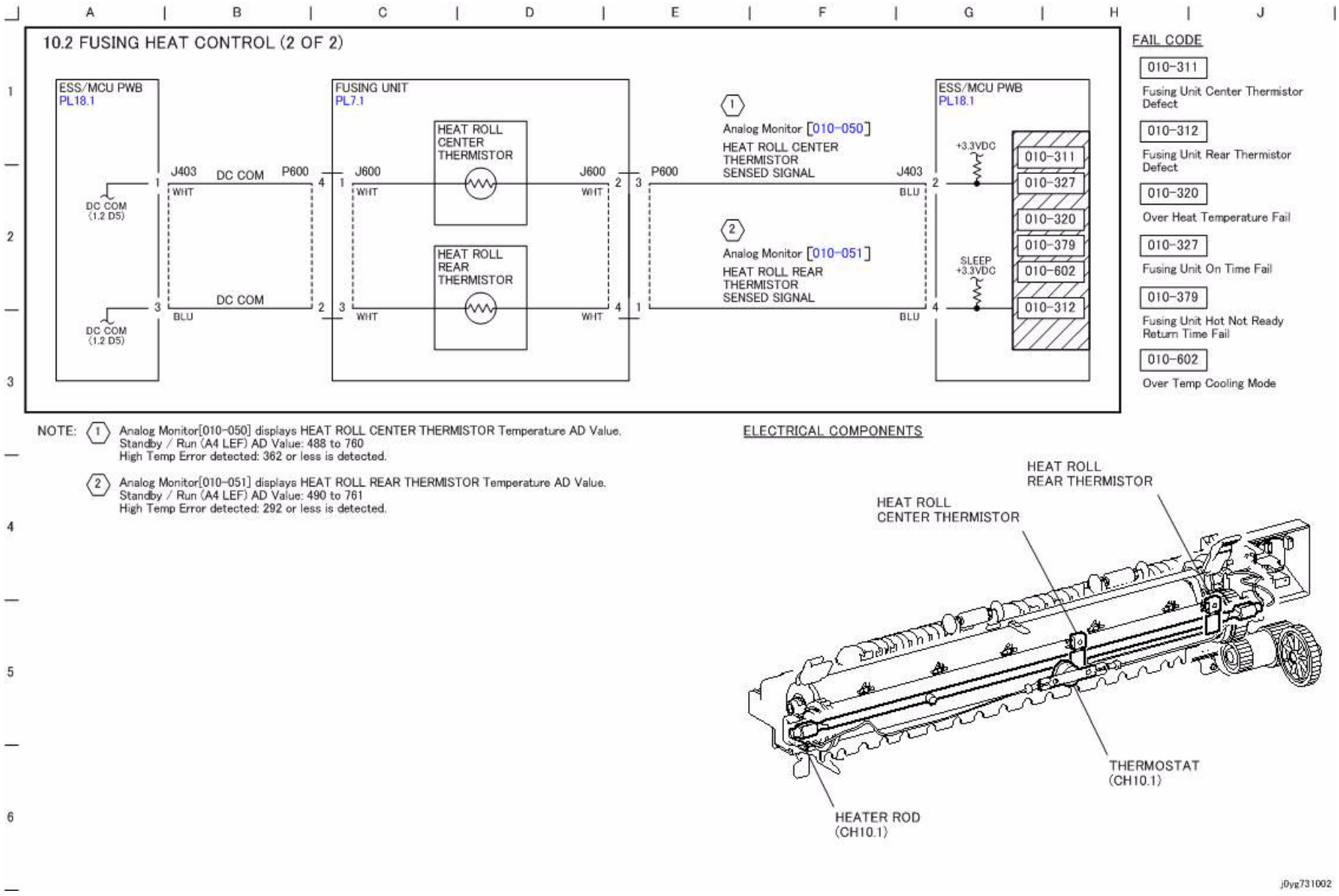


Figure 1 j0yg731001

CH10.2 Fusing Heat Control (2 of 2)

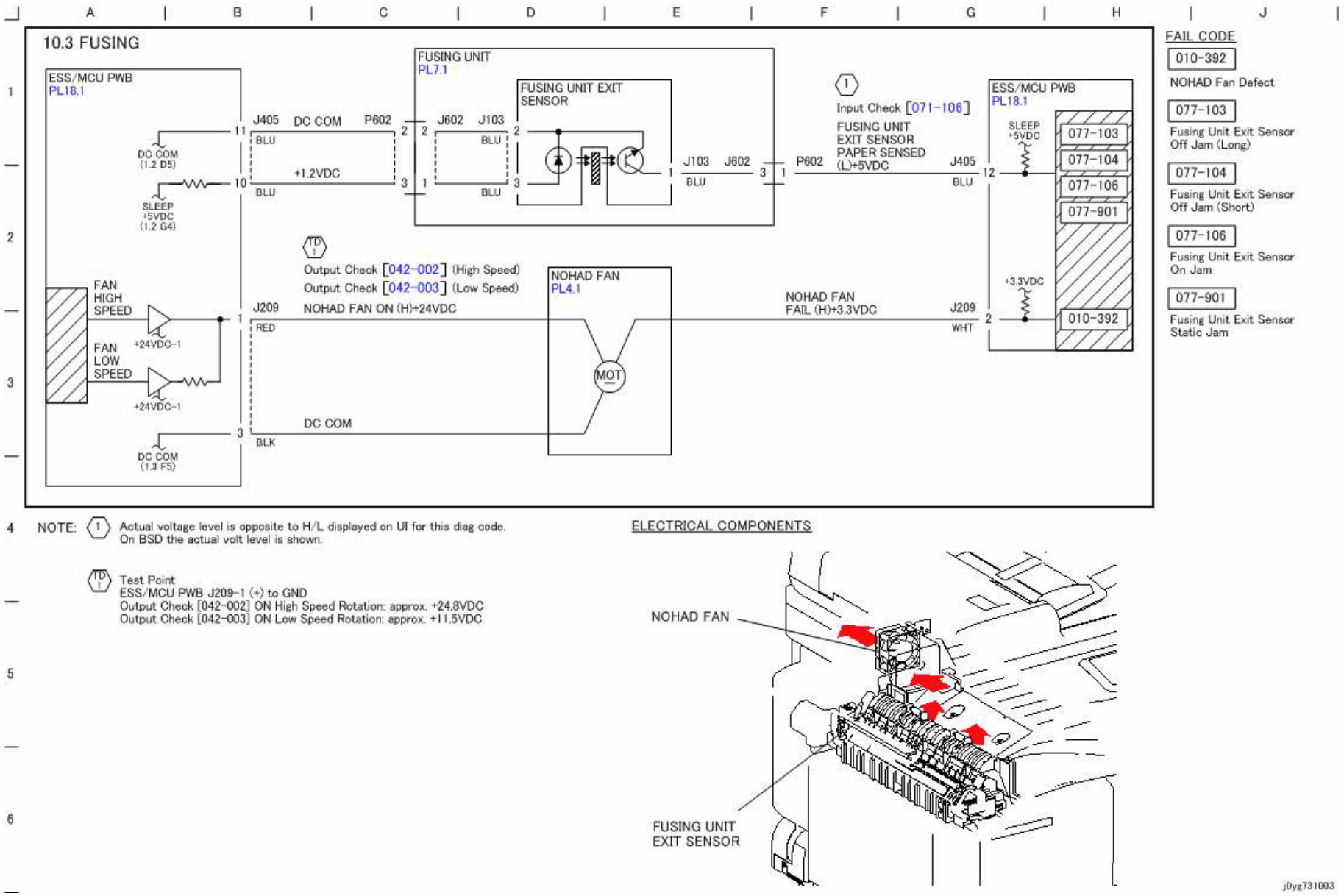


NOTE: (1) Analog Monitor[010-050] displays HEAT ROLL CENTER THERMISTOR Temperature AD Value.
Standby / Run (A4 LEF) AD Value: 488 to 760
High Temp Error detected: 362 or less is detected.

(2) Analog Monitor[010-051] displays HEAT ROLL REAR THERMISTOR Temperature AD Value.
Standby / Run (A4 LEF) AD Value: 490 to 761
High Temp Error detected: 292 or less is detected.

ELECTRICAL COMPONENTS

Figure 1 j0yg731002



NOTE: (1) Actual voltage level is opposite to H/L displayed on UI for this diag code. On BSD the actual volt level is shown.

(TD 1) Test Point
ESS/MCU PWB J209-1 (+) to GND
Output Check [042-002] ON High Speed Rotation: approx. +24.8VDC
Output Check [042-003] ON Low Speed Rotation: approx. +11.5VDC

ELECTRICAL COMPONENTS

j0yg731003

Figure 1 j0yg731003

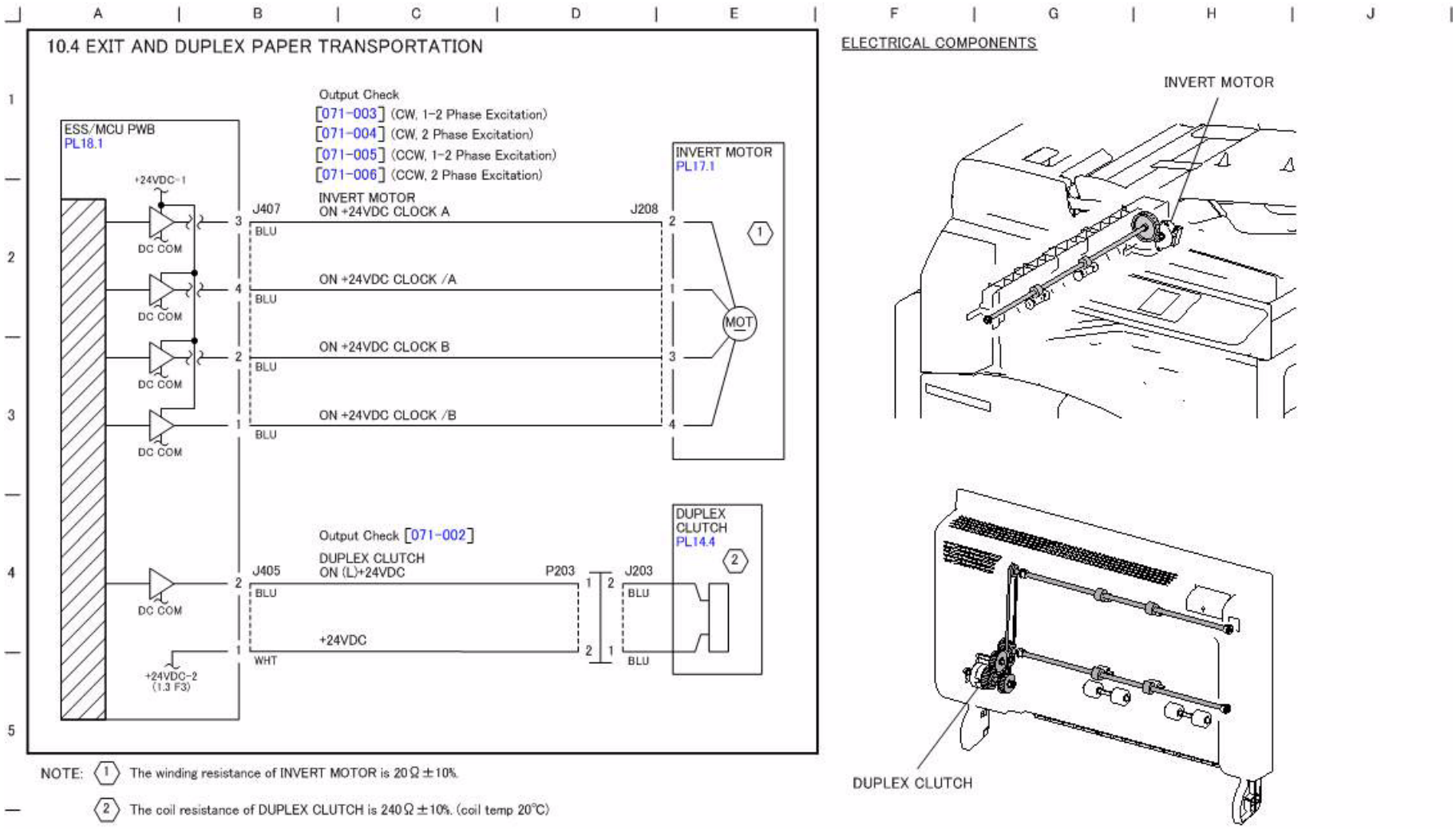


Figure 1 j0yg731004