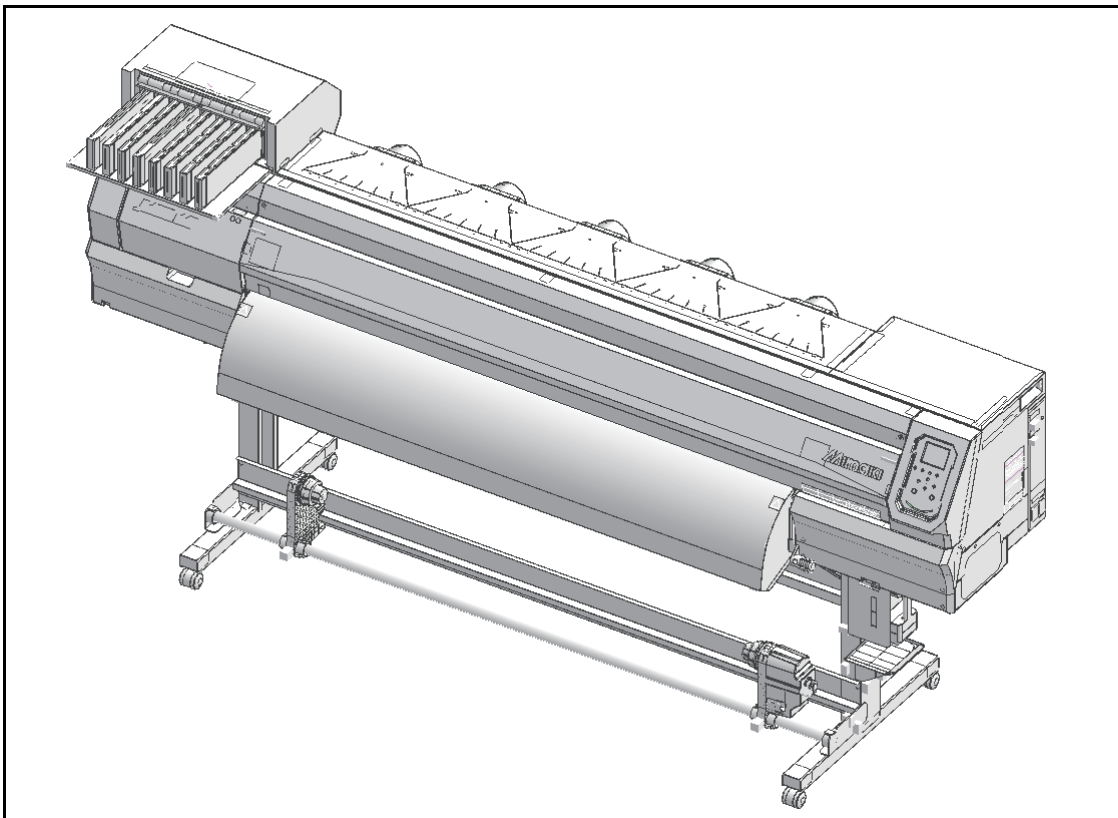


# ***JV300-130/160***

## **SERVICE DOCUMENTS**



# Constitution of JV300-130/160 Service Documents

- This SERVICE DOCUMENTS contains the following documents.

SERVICE DOCUMENTS		ver 1.00	Revised 2014.05.30
<p>This document, for use by service engineers, describes the instructions and information necessary for the installation and maintenance work of the machine JV300-130/160 (called the machine below). Perform installation and maintenance by consulting this document and the following related documents.</p>			
INSTALLATION CHECKLIST		ver 1.10	Revised 2014.06.23
<p>This "INSTALLATION CHECKLIST" includes important information and useful information about the installation of this machine including preparation before installation and user training after installation.</p> <p>It also includes "Installation Report" to report the result of the installation or problems and trouble encountered during installation.</p>			
ACCESSORIES LIST		ver 1.20	Revised 2014.06.23
<p>This list shows the photos of the accessories contained in the package of the machine.</p> <p>Before installation, check the accessories against the "ACCESSORIES LIST" to see that no accessory is missing. If any accessories are missing, circle the relevant photos in the list and attach the list to the "Installation Report".</p>			
INSTALLATION GUIDE		ver 1.30	Revised 2014.06.23
<p>This guide describes the information necessary for installation of this machine and the installation procedure.</p> <p>Understand thoroughly the procedure and precautions described in "INSTALLATION GUIDE" and be sure to follow them to install the machine.</p>			
MAINTENANCE MANUAL		ver 1.00	Revised 2014.05.30
<p>This manual describes the information about the after-sale service of this machine.</p> <p>"MAINTENANCE MANUAL" describes the operating principle of the machine, details of electrical parts, workflow of the service, adjustment and test items, assembly and disassembly procedure, troubleshooting, and operation flow. Understand the information and precautions described in this manual and follow them to perform maintenance work.</p>			
Request for Care and Maintenance		ver 1.10	Revised 2014.06.23
<p>This manual describes procedures to perform frequently or periodically in order to use this device for a long time while maintaining precision.</p>			
MECHANICAL DRAWING		ver 1.10	Revised 2014.06.23
<p>This parts list shows the names of parts of the machine, including the part numbers and exploded views.</p> <p>The names of parts referred to in "INSTALLATION GUIDE" and "MAINTENANCE MANUAL" are the same as those shown in this list. Consult this list during the disassembly and assembly of the machine or for procurement of parts.</p>			

# Change Tracking

Date	2014.05.30	Manual Ver.	1.00	Remark	
Status	Index	Rev.	Changes		
Released			New issued		

Service Documents > Table of Contents						Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised	F/W ver	Remark
<b>Table of Contents</b>						<b>1.0</b>

1	About Service Documents
1.1	Constitution and Rules
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4.2	Regular Maintenance
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4.2.4	Greasing
4.2.5	Checking
4.3	About Print Quality
4.4	Essential Information for Service
4.4.1	Handling of FFC
4.4.2	Electric charge checking when replace the Electrical Parts



# About Service Documents

**1.1**  
**Constitution and Rules**

**1.2**  
**Symbol**

**1**

**2**

**3**

**4**

Service Documents > Constitution and Rules							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised		F/W ver	Remark
1.1 Constitution and Rules							1.0

### A-1) Format of the Cover of “SERVICE DOCUMENTS”

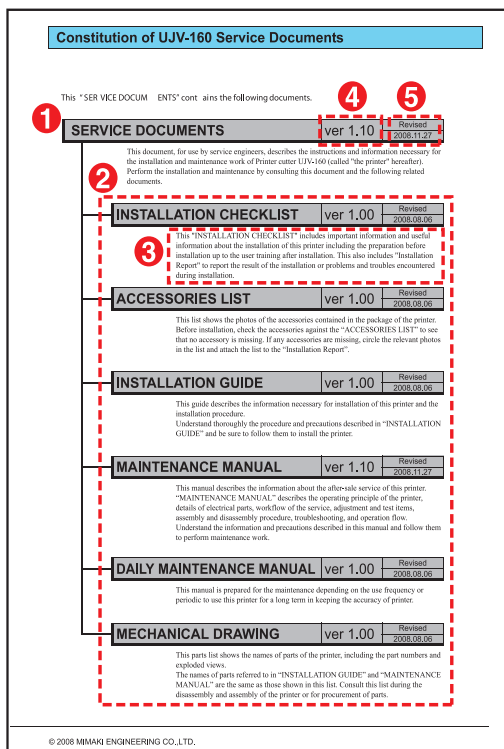


#### ■ Details

- Put the logo of “MIMAKI” at the upper right corner.  
The cover is to be monochrome.
- Indicate the name of this machine.
- Indicate the model name (details).
- Put white characters “SERVICE DOCUMENTS” in a black background.
- Show an image (appearance) of this machine.
- Indicate the company name and URL of MIMAKI.
- Put the ledger number of the document.

\* It is not required to replace this cover at the case of item revision or document version updated.

### A-2) Constitution of “SERVICE DOCUMENTS”



#### ■ Details

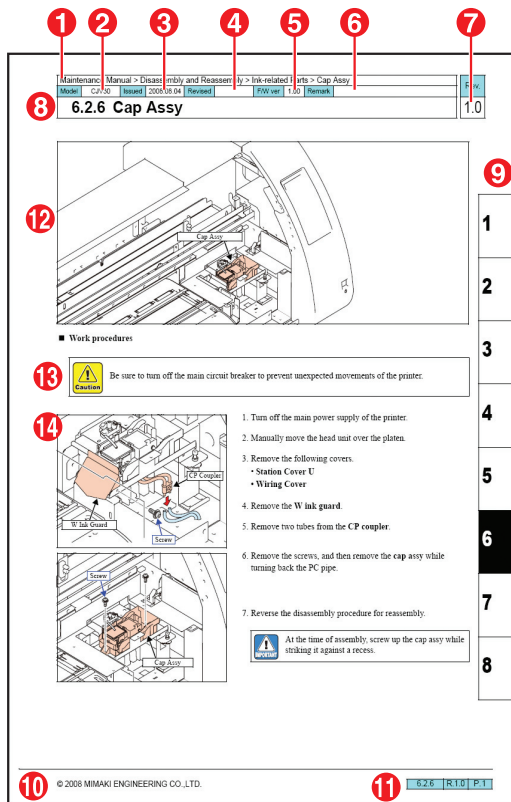
- Display the component tree of “SERVICE DOCUMENTS”.
- The following documents are included in “SERVICE DOCUMENTS” when the machine is released in the market.
  - ☐ INSTALLATION CHECKLIST
  - ☐ ACCESSORIES LIST
  - ☐ INSTALLATION GUIDE
  - ☐ MAINTENANCE MANUAL
  - ☐ DAILY MAINTENANCE MANUAL
  - ☐ MECHANICAL DRAWING
 Additions or changes are possible anytime.
- Describe the outline of each document.
- Indicate the version of each document up to two decimals.
- Indicate the issued date of latest document version.

\* Replace this page at the case of item revision or document version updated.

\* The latest version of each document is administered and displayed in this page.

Service Documents > Constitution and Rules							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised		F/W ver	Remark
1.1 Constitution and Rules							1.0

### A-3) Format of Explanatory Page



#### ■ Header

- 1 Indicate the heading flow to the section.
- 2 Indicate the model name of machine.
- 3 Indicate the date of issue of the section.
- 4 Indicate the date of revision of the section.
- 5 Indicate the oldest firmware version to which the section relates.
- 6 Indicate additional information, such as the related serial number.
- 7 Indicate the revision number of the section.

- For a minor change (correction of text or change of names of parts), raise the number at the first decimal place.  
Example: 1.0 → 1.1
- For a major change (change in specifications or modification to drawings), raise the number at the ones place.  
Example: 1.0 → 2.0

- 8 Indicate the title of item with the item number.

#### ■ Index

- 9 Indicated the chapter number, as a reference at document retrieving.

#### ■ Footer

- 10 Indicate Copyright at the bottom left of the page. Indicate the year of the first release of the document.
- 11 At the bottom right of page, indicate the item number, revision number and page number.

#### ■ Description

The basic format of the explanation is as follows:

- Use the same font of the same size for the characters on the page excluding the header, footer and index.
- Use only black for the characters on the page excluding those for drawings, header, footer and index.
- Locate the general drawing for adjustments or disassembly and reassembly, if any, in the upper area of the page. (12)
- Locate the drawings in the left area and the text in the right area. (14)
- Do not use any drawings other than line drawings, except when photos are appropriate for, say, cables.
- Enclose each symbol such as “Warning”, “Caution”, “Important” or “Tips” and the explanatory text with a rectangular box. (13)
- Use “[ ]” and “->” when an operation function is to be shown in the text of this document.  
Example: [FUNCTION] -> [#ADJUST] -> [HEAD ADJUST] -> [SLANT ADJUST]
- Do not use any trademarks or trade names of other companies to name tools or parts.  
Example: INSULOK, LOCTITE
- In the explanatory text, use the same names of parts as those in “MECHANICAL DRAWING”, and use bold characters for them.
- Express the explanatory text as briefly as possible.
- Avoid a redundant description of the same information or procedure.

# 1.1 Constitution and Rules

1.0

## A-4) Format of Change Tracking

1

Service Documents > Change Tracking

Change Tracking 2

Date	2008.08.01	Manual Ver.	1.00	Remark
Status	Index	Rev.		Changes
Released		New issued		

3 4 5 6 7 8 9

© 2008 MIMAKI ENGINEERING CO.,LTD. Change Tracking P.1

### ■ Details

- 1 Indicate the heading flow to the section.
  - 2 Indicate the title of the section. For any document other than “SERVICE DOCUMENTS”, indicate the name of the document in front of Change Tracking.  
Example: Indicate “Change Tracking” for “SERVICE DOCUMENTS” or “Maintenance Manual Change Tracking” for “MAINTENANCE MANUAL”.
  - 3 Enter the date of change in the “Date” field in the yyyy/mm/dd format.
  - 4 Enter the version of the revised document in the “Manual Ver.” field.
  - 5 Enter additional information such as the related firmware version and the related serial number in the “Remark” field.
  - 6 Enter the change status in the “Status” field.  
Released: A new version is issued when a major change, such as change in specifications, takes place.  
Example: 1.00 → 2.00  
Revised: The correction of the document takes place.  
Example: Correction or addition of explanatory text and/or names of parts, or modification to and/or addition of drawings.  
Erased: Descriptions of work or functions are deleted because of specification change or firmware upgrade.  
Added: Descriptions of work or functions are newly added because of specification change or firmware upgrade.
  - 7 Indicate the section number of the changed section in the “Index” field.
  - 8 Indicate the revision number of the changed section in the “Rev.” field.
  - 9 Describe detailed information of the change, such as the location of change, reason and purpose, in the “Changes” field.
  - 10 Prepare an independent list for Change Tracking for every version of the document. Locate the Change Tracking list for the latest version at the top. (11)
- \* Replace this cover by each user at the case of item revision or document version updated.

10

Service Documents > Change Tracking

Change Tracking

Date	2008.08.02	Manual Ver.	1.00	Remark
Status	Index	Rev.		Changes
Revised	4.2.2	1.1		
Erased	4.3.2	1.0		
Added	4.4.1	1.0		

11

Date	2008.08.01	Manual Ver.	1.00	Remark
Status	Index	Rev.		Changes
Released		New issued		

© 2008 MIMAKI ENGINEERING CO.,LTD. Change Tracking P.1

1

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Service Documents > Constitution and Rules							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised		F/W ver	Remark
1.1 Constitution and Rules							1.0

## A-5) Format of Contents

1	2	3	4	5	6
7	8	9	10	11	12
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1.0					
1 Operating Principle					
1.1 Basic Operation					
1.1.1 Main Switch Power ON					
1.1.2 Sub Switch Power ON					
1.1.3 Initial Machine Operation					
1.1.4 Detection of a Media Width					
1.1.5 Clamp Pressure Switching					
1.1.6 Operation for Connecting the Heads					
1.1.7 Mark Detection					
1.1.8 Main Switch Power OFF					
1.2 Maintenance Function					
1.2.1 CARRIAGE OUT					
1.2.2 WIPER REPLACE					
1.2.3 NOZZLE WASH					
1.2.4 PUMP TUBE WASH					
1.2.5 GR MAINTENANCE					
1.2.6 FILL					
1.2.7 DISCHARGE WASH					
1.2.8 Maintenance Washing Liquid Filling and Discharge					
1.2.9 Waste Ink Tank Warning					
1.3 Ink System					
1.3.1 Configuration					
1.3.2 Ink System Error Monitoring					
1.3.3 Supply Cartridge Control and Selection					
1.3.4 Cartridge LED Control					
1.3.5 Supply Valve Control					
1.3.6 Monitoring of the Amount of Remaining Ink					
1.3.7 Use-up Cleaning					
1.3.8 Ink Suction and Discharge Control					
1.3.9 Initial Filling					
1.4 Print & Cut					
2 Electrical Parts					
2.1 Block Diagram					
2.1.1 Connection Diagram Inside the Main Body					
2.1.2 Connection Diagram Outside the Main Body					
2.2 Operating Description					
2.2.1 Operation Explanation					
2.3 Circuit Board Specifications					
2.3.1 Power Supply PCB Assy					
2.3.2 Main PCB Assy					
2.3.3 PREAM PCB Assy					
2.3.4 Regenerative Resistivity PCB Assy					
2.3.5 Cutter Driver PCB Assy					
2.3.6 Station PCB Assy					
2.3.7 X-axis Motor Relay PCB Assy					
2.3.8 Ink Slider PCB Assy					
2.3.9 Cutter Slider PCB Assy					
2.3.10 Head Memory PCB Assy					
2.3.11 LED PCB Assy					
2.3.12 Keyboard PCB Assy					
2.3.13 Take-up PCB Assy					
3 Workflow					
3.1 Ink Related Parts					
3.1.1 Replacement of the Head Unit					
3.1.2 Replacement of the Cap Assy					
3.1.3 Replacement of the Cartridge Assy					
3.2 Cut Head Carriage					
3.2.1 Replacement of the Pen Assy and LED Pointer					
3.2.2 Replacement of the Auto Cutter Assy					
3.2.3 Replacement of the Mark Assy					
3.3 Driving Parts					
3.3.1 Replacement of the X-axis Motor					
3.3.2 Replacement of the Y-axis Motor					
3.3.3 Replacement of the Y Driver Belt					
3.3.4 Replacement of the Linear Encoder Scale					
3.3.5 Replacement of the GR Roller Assy					
3.3.6 Replacement of the Wiper Unit					
3.4 Electrical Parts					
3.4.1 Replacement of the Main PCB Assy					
© 2009 MIMAKI ENGINEERING CO., LTD.					
Maintenance Manual Contents [ R.1.0 ] P.1					

### ■ Header

- 1 Indicate the flow of contents.
- 2 Indicate the model name of machine.
- 3 Indicate the date of issue of the contents.
- 4 Indicate the date of revision of the contents.
- 5 Indicate additional information, such as the related serial number.
- 6 Indicate the revision number of the contents.
  - For a minor change (correction of text or addition of sections), raise the number at the first decimal place. Example: 1.0 → 1.1
  - For a major change (change in specifications), raise the number at the ones place. Example: 1.0 → 2.0
- 7 Indicate the title of contents.

### ■ Description

- 8 Indicate no page number. (The item number only.)
- 9 Indicate the contents in two-column format.
- 10 Use black characters of the same font and same size.

### ■ Footer

- 11 Indicate Copyright at the bottom left of the page. Indicate the year of the first release of the document.
- 12 At the bottom right of the page, indicate the section number, revision number and page number.

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Service Documents > Constitution and Rules							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised		F/W ver	Remark
<b>1.1 Constitution and Rules</b>							<b>1.0</b>

## B-1) “INSTALLATION CHECKLIST”



### ■ Explanation of Cover

- ① Indicate the logo of “MIMAKI” at the upper right corner. The monochrome is only accepted for the cover.
- ② Indicate the name of this machine.
- ③ Indicate the model name (details).
- ④ Indicate “SERVICE DOCUMENTS”.
- ⑤ For the document name, use white letters on the black background.
- ⑥ Indicate the company name and URL of MIMAKI.
- ⑦ Put the ledger number of the document.

### ■ Constitution

The “INSTALLATION CHECKLIST” includes information useful and necessary for the installation of this machine.

#### ☐ INSTALLATION CHECKLIST

This easy-to-use check list summarizes important information and useful information about the installation including preparation before installation and user training after installation.

#### ☐ Installation Report

This report is prepared for submitting the result of installation or the report of problems and troubles encountered during the installation to “MIMAKI” simply.

- \* There is no need of replacing this cover even when the revision of sections is updated or a new version is issued.

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## B-2) “ACCESSORIES LIST”



### ■ Explanation of Cover

- ① Indicate the logo of “MIMAKI” at the upper right corner. The monochrome is only accepted for the cover.
- ② Indicate the name of this machine.
- ③ Indicate the model name (details).
- ④ Indicate “SERVICE DOCUMENTS”.
- ⑤ For the document name, use white letters on the black background.
- ⑥ Indicate the company name and URL of MIMAKI.
- ⑦ Put the ledger number of the document.

### ■ Constitution

- The “ACCESSORIES LIST” is a list of accessories contained with illustrations in the packing box.
- Check the accessories prior to the installation of this machine if there is any missing, referring to the “ACCESSORIES LIST”. Make a check at the applicable check box on the list then attach it on the “INSTALLATION REPORT” at the case of missing.

- \* There is no need of replacing this cover even when the revision of sections is updated or a new version is issued.

Service Documents > Constitution and Rules							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised		F/W ver	Remark
<b>1.1 Constitution and Rules</b>							<b>1.0</b>

### B-3) “INSTALLATION GUIDE”



#### ■ Explanation of Cover

- ❶ Indicate the logo of “MIMAKI” at the upper right corner. The monochrome is only accepted for the cover.
- ❷ Indicate the name of this machine.
- ❸ Indicate the model name (details).
- ❹ Indicate “SERVICE DOCUMENTS”.
- ❺ For the document name, use white letters on the black background.
- ❻ Indicate the company name and URL of MIMAKI.
- ❼ Put the ledger number of the document.

#### ■ Constitution

The “INSTALLATION GUIDE” describes the information necessary for installation of this machine and the installation procedure.

At installing, understand the procedures and caution items of this manual thoroughly for the work.

- \* There is no need of replacing this cover even when the revision of sections is updated or a new version is issued.

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### B-4) “MAINTENANCE MANUAL”



#### ■ Explanation of Cover

- ❶ Indicate the logo of “MIMAKI” at the upper right corner. The monochrome is only accepted for the cover.
- ❷ Indicate the name of this machine.
- ❸ Indicate the model name (details).
- ❹ Indicate “SERVICE DOCUMENTS”.
- ❺ For the document name, use white letters on the black background.
- ❻ Indicate the company name and URL of MIMAKI.
- ❼ Put the ledger number of the document.

#### ■ Constitution

This manual describes the information about the after-sale service of this machine. This manual describes the operating principle of the machine, details of electrical parts, working procedure of service, adjustment and test items, assembly and disassembly procedure, trouble-shooting, and operation flow.

- \* Understand the information and precautions described in this manual and follow them to perform maintenance work.
- \* There is no need of replacing this cover even when the revision of sections is updated or a new version is issued.



Service Documents > Constitution and Rules							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised		F/W ver	Remark
1.1 Constitution and Rules							1.0

B-5) “DAILY MAINTENANCE MANUAL”



■ Explanation of Cover

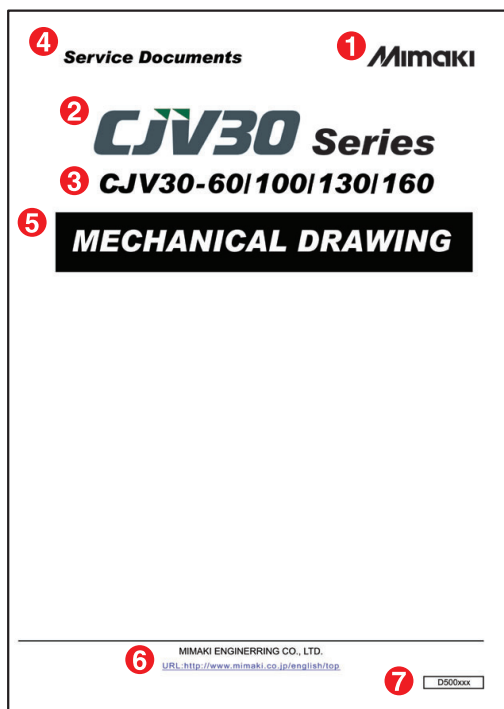
- ❶ Indicate the logo of “MIMAKI” at the upper right corner. The monochrome is only accepted for the cover.
- ❷ Indicate the name of this machine.
- ❸ Indicate the model name (details).
- ❹ Indicate “SERVICE DOCUMENTS”.
- ❺ For the document name, use white letters on the black background.
- ❻ Indicate the company name and URL of MIMAKI.
- ❼ Put the ledger number of the document.

■ Constitution

The “DAILY MAINTENANCE MANUAL” describes the procedure of daily maintenance to maintain this machine in good condition.

- \* After the maintenance work, make sure to perform the work according to the “DAILY MAINTENANCE MANUAL”.
- \* There is no need of replacing this cover even when the revision of sections is updated or a new version is issued.

B-6) “MECHANICAL DRAWING”



■ Explanation of Cover

- ❶ Indicate the logo of “MIMAKI” at the upper right corner. The monochrome is only accepted for the cover.
- ❷ Indicate the name of this machine.
- ❸ Indicate the model name (details).
- ❹ Indicate “SERVICE DOCUMENTS”.
- ❺ For the document name, use white letters on the black background.
- ❻ Indicate the company name and URL of MIMAKI.
- ❼ Put the ledger number of the document.

■ Constitution

1. This document shows the names of parts of the machine, together with the part numbers and exploded views. The names of parts referred to in “INSTALLATION GUIDE” and “MAINTENANCE MANUAL” are the same as those shown in this document. Consult this document during the disassembly and assembly of the machine or for procurement of parts.
- \* There is no need of replacing this cover even when the revision of sections is updated or a new version is issued.



## C-1) Replacement of Updated page

**1**

Red Arrow

**2**

Green Arrow

**3**

Red Arrow

**1.1.3 Initial Machine Operation** (Rev. 1.0)

■ Indication on LCD

● A display at the start of the operation

PLEASE WAIT

■ Processing sequence

Step	Processing	Description	Indication on LCD
1	Detection of a station origin	1. Drive the vapor motor to detect the station origin. • When it cannot be detected, [ERROR46 VAPER] is displayed and the system goes down. • If an error occurs during the service mode, try the operation again by pressing the key [ENTER]. Pressing the key [FUNCTION] is also available.	●
2	Detection of the Y origin	1. Drive the Y-axis motor to detect the Y origin. • When it cannot be detected, [ERROR1 Y-ORIGIN] is displayed and the system goes down.	●
3	Capping	1. Move the head carriage back to the Y origin and carry out capping.	●
4	Correcting the Y-axis distance	1. Make the print head carriage go and return one time by a photo with, correct the Y-axis distance and conduct the laser encode test. • In the malfunction, [ERROR18 Laser/ENCODER] is displayed and the system goes down.	●
5	Stand by of cut head	1. Move the cut head to the maintenance position at the left of the unit and check the coupling of the cut head.	●

**1.1.2 Sub Switch Power ON** (Rev. 1.0)

■ Indication on LCD

● Display at main switch power ON

● Version information display

● Version information display (during the service mode)

■ Processing sequence

Step	Processing	Description	Indication on LCD
1	Initial setting of CPU and SW	1. [Boot] is displayed.	●
2	Display at main switch power ON	1. [Boot] is displayed.	●
3	SD-RAM check	1. Check the read / write of SD-RAM. • In the malfunction, [ERROR60 MAIN RAM] is displayed and the system goes down.	●
4	F-BOM check	1. Check the built-in value of F-BOM. • In the malfunction of boot system area, [ERROR01 MAIN ROM] is displayed and the system goes down. • In the malfunction of the main system area, F/W update mode starts.	●
5	Voltage check	1. Check the power supply voltage on the main PCB auxy. • In the malfunction, [ERROR63 POWER +V] is displayed and the system goes down.	●
6	FPQA setting	1. Execute the configuration of PDK and HDC. • In the malfunction, [ERROR09 FPGA ERROR] is displayed and the system goes down.	●
7	Printer configuration	1. Check the configuration results about HDC. • HDC connection has not been completed, [ERROR09 HDC ERROR] is displayed and the system goes down.	●
7-1	Checks on the HDC connection	1. Check the connection status of the print head 47V. • In the malfunction, [ERROR07 HEAD] or [ERROR07 VOLTAGE] is displayed and the system goes down.	●
7-2	Checks on the print head connection	1. Check the contents of the memory PCB array of the print head. • In the malfunction, [ERROR30 HEAD MEMORY] is displayed and the system goes down.	●
7-3	Checks on the print head assembly	1. Check the FRAM size 128 KB is needed in its size. • If the size is over, [ERROR210 SDRAM SIZE] is displayed and the system goes down.	●
7-4	Checks on FRAM	1. Check the FRAM size 128 KB is needed in its size. • If the size is over, [ERROR210 SDRAM SIZE] is displayed and the system goes down.	●
8	Version information display	1. Machine model name and main body firmware version are displayed. 2. "Revision" and "FPGA/HDC revision" are also displayed during the service mode. 3. Special key function is available during the version information is being displayed.	●
9	Parameter check	1. During the initial start-up process after the upgrading of the F/W version, initialize the following parameters: • MAMATE • INDSYSTEM • INSALFTE • INSEQUENCE • INSCYTE • SERVVO • TEST 2. Carry out the check unit of the parameter region. • In the malfunction, [ERROR14 F-BOM] is displayed and the system goes down.	●
10	Initial operation of the printer	1. Refer to "1.1.3 Initial Machine Operation".	●

### ■ Description

**①** Confirm the page changed, and remove the page if not necessary.

**②** Insert the revision page added or revised.

**③** Confirm the revision number of the revision page inserted.

\* It is also accepted to leave the previous page as a reference since it is administered by the revision number.

\* For the details of change, confirm the "CHANGE TRACKING".





About Service Documents	
1.1 Constitution and Rules	1.2 Symbol

1
2
3
4

Service Documents > Symbol							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised	F/W ver	Remark	1.0
<b>1.2 Symbol</b>							

## ■ Outline

The following symbols are used in this manual. Understand the symbols, and be sure to observe the instructions.

Symbol	Name	Description
	Warning	Failure to observe the instructions given with this symbol can result in death or serious injuries to personnel. Be sure to understand the instructions thoroughly and follow them to perform work.
	Caution	Failure to observe the instructions given with this symbol can result in injuries to personnel or damage to property.
	Important	Important notes on maintenance work are given with this symbol. Understand the instructions thoroughly, and perform maintenance work properly.
	Tips	Useful information for maintenance work is given with this symbol.
(1.1.1)	Reference Page	Related description is given on the page shown by this symbol. Be sure to refer to the specified page.

<b>1</b>
<b>2</b>
<b>3</b>
<b>4</b>

**1**

**2**

**3**

**4**

## Service Outline

**2.1**  
**Safety Precaution**

**2.2**  
**Required Tool**

**2.3**  
**Unit Conversion List**

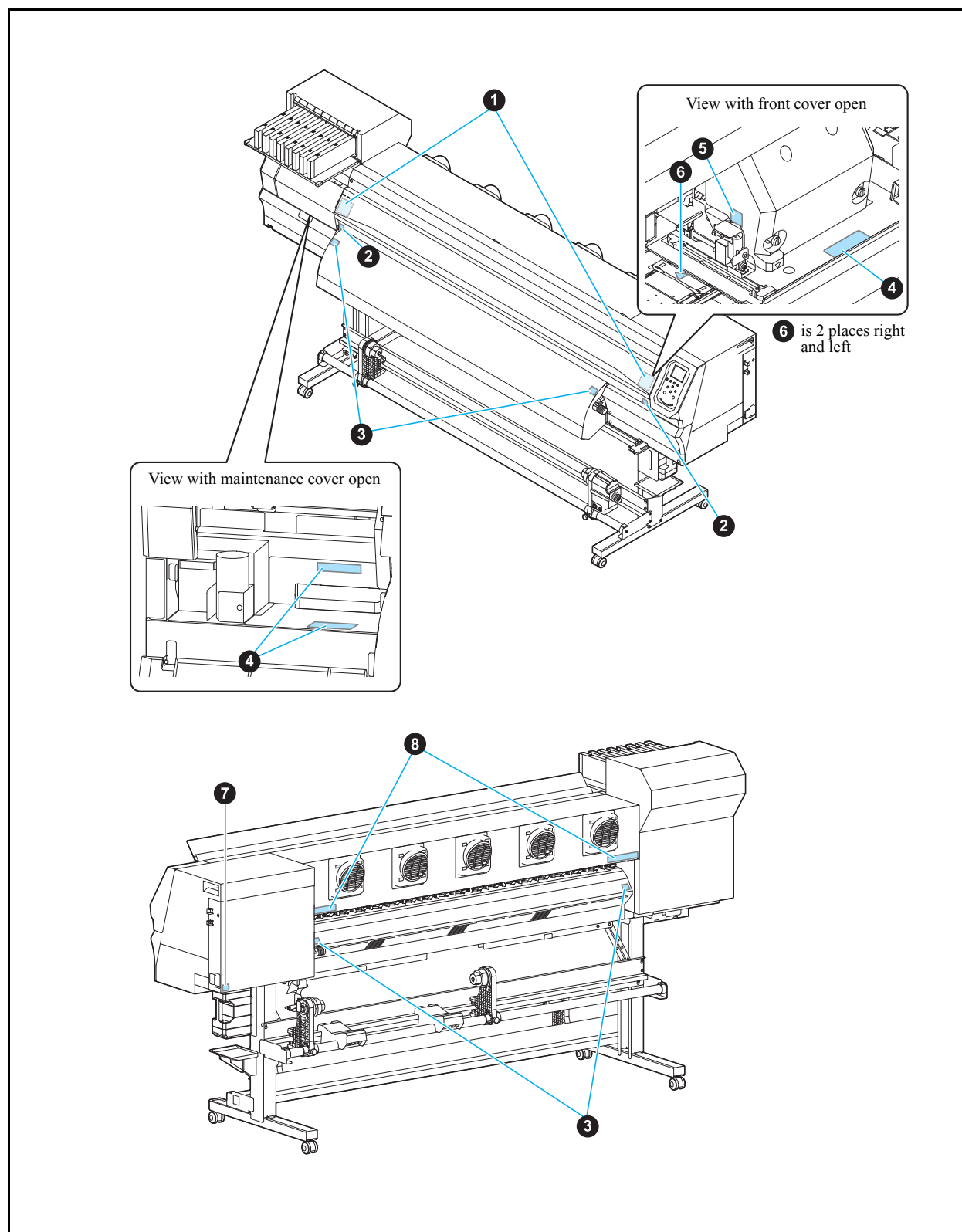
## 2.1.1 Warning Label

1.0

### ■ Label Position

The following figure shows the warning labels attached to this machine. Understand the symbols, and be sure to observe the instructions of the warning labels. If the warning labels are soiled and unreadable or peeling off during the preliminary checks, replace with new warning labels after confirming with the customer.

### ■ Label Position



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## 2.1.1 Warning Label

1.0

### ■ Label Description

①	Order Number	Label Name	Label Description
	M910931		
			
②	Order Number	Label Name	Label Description
	M907833	Head slider Caution Label	As the carriage moves, do not insert your hand.
			
③	Order Number	Label Name	Label Description
	M903239	Heat Caution Label	Be careful of the heat.
			
④	Order Number	Label Name	Label Description
	M903330	Work Caution Label	Please wear the goggle and gloves at work.
			
⑤	Order Number	Label Name	Label Description
	M903405	Cutter Caution Label	Be careful of the cutter blade.
			
⑥	Order Number	Label Name	Label Description
	M906144	Heat Caution Label	Be careful of the heat.
			

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## 2.1.1 Warning Label

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7	Order Number	Label Name	Label Description
	M907935	Dangerous voltage Label	Dangerous voltage attention
			

8	Order Number	Label Name	Label Description
	M905811	Moving parts Caution Label	Keep fingers and other body parts away.
			

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## 2.1.2 Maintenance Precaution

1.0



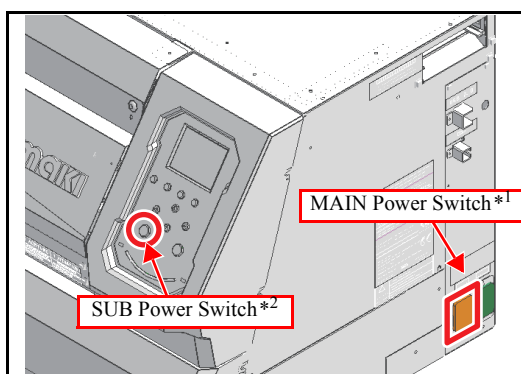
- Before starting maintenance work, be sure to turn off the SUB power switch first and then MAIN power switch, unplug the power cable from the power inlet on the machine, and wait for more than 15 minutes.

Without waiting for an adequate period of time, the electricity in the circuits on PCBs will not be discharged completely. Under such conditions, components on PCBs may be damaged if any cable inside the machine is unplugged or plugged in. Also you may get electric shock if you touch a bare electrode.

- To protect your eyes and hands from ink, be sure to wear goggles and gloves when cleaning the print head or replacing the pump assy or when there is a possibility that ink may scatter. Your hands can get rough and dry if they are stained with the ink.
- A button type lithium battery is used for this board. Warn following 1)~4).
  - 1), Danger of explosion if battery is incorrectly replaced.
  - 2), Replace only with the same or equivalent type recommended by the manufacture.  
Recommended type : [CR1220]
  - 3), Dispose of used batteries according to the manufacturers instructions.
  - 4), When the battery is replaced with a new one, pay attention to the polarity at replacing.



- When removing or installing dampers, take great care not to permit ink leakage and not to stain any parts with ink. A drop of ink on FFCs or connectors may cause a short circuit or poor electrical contact, thus resulting in faulty ink ejection or damage to the head or PCBs.
- Carefully connect the FFC cable between the main PCB and the SL2H PCB so that the connectors of the same number meet each other. A wrong connection may cause a short circuit of the power supply and thus damage the PCBs.
- Take great care not to confuse the two FFC cables between the SL2H PCB and the head; otherwise, the power supply would be short-circuited.
- Do not turn off the power during firmware upgrading. Doing so may disable restarting.



\*1 The switch called the “MAIN Power Switch” in this document is called the “Main Power Switch” in the “Operation Manual”.

\*2 The switch called the “SUB Power Switch” in this document is called the “Power Switch” in the “Operation Manual”.

### ■ Preliminary Checks

Before starting work, make sure that the following conditions are all met:

1. ☐ Understand thoroughly all the instructions given in “Warning for Use” in the Operation Manual before starting work.
2. ☐ The following conditions for the power supply system are all met:
  - ☐ The power supply voltage must be within the specification limits.
  - ☐ The machine must be grounded properly.
  - ☐ The power cable must be free from damage, broken wire, etc. Many cables must not be connected to one outlet.
  - ☐ The location must be such that the cable can be easily unplugged from the wall outlet in case smoke or flame has been risen from the electrical system.
3. ☐ Some trouble may be due to misoperation. Judge whether or not the error display and the error condition signify misoperation.



Service Documents > Service Outline > Safety Precaution > Maintenance Precaution							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised	F/W ver	Remark	1.0
<b>2.1.2 Maintenance Precaution</b>							

## ■ Precautions in Work

Take the following precautions during maintenance work:

1. ☐ Provide adequate space for the maintenance work.
2. ☐ When performing tests with the electrical box cover open, be careful not to receive an electric shock from any live part. Also take care not to drop screws or any other parts into the circuit box.
3. ☐ Take care to avoid insufficient insertion or skewed insertion of any connector or FFC.
4. ☐ Do not touch FFCs with your fingers. Doing so may cause contact failure.
5. ☐ The lever of each FFC connector breaks easily. Move it up or down gently when releasing or locking the connector.
6. ☐ Pay attention to the movement of the head if you are required to perform maintenance work with the power on. (Keep all parts of your body away from moving parts.)
7. ☐ Use jog keys to move the media (in the X direction) or the head (in the Y direction).  
The media or head can be moved by hand with the power turned off. In doing so, however, exercise care to move them slowly.
8. ☐ Do not tilt the machine if ink cartridges are filled with ink. Doing so can cause ink leakage.  
Follow the procedure described below before transporting the machine. Use the dedicated packaging materials to transport the machine.
  - ☐ Remove the ink from the tubes by following the procedure of [MAINTENANCE] -> [HD.MAINTENANCE] -> [DISCHARGE&WASH] or [#ADJUST] -> [HEAD WASH].
  - ☐ Remove the maintenance solution from the tubes by following the procedure of [MAINTENANCE] -> [HD.MAINTENANCE] -> [MaintWashLiquid].
  - ☐ Remove the waste ink tank.
  - ☐ Install the head stopper to fasten the head.

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## Service Outline

**2.1**  
**Safety Precaution**

**2.2**  
**Required Tool**

**2.3**  
**Unit Conversion List**

Service Documents > Service Outline > Required Tool > Tools							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised	F/W ver	Remark	1.0
<b>2.2.1 Tools</b>							

## ■ Tools

The table below shows the tools to be used in maintenance work. In the table, each adjustment item for parts requiring the relevant tool is marked with “○”.

Name	Category	Remarks	Cover Assy	Frame Leg Assy	Clamp Assy	X-drive Assy	Y-drive Assy	Bear Assy	SL2H PCB	Station Assy	Cap Base Assy	Wiper Assy	Waste Ink Tank Assy	Print Head Unit	Electrical Device Assy	Platen Assy	Cartridge Assy	Washing Cartridge	Small Take-up Device Assy	Roll Assy	Drying Assy	Installation or change of location	Adjustment of the print head	Adjustment of the edge	Distance accuracy
Phillips Screwdriver Type 1	Tool	For M2		○												○					○				
Phillips Screwdriver Type 2	Tool	For M3 to M5 (L=260 or more)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		For M3 to M5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Slotted Screwdriver	Tool	Long side 2.5mm	○		○					○				○			○								
Hexagon Wrench	Tool	1.5mm for M3 SSWP				○				○		○							○	○					
		2.0mm for M4 SSWP				○	○																		
		2.5mm for M3 cap bolts			○										○										
		3.0mm for M4 cap bolts			○	○																○			
		4.0mm for M5 cap bolts			○																		○		
		5.0mm for M6 cap bolts																					○	○	
		6.0mm for M8 cap bolts																					○	○	
Spanner	Tool	10.0mm for M12 cap bolts		○																			○		
		Width across flats: 5mm																							
		Width across flats: 5.5mm M3																							
		Width across flats: 7mm M4		○																		○			
		Width across flats: 10mm					○																		
		Width across flats: 19mm																				○			
Snap Ring Plier	Tool																		○	○					
Loupe	Tool	x50 or x60												○			○						○		
Ink Line Airtight Tester	Jig	OPT-J0094															○								
Head Inside Washing Jig Set	Jig	OPT-J0136												○											
Auto Cutter Height Adjustment Jig	Jig																								
Head Height Adjustment Jig	Jig													○											
Bar Type Tension Gauge	Tool	500gf																							
Scale	Tool	150mm																						○	
		500mm																						○	
Trimmer Adjustment Screwdriver	Tool																								
Long-nose Pliers	Tool		○		○					○															
Nippers	Tool									○	○														
Thickness Gauge	Tool																								
Grease	Expendable	MG-A1-GU			○																				
		LONGTERM-W2-GU			○																				
Cleaning Liquid for Water Based Ink	Expendable																								
Adhesive Agent	Expendable	Instantaneous adhesive																							
Waste Cloth	Expendable	For cleaning																							
Cotton Swab	Expendable																								
Gloves	Expendable	Gloves with oilproof and tolerance																							
Industrial Alcohol	Expendable	For degreasing and washing																							
Cable Tie	Expendable	L=150 or less (UL-approved product)																							
Acetate Fabric Tape	Expendable							○						○											
Drafting Tape	Expendable																								
Double-stick Tape	Expendable							○								○									
Tweezers	Tool																								
Cutter Knife	Tool																								
Tester	Tool																								
Goggles	Tool																								

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Service Outline		
<b>2.1</b> Safety Precaution	<b>2.2</b> Required Tool	<b>2.3</b> Unit Conversion List

## 2.3.1 Conversion List for the International System of Units

### ■ Conversion list for the international system of units

The following is a conversion table among the International System of Units, the Gravitational System of Units and the Inch-pound System of Units.

	International System of Units		Gravitational System of Units		Inch-pound System of Units	
	[N]	[cN]	[kgf]	[gf]	[ozf]	[lbf]
1[N]	1	100	0.102	101.97	3.60	0.225
1[cN]	0.01	1	0.001019716	1.02	0.03597	0.002248089
1[kgf]	9.81	980.67	1	1000	35.27	2.20
1[gf]	0.00980665	0.981	0.001	1	0.03527	0.002204623
1[ozf]	0.278	27.80	0.02835	28.35	1	0.0625
1[lbf]	4.45	444.82	0.45359237	453.59	16	1

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## Basic Specification

**3.1**  
**Main Unit Specification**

**3.2**  
**PC Specification**

**3.3**  
**Output Speed**

**3.4**  
**Ink Consumption**

Service Documents > Basic Specification > Main Unit Specification > Main Unit Specification							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised		F/W ver	Remark
<b>3.1.1 Main Unit Specification</b>							<b>1.0</b>

## ■ Specifications

Item		Specification		Remarks
		JV300-130	JV300-160	
Head		On-demand piezzo head 1A5540 (8 nozzle line/1 head, 180 nozzle/1 nozzle line, nozzle pitch 180dpi, 2head stagger) Drop size; WF3 : Small:4pl, Middle:16pl, Large:23pl WF4 : Small:4pl, Middle:16pl, Large:35pl		
Printing resolution		360, 540, 720, 1440dpi		Variable dot support
Printing speed				In case of 4-color is used
Print mode (Scan x Feed)		360 x 360dpi VD : 540 x 360dpi VD : 540 x 720dpi VD : 720 x 1080dpi VD : 720 x 1440dpi VD : 1440 x 1440dpi :		
Ink	4-color set installed	M, C, Y, K (SS21) / M, Bl, Y, K (Sb53*1)		Total 8 cartridges with IC chip installed *1:Available by a parameter change
	6-color set installed	M, Bl, Y, K, Lm, Lbl (Sb53*1)		
	8-color set installed	M, C, Y, K, Lm, Lc, Or, Lk (SS21)		
	6-color+W	M, C, Y, K, Lm, Lc, W, W (SS21)		
Ink supply		For 4-color and 6-color M, Bl only, the supply is toggled switched by installing 2 cartridges (cartridge can be replaced during printing) The ink end uses cartridge end plate detection		
Ink capacity	4-color set installed M and Bl in 6-color set installed	Two 440-cc cartridges for each color, that is 880 cc for each color		
	Except above set installed	One 440-cc cartridges for M,C,Y,K,Lm,Lc,Or,Lk,Lbl,Dk each color, that is 440 cc for each color One 220-cc cartridges for W,Si each color, that is 220 cc for each color		
Media that can be used		Label media (paper-based), PV sheet (including laminated, no more than 0.25 mm thick), fluorescent sheet, reflective sheet (except high-brightness reflective sheet), thermal transfer rubber sheet		
Maximum printing width		1361 mm	1610 mm	When the minimum right and left non-printing areas are set
Media specs	Maximum width	1371 mm	1620 mm	
	Minimum width	210 mm		
	Thickness	1.0 mm or less		
	Roll O. D.	Paper media: φ250 mm or less Other media: φ210 mm or less		
	Roll weight	40 kg or less		
	Paper sleeve I. D.	2 inches or 3 inches (only 3 inches for fast speed mode)		
	Printing surface	Side facing inward or outward (available to both)		
	Take-up processing	Roll end fixed with adhesive tape or weak glue		
Print margin	Roll	Left/Right:15 mm (default value) Front: 120 mm Back: 150 mm		Tolerance excluding media inclined pass is ±2mm The left and right margins can be changed Minimum 5mm
	Cut sheet	Left/Right:15 mm (default value) Front: 120 mm Back: 150 mm		
Origin position matching (LED pointer)		Positioning by the LED pointer mounted on the head actuator • Pointer is used when printing origin is changed from default value		

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## 3.1.1 Main Unit Specification

Item		Specification		Remarks
		JV300-130	JV300-160	
Distance accuracy	Absolute accuracy	±0.3 mm or ±0.3% of specified distance, whichever is larger		Excluding test media photo paper glossy paper contraction and expansions Excluding initial meandering
	Repeatability	±0.2 mm or ±0.1% of specified distance, whichever is larger		
Squareness		±0.5 mm/1000 mm		
Media skew		5 mm or less/10 m		
Print gap		Manual 3 step adjustment(2.0/2.5/3.0) +1mm or +2mm, selection at install,		
Media heater		PRE/PRINT/AFTER :60 / 60 / 60 3 system independently control		
MCT		2 path installed		
UISS		Installed		
Washing cartridge		Installed		
NCU (nozzle missing detect)		Installed		
Media severing		Y-axis cut by head cutter Severing precision (misalignment) 0.5 mm or less		Cutting tool is an expendable item.
Waste ink tank		Bottle type (2000 cc)		
Image decompression memory		SD-RAM 256MB		
Interface	Mounted standard	USB2.0		* Cable supplied
		Ethernet: 100BASE-TX (For output printing status)		
Command		MRL-IV		
MAPS		MAPS3		
Displayable language		Japanese/English		
Noise	Standby	51 dB or less. (FAST-A, at 1 m from the front, rear, right and left side of the machine)		
	During operation	65 dB or less		
	Discontinuous operation	75 dB or less		
Compliance with standards		1)VCCI class A 2)FCC class A 3)UL 60950-1 4)CE Marking (EMC Directive , Low Voltage Directive and Machinery Detective) 5)CB report 6)RoHs REACH, Energy Star		
Power supply and power consumption		AC100 to 120V 1440W or less, AC220 to 240V 1920W or less, 50/60Hz±1Hz		• Input manual switching • With remote SW function • With sleep function mode
		Inlet1; control + heater (after) Inlet2; heater (pre / print)		
Power consumption		1440W x 2 (AC100 - 120V) or less		Main unit, including heater excluding options
Ambient conditions	Service temperature range	20 °C - 35 °C		Ink discharge stability can drop under any ambient conditions exceeding the specified limits.
	Relative humidity	35 % - 65 % Rh (no condensation)		
	Quality assurance temperature	20 °C - 25 °C		
	Temperature gradient	±10 °C/h or less		
	Dust	0.15mg/m <sup>3</sup> (Equivalent to the atmosphere in offices)		
Option		1)Drying Fan unit (Use separately power supply) 2)Sticking prevention net 3)AMF unit		
Weight		Main body:170 kg No legs: 140kg Packing:223kg	Main body:200 kg No legs: 155kg Packing:239kg	

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Service Documents > Basic Specification > Main Unit Specification > Main Unit Specification							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised		F/W ver	Remark
<b>3.1.1 Main Unit Specification</b>							<b>1.0</b>

Item	Specification		Remarks
	JV300-130	JV300-160	
Dimensions (W x D x H)	2525 x 700(930*4) x 1392 mm Packing:2662 x 750 x 1050 mm	2775 x 700(930*4) x 1392 mm Packing:2662 x 750 x 1050 mm	*4:AMF device is included

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## 3.1.2 Specifications for Ink

1.0

### ■ Specifications

No.	Item	Specification	
		SS21 (Solvent ink)	Sb53 (Aqueous sublimation transfer ink <sup>*1</sup> )
1	Supply	Dedicated ink cartridge	
2	Ink color	<ul style="list-style-type: none"> <li>• Black (K)</li> <li>• Cyan (C)</li> <li>• Magenta (M)</li> <li>• Yellow (Y)</li> <li>• Light cyan (Lc)</li> <li>• Light magenta (Lm)</li> <li>• Orange (Or)</li> <li>• Light black (Lk)</li> <li>• White (W)</li> </ul>	<ul style="list-style-type: none"> <li>• Black (K)</li> <li>• Blue (Bl)</li> <li>• Magenta (M)</li> <li>• Yellow (Y)</li> <li>• Light blue (Lbl)</li> <li>• Light magenta (Lm)</li> </ul>
3	Ink capacity	220/440cc cartridge	440cc cartridge
4	Available period	The period is printed on the ink cartridge.	
5	Storage temperature	Storage	10 to 35 °C (Daily mean temperature) * Keep the package sealed. * Keep the package in the dark cold place where is dried and well-ventilated.
		Transportation	0 to 40 °C * Avoid passing a place where temperature is lower than 0 °C or higher than 40 °C.

\*1.Available by a parameter change



- The warranty is not applicable if any of the ink cartridges was disassembled or refilled with ink. Do not use any ink cartridge disassembled once or refilled.
- The ink may freeze when it is left for a long time in a cold environment.
  - For the water-based ink, if the ink has frozen, it cannot be used any more by changing in quality. Be sure to keep the ink cartridge in the condition that the ink does not freeze.

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## Basic Specification

**3.1**  
**Main Unit Specification**

**3.2**  
**PC Specification**

**3.3**  
**Output Speed**

**3.4**  
**Ink Consumption**

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## Basic Specification

**3.1**  
**Main Unit Specification**

**3.2**  
**PC Specification**

**3.3**  
**Output Speed**

**3.4**  
**Ink Consumption**

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<b>Basic Specification</b>		
<b>3.1 Main Unit Specification</b>	<b>3.2 PC Specification</b>	<b>3.3 Output Speed</b>
<b>3.4 Ink Consumption</b>		

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## Technical Information

**4.1  
Basic Information**

**4.2  
Regular Maintenance**

**4.3  
About Print Quality**

**4.4  
Essential Information  
for Service**

Service Documents > Technical Information > Basic Information > Service Mode and Specialized Key							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised		F/W ver	1.10
4.1.1 Service Mode and Specialized Key							1.0

## ■ Indication on LCD



## ■ Outline

For troubleshooting or maintenance work, the machine needs to be operated in service mode. The following describes the Specialized Key functions which start this machine in service-related mode.

## ■ Specialized Key Functions

After the start of the machine, press the specific key(s) on the operation panel while the version information is displayed. Then the machine will enter the corresponding one of the following service-related modes.

Service-related mode	How to enter	Remarks
F/W Update	(While version information is displayed) Press [ENTER]	<ul style="list-style-type: none"> <li>Receives FirmwareROM data from the host PC via USB2.0 I/F, and updates the firmware of the main PCB.</li> <li>Available only when the machine is started by turning on the main power.</li> <li>After firmware update, restart the machine by turning the main power.</li> </ul>
Parameter UP/DOWNLOAD	(While version information is displayed) Press [▲] + [▼]	<ul style="list-style-type: none"> <li>Uploads the parameters and log data from the machine to the host PC via USB2.0 I/F.</li> <li>Downloads the parameters and log data from the host PC to the machine via USEB2.0 I/F.</li> </ul>
System Parameter input	(While version information is displayed) Press [◀] + [▶]	<ul style="list-style-type: none"> <li>Start the machine in [SYSTEM PARAM.] input mode of [#PARAMETER].</li> <li>When the machine cannot start because of a parameter hash error or the like, the parameters can be initialized in this mode.</li> <li>When the machine cannot be operated because of a system down error or the like, input the system parameter No. 45 HASH 0 → 1 or 2 in this mode. Then the machine can be started for the purpose of checking for problem.</li> </ul>
Service mode	(While version information is displayed) Press [FUNC1] + [FUNC3]	Active until the power to the machine is turned off.
	System parameter SUPPORT 0 → 2 (3: English version)	Active until the value of the system parameter No. 122 SUPPORT is changed to 0.
When installing the device-specific F/W into new product maintenance PCB (common PCB)	(While version information is displayed) Press [FUNC2]	Install the device-specific F/W into new product maintenance PCB (common PCB).

## ■ Service Mode

For maintenance work, start the machine in service mode. Then you can use the functions that are not available in normal mode. As for those functions, the "#" mark is added at the head of the function name.



## ■ Indication on LCD

<b>❶</b> Ready for ROM data reception <div>F/W UPDATING *TRANSMIT START*</div>	<b>❷</b> ROM data being received <div>*TRANSMIT START* \$ recieving...</div>	<b>❸</b> ROM data receiving has been completed <div>TYPE:HOST-&gt;MAIN ver :1.00-&gt;*. **</div>	<b>❹</b> ROM data being overwritten <div>ver :1.00-&gt;*. ** writing F/W</div>
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## ■ Outline

Using FW Version Upgrade function of FW Update Tool III, perform version upgrade of JV300 series.  
For FW Update Tool III, refer to “FW Update Tool III User’s Manual”.

## ■ Update procedure

	Do not turn OFF the power supply during the program is being written into the memory. Once overwriting fails, the main PCB must be replaced with a new one for recovery.
	F/W update can be canceled by turning off the main power in the stage where the indication on the LCD is as shown at <b>❶</b> .

☐ Normal version upgrade of F/W

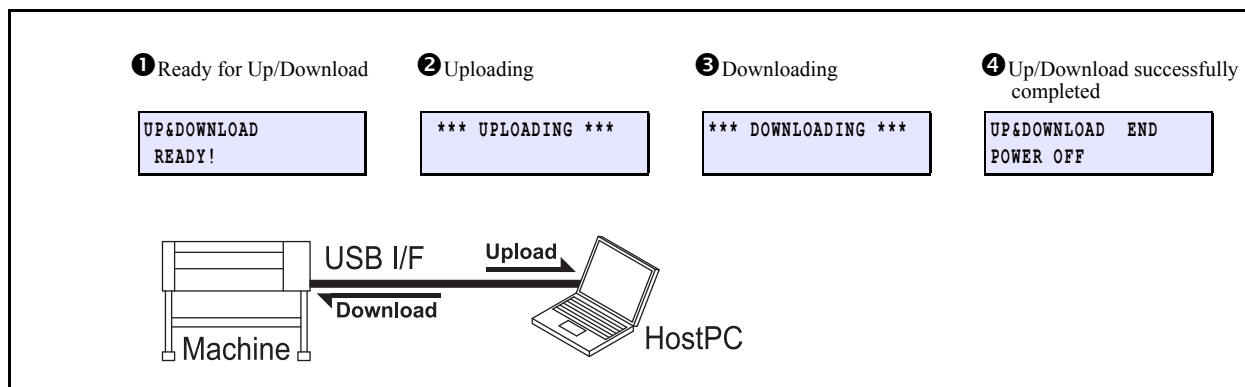
Step	Operation	Description	Indication on LCD
1	Main power ON+[REMOTE]	Machine starts in F/W update mode  <input type="checkbox"/> When replacing maintenance PCB, perform this first.  The main circuit board described below is the common parts for several models. When such board is delivered, written firmware is not for specified model, but the common to each model.  Part codes: E000011 Main PCB ASSY  LCD indication after the startup: <div>EplMb Start-up Ver.x.xx</div> <div> When display is not above, perform update in regular update mode.</div> For the common F/W, the JV300 series F/W can be updated with Main power ON + [FUNC2].	
		Ready for ROM data reception	<b>❶</b>
		Data being received	<b>❷</b>
		Data receiving has been completed. Press the [ENTER] key	<b>❸</b>
2	Version up file transmission	The program is written into the memory.	<b>❹</b>
		Update work completed	
3	Main power OFF		



## 4.1.3 Parameter Up/Download

1.0

### ■ Indication on LCD



### ■ Upload procedure (machine → host PC)

Step	Operation	Description	Indication on LCD
1	Power ON+ [▲] + [▼]	Machine starts in Parameter Up/Download mode.	
		Ready for Up/Download	①
2	Parameter upload	Uploads parameter data to the host PC.*1	
		Uploading	②
		Up/Download completed	④
3	Power OFF	Parameter upload completed	

\*1.How to upload the LOG file:

LOG files can be uploaded by uploading the files on the "LCD ①" screen with the [ENTER] key on the main unit operation panel pressed.

### ■ Download procedure (machine ← host PC)

Step	Operation	Description	Indication on LCD
1	Power ON+ [▲] + [▼]	Machine starts in Parameter Up/Download mode.	
		Ready for Up/Download	①
2	Parameter download	Downloads parameter data to the host PC.	
		Downloading	③
		Up/Download completed	④
3	Power OFF	Parameter download completed	

## 4.1.4 Parameter Function

### ■ Outline

With the PARAMETER function, you can check and set parameters on the machine. (Available in service mode)



Be sure to upload parameters before changing them.  
There is a possibility that input errors may make recovery impossible.

### ■ Parameter function items

No.	Item	Description	Change
1	SYSTEM PARAMETER	A group of parameters as a storage of adjusted values for each machine (printing)	Partially permitted
2	MAINTENANCE PARAMETER	A group of parameters for firmware debugging and assessment in the development stage	Partially permitted
3	SERVO PARAMETER	A group of parameters for XY motor control.	Disapprove <sup>*1</sup>
4	FEED PARAMETER	A group of parameters for feed control.	Disapprove
5	HEAD PARAMETER	A group of parameters to save the dot position correction and the head voltage (correction value)	Permitted
6	OPE PARAMETER	A group of parameters for operation control.	Disapprove
7	INK PARAMETER1	A group of parameters as a storage of the operation status of the machine	Partially permitted
8	INK PARAMETER2	Parameters for control of function related to ink system.	Disapprove
9	DEBUG PARAMETER	Parameters for evaluation of debug in development	Disapprove
10	SCAN PARAMETER	A group of parameters for scan control.	Disapprove
11	NOZZLE RECOVERY PARAMETER	Parameters to save nozzle numbers registered at nozzle recovery	Disapprove

\*1. Do not change the disapprove parameter without instructions from developer.

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Service Documents > Technical Information > Basic Information > Important Parameter									Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised		F/W ver	1.10	Remark	
4.1.5 Important Parameter									1.0

## ■ Outline

This section shows the parameters necessary in repair and verification work.

## ■ Important parameters

### ☐ SYSTEM PARAMETER

No.	Display	Initial Value	Adjusted Value	Description	Unit	Input Range
007	FLSposY	0		Flushing Y position adjustment	0.1mm	-200~200
008	CapPosY	0		Capping Y position adjustment	0.1mm	-200~200
009	WipPosY	0		Wiping Y position adjustment	0.1mm	-200~200
032	INK SET	0		Ink set	codes	0x0000 ~0x00ff
109	AirVacY	0		Air vacuum Y position adjustment	Pulses	-200~200
124	MECASIZ	6		Mecha size 6: 130, 7: 160	codes	0~10
129	SUPPORT	0		Adjustment functionality expansion 2: Adjustment functionality expansion 3: Adjustment functionality expansion + English	codes	0~2
130	INITIAL	0		Initialization 1: All parameters (1: 2 head machine, 2: 1 head machine) 10: Restore from FROM to EEPROM (Not used) 11~:Parameter initialized at update (11: 2 head machine, 12: 1 head machine) 20: Reserve 21~:System parameter and Operation parameter (21: 2 head machine, 22: 1 head machine)	codes	0~255

### ☐ INK PARAMETER1

No.	Display	Initial Value	Adjusted Value	Description	Unit	Input Range
000	INKSET	0x0000		Initial filling performing flag: Bit allocation ^0=Head 1 ~ ^7=8		0~255
256	SubsSW	1		Filling fluid filling (for initial filling) execution flag 1=Execute		0~1

### ☐ HEAD PARAMETER

Drop position adjusting value has been saved.

For details, refer to the parameter list.


## 4.1.6 F/W update procedure after the replacement of the main circuit board

1.0

### ■ Outline

This section shows the procedure for F/W updating after the replacement of the main circuit board.

### ■ Update procedure

Step	Operation	Description
1	Parameter upload	Refer to “ <a href="#">4.1.3 Parameter Up/Download</a> ”
2	Replace the main PCB	Replace the main PCB
3	Power ON	Turn the power ON
4	F/W update	<p>Update F/M to the same version of F/W when uploading the parameter. Refer to “<a href="#">4.1.2 F/W Update</a>”</p> <div style="border: 1px solid black; padding: 5px;">  <ul style="list-style-type: none"> <li>● If version upgrade of Epl Mb F/W (common F/W) is required, start the machine while pressing the [FUNC2] key, and then perform version upgrade. (As Epl Mb F/W (common PCB) is installed in the main PCB for maintenance, start with the [FUNC2] key, and perform version upgrade.)</li> <li>● When you start the machine with Epl Mb F/W installed in while pressing the [ENTER] key, the machine will be in the unexpected status other than the specification. Therefore, be sure to start the machine while pressing the [FUNC2] key.</li> </ul> </div>
5	Initial the SYSTEM PARAMETER	Input system parameter INITIAL= “1” for initializing all parameters. *1
6	Parameter download	Download the parameter that is uploaded on the above step “1”. Refer to “ <a href="#">4.1.3 Parameter Up/Download</a> ”

\*1. Make sure all parameters are initialized

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## 4.2.1 Periodic Check Items

### ■ Outline

This section shows the periodical maintenance work items recommended to keep the machine in good condition.

### ■ Periodic Check Items

Item	Sub Item	Remarks	See
Checking the machine condition	<input type="checkbox"/> 1 Upload of parameters		4.2.2
	<input type="checkbox"/> 2 Update of firmware	Old Ver.:      New Ver.:	
	<input type="checkbox"/> 3 Checking the result of user's care		
	<input type="checkbox"/> a Area around the heads		
	<input type="checkbox"/> b Station		
	<input type="checkbox"/> c Media holder, platen, etc.		
	<input type="checkbox"/> 4 Head condition	Test drawing:	
	<input type="checkbox"/>	Head adjustment: <input type="checkbox"/> Inclination <input type="checkbox"/> Ink drop position	
Regularly replaced parts	<input type="checkbox"/> 1 Tube Pump Assy		4.2.3
	<input type="checkbox"/> 2 Select Path Pump Assy		
	<input type="checkbox"/> 3 Cap Head Assy		
	<input type="checkbox"/> 4 Wiper Slider		
	<input type="checkbox"/> 5 Wiper Cleaner Assy		
	<input type="checkbox"/> 6 CP pad Assy		
	<input type="checkbox"/> 7 Pressure Damper		
Greasing	<input type="checkbox"/> 1 Clamp Lever		4.2.4
	<input type="checkbox"/> 2 Clamp Cams		
	<input type="checkbox"/> 3 Cap Slider		
Checking	<input type="checkbox"/> 1 Sensor test		4.2.5
	<input type="checkbox"/> 2 Operation test		
	<input type="checkbox"/> 3 Linear encoder test		
	<input type="checkbox"/> 4 Replace counter		
	<input type="checkbox"/> a Hours of machine use	Value:      [h]	
	<input type="checkbox"/> b Drawing area	Value:      [m <sup>2</sup> ]	
	<input type="checkbox"/> c Drawing length	Value:      [m]	
	<input type="checkbox"/> d Scan count	Value:      [times]	
	<input type="checkbox"/> 5 Upload of parameters		
	<input type="checkbox"/> 6 Checking online drawing		

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## 4.2.2 Checking the Machine Condition

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### ■ Outline

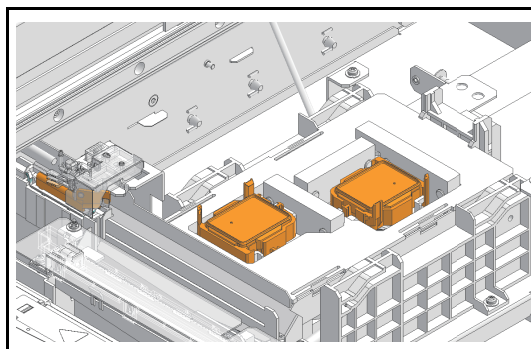
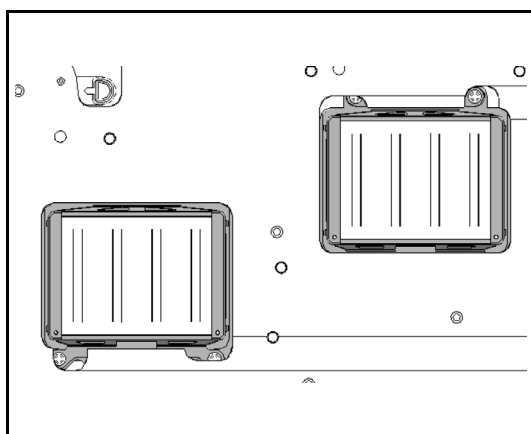
This section shows the work items for understanding the machine condition at the beginning of work and solving the current problems.

### ■ Work items



For cleaning the sensors and covers, do not use any organic solvent, such as alcohol or Solvent Washing Liquid.

An organic solvent can liquefy resin and paint, thus causing a machine failure or flaw in appearance.



1. Upload the parameters to store the parameters of the machine.
2. When the firmware of the machine is not the latest version, update the firmware.
3. Check the result of user's maintenance with attention paid to the following points:

#### ☐ Area around the heads

Check for ink sticking or dust accumulation. If necessary, tell the user the cleaning method which uses Solvent Washing Liquid or Clean Stick.

#### ☐ Station

Check the areas around the caps and wipers for ink sticking or dust accumulation. If necessary, tell the user the cleaning method which uses Solvent Washing Liquid or Clean Stick.

#### ☐ Media holder, platen, etc.

Check the following parts for paper dust accumulation or ink sticking.

If necessary, tell the user the cleaning method which uses natural detergent, waste cloth, or Clean Stick.

- Media Holder
- Platen
- PF Roller
- Media sensor (Two locations: back right and center)
- Cover
- Waste Ink Tank (volume of empty space)

4. Execute test drawing and check the head condition (for nozzle clogging or jet deviation).  
Perform slant adjustment and/or drop position adjustment, if necessary.

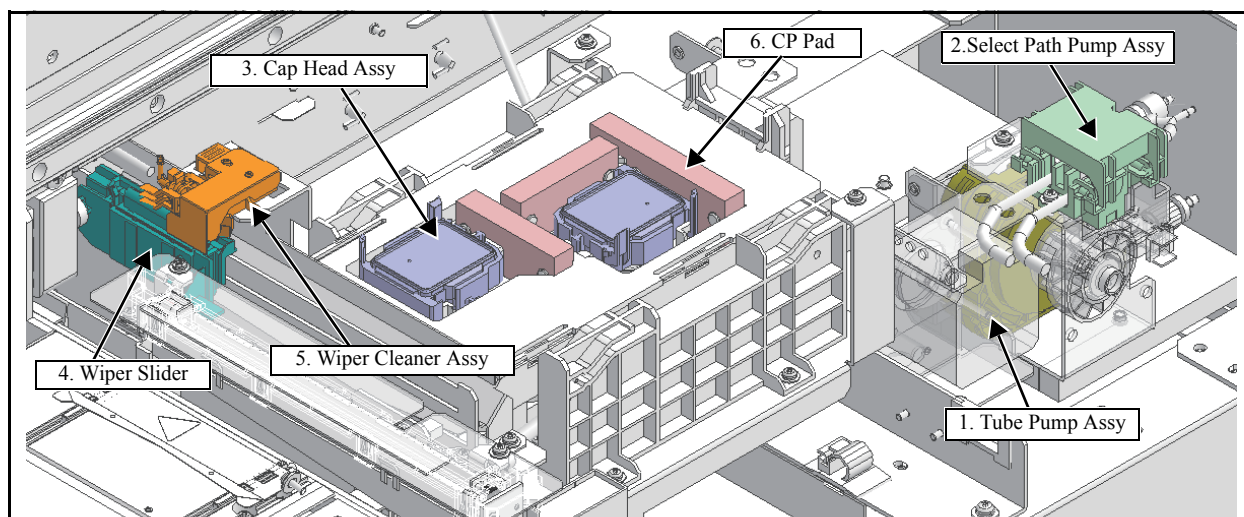
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## 4.2.3 Regularly Replaced Parts

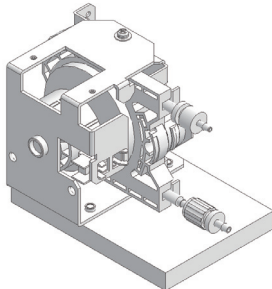
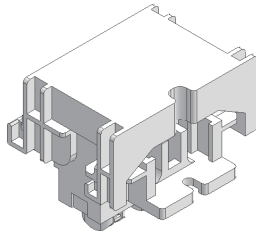
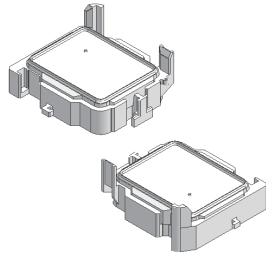
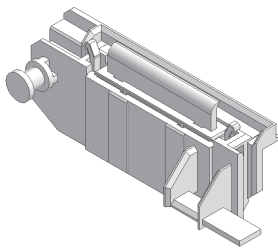
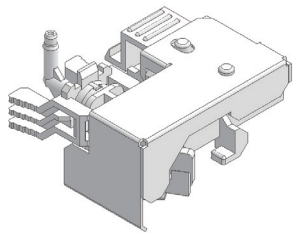
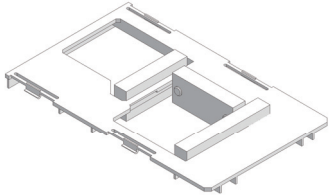


### ■ Outline

Check the Regularly Replaced Parts with attention paid to the following points:

- Is there a possibility that trouble may occur in ink suction or wiper replacement work because user maintenance is inadequate and thus the machine is badly stained?
- Is the rubber of the cap head deformed?
- Can the stain, such as ink sticking, be removed completely?
- Are there any parts worn significantly?

### ■ Regularly replaced parts

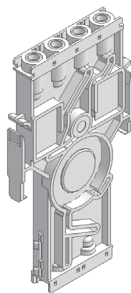
No.1	Tube Pump Assy.	No.2	Select Path Pump Assy	No.3	Cap Head Assy.
					
No.4	Wiper Slider	No.5	Wiper Cleaner Assy.	No.6	CP Pad Assy.
					



## 4.2.3 Regularly Replaced Parts

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No.7	Pressure Damper Assy.
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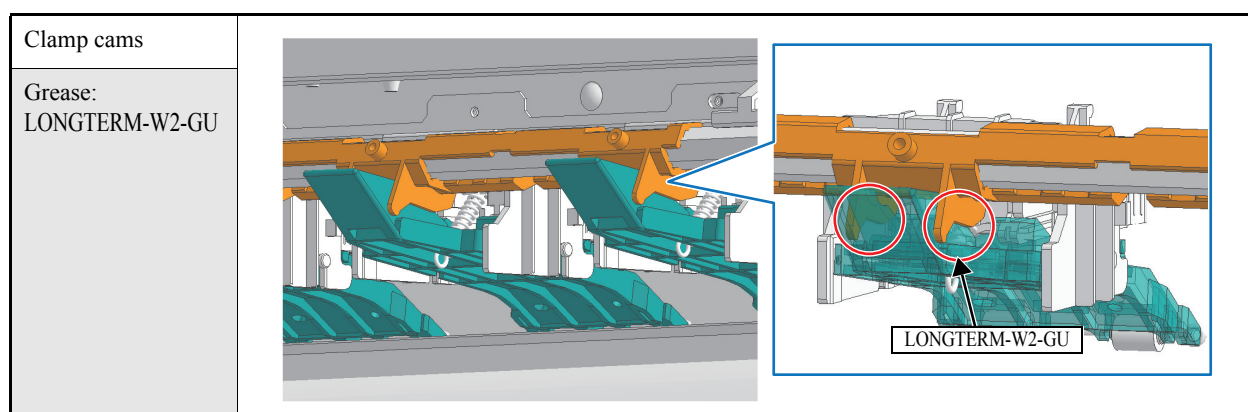
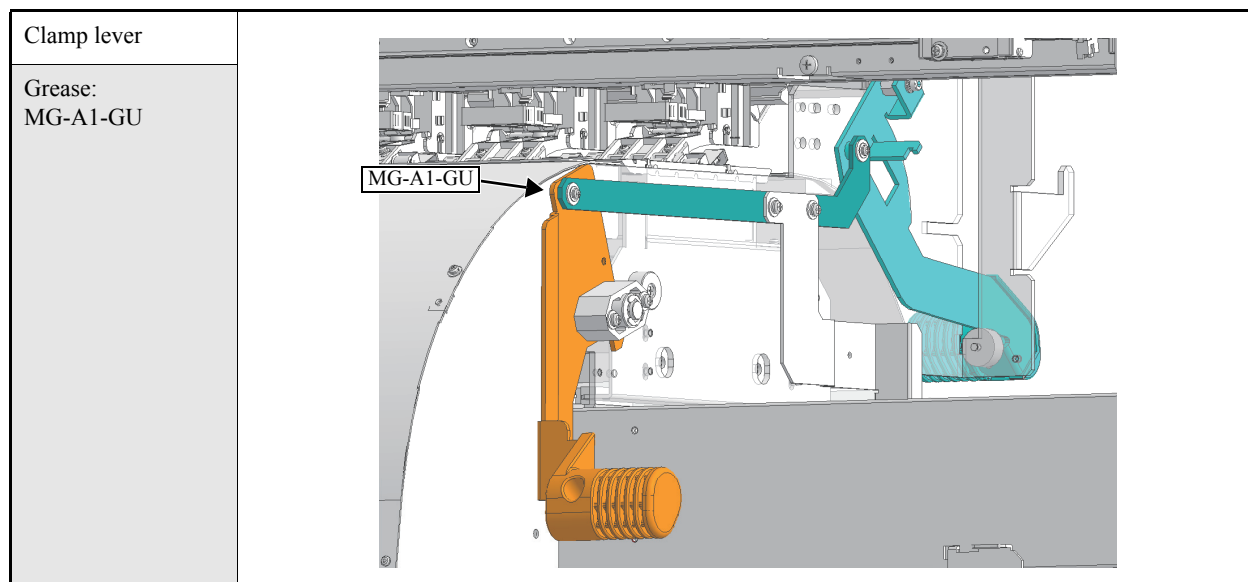
## 4.2.4 Greasing

1.0

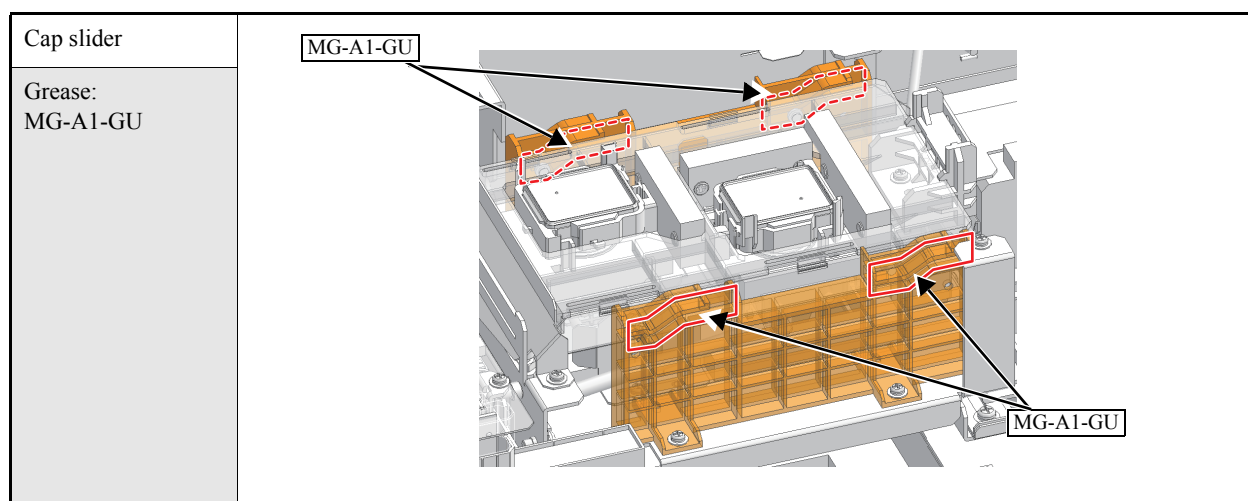
### ■ Outline

This section shows the parts to be greased periodically to suppress abrasion or abnormal sound during machine operation.

### ■ Parts to be greased



Apply the grease to all the cams.



Service Documents > Technical Information > Regular Maintenance > Checking							Rev.
Model	JV300-130/160	Issued	2014.05.30	Revised		F/W ver	Remark
<b>4.2.5 Checking</b>							<b>1.0</b>

## ■ Outline

For the various sensors, fans, motors, etc., this section shows the work items for checking the use to date and inspections.

## ■ Checking items

No.	Item	Description
1	Sensor test	Perform all items defined in Sensor Check and make sure that there is no problem.
2	Operating test	Perform all items defined in Operating Test and make sure that there is no problem.
3	Linear encoder test	Perform linear encoder test and make sure that there is no problem.
4	Checking the REPLACE COUNTER	Check the REPLACE COUNTER and note down the following records. a. Hours of machine use b. Drawing area c. Drawing length d. Scan count
5	Upload of parameters	Once adjusted values or settings are changed, upload the parameters again.
6	Checking online drawing	Finally, perform test drawing and online drawing and make sure that there is no problem.

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