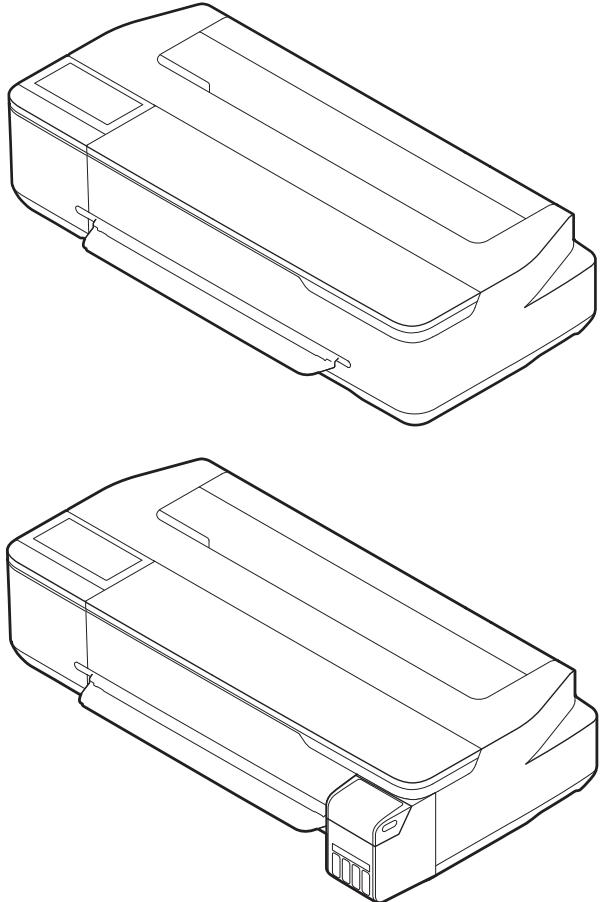


# SERVICE MANUAL



*Large Format Color Inkjet Printer*

**SC-T5100 Series  
SC-T5100N Series  
SC-T3100 Series  
SC-T3100N Series  
SC-T3100X Series  
SC-T3100D Series  
SC-T2100 Series  
SC-F500 Series**

## **Notice:**

- All rights reserved. No part of this manual may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SEIKO EPSON CORPORATION.
- The contents of this manual are subject to change without notice.
- All efforts have been made to ensure the accuracy of the contents of this manual. However, should any errors be detected, SEIKO EPSON would greatly appreciate being informed of them.
- The above notwithstanding SEIKO EPSON CORPORATION can assume no responsibility for any errors in this manual or the consequences thereof.

EPSON is a registered trademark of SEIKO EPSON CORPORATION.

Notice: Other product names used herein are for identification purpose only and may be trademarks or registered trademarks of their respective owners. EPSON disclaims any and all rights in those marks.

Copyright © 2021 SEIKO EPSON CORPORATION.  
Service Support Planning dept.

# **PRECAUTIONS**

Precautionary notations throughout the text are categorized relative to 1) Personal injury and 2) Damage to equipment.

**DANGER** Signals a precaution which, if ignored, could result in serious or fatal personal injury. Great caution should be exercised in performing procedures preceded by DANGER Headings.

**WARNING** Signals a precaution which, if ignored, could result in damage to equipment.

The precautionary measures itemized below should always be observed when performing repair/maintenance procedures.

## **DANGER**

1. ALWAYS DISCONNECT THE PRODUCT FROM THE POWER SOURCE AND PERIPHERAL DEVICES PERFORMING ANY MAINTENANCE OR REPAIR PROCEDURES.
2. NO WORK SHOULD BE PERFORMED ON THE UNIT BY PERSONS UNFAMILIAR WITH BASIC SAFETY MEASURES AS DICTATED FOR ALL ELECTRONICS TECHNICIANS IN THEIR LINE OF WORK.
3. WHEN PERFORMING TESTING AS DICTATED WITHIN THIS MANUAL, DO NOT CONNECT THE UNIT TO A POWER SOURCE UNTIL INSTRUCTED TO DO SO. WHEN THE POWER SUPPLY CABLE MUST BE CONNECTED, USE EXTREME CAUTION IN WORKING ON POWER SUPPLY AND OTHER ELECTRONIC COMPONENTS.
4. WHEN DISASSEMBLING OR ASSEMBLING A PRODUCT, MAKE SURE TO WEAR GLOVES TO AVOID INJURY FROM METAL PARTS WITH SHARP EDGES.

## **WARNING**

1. REPAIRS ON EPSON PRODUCT SHOULD BE PERFORMED ONLY BY AN EPSON CERTIFIED REPAIR TECHNICIAN.
2. MAKE CERTAIN THAT THE SOURCE VOLTAGES IS THE SAME AS THE RATED VOLTAGE, LISTED ON THE SERIAL NUMBER/RATING PLATE. IF THE EPSON PRODUCT HAS A PRIMARY AC RATING DIFFERENT FROM AVAILABLE POWER SOURCE, DO NOT CONNECT IT TO THE POWER SOURCE.
3. ALWAYS VERIFY THAT THE EPSON PRODUCT HAS BEEN DISCONNECTED FROM THE POWER SOURCE BEFORE REMOVING OR REPLACING PRINTED CIRCUIT BOARDS AND/OR INDIVIDUAL CHIPS.
4. IN ORDER TO PROTECT SENSITIVE MICROPROCESSORS AND CIRCUITRY, USE STATIC DISCHARGE EQUIPMENT, SUCH AS ANTI-STATIC WRIST STRAPS, WHEN ACCESSING INTERNAL COMPONENTS.
5. REPLACE MALFUNCTIONING COMPONENTS ONLY WITH THOSE COMPONENTS BY THE MANUFACTURE; INTRODUCTION OF SECOND-SOURCE ICs OR OTHER NON-APPROVED COMPONENTS MAY DAMAGE THE PRODUCT AND VOID ANY APPLICABLE EPSON WARRANTY.
6. WHEN AIR DUSTER IS USED ON THE REPAIR AND THE MAINTENANCE WORK, THE USE OF THE AIR DUSTER PRODUCTS CONTAINING THE INFLAMMABLE GAS IS PROHIBITED.
7. MAKE SURE AN ANTIVIRUS SOFTWARE IS INSTALLED ON THE COMPUTER USED FOR SERVICE SUPPORT. BE SURE TO HAVE THE LATEST VIRUS DEFINITION FILE FOR THE SOFTWARE.

# About This Manual

About This Manual: This manual is made for the sole purpose of providing necessary information in order that a serviceperson qualified by Epson performs his / her appropriate repair / maintenance for the applicable Epson's products. You shall not use this manual out of this purpose.

This manual is Epson's confidential information. When you use this manual, you shall hold it in strict confidence and shall not disclose to any third party without prior consent of Epson.

The instructions and procedures included herein are intended for the experienced repair technicians, and attention should be given to the precautions on the preceding page.

## **Manual Configuration**

This manual consists of six chapters and Appendix.

### **CHAPTER 1.PRODUCT DESCRIPTIONS**

Provides a general overview and specifications of the product.

### **CHAPTER 2.TROUBLESHOOTING**

Describes the step-by-step procedures for the troubleshooting.

### **CHAPTER 3.DISASSEMBLY / ASSEMBLY**

Describes the step-by-step procedures for disassembling and assembling the product.

### **CHAPTER 4.ADJUSTMENT**

Provides Epson-approved methods for adjustment.

### **CHAPTER 5.MAINTENANCE**

Provides preventive maintenance procedures and the lists of Epson-approved lubricants and adhesives required for servicing the product.

### **CHAPTER 6.APPENDIX**

Provides the following additional information for reference:

- Wiring Diagram
- Panel Menu Maps

## **Symbols Used in this Manual**

Various symbols are used throughout this manual either to provide additional information on a specific topic or to warn of possible danger present during a procedure or an action. Be aware of all symbols when they are used, and always read NOTE, CAUTION, or WARNING messages.



Indicates an operating or maintenance procedure, practice or condition that, if not strictly observed, could result in injury or loss of life.



Indicates an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in damage to, or destruction of, equipment.



May indicate an operating or maintenance procedure, practice or condition that is necessary to accomplish a task efficiently. It may also provide additional information that is related to a specific subject, or comment on the results achieved through a previous action.



Indicates an operating or maintenance procedure, practice or condition that is necessary to keep the product's quality.



Indicates that a particular task must be carried out according to a certain standard after disassembly and before re-assembly, otherwise the quality of the components in question may be adversely affected.



Indicates that lubrication is needed for the parts after disassembly, when doing a maintenance or replacing a part with a new one.

# Revision Status

Revision	Date of Issue	Description
A	June 25, 2018	<p>First release</p>
B	December 26, 2018	<p>Chapter 1</p> <ul style="list-style-type: none"> <li>• <a href="#">1.5.3 Various Startup Mode (p. 55)</a> : changed from "Serviceman Mode" to "Inspection Mode".</li> </ul> <p>Chapter 2</p> <ul style="list-style-type: none"> <li>• <a href="#">2.3.2 Service Call List (p. 64)</a> : partially revised.</li> <li>• <a href="#">2.3.3 Details of Service Call (p. 66)</a> : partially revised and added.</li> <li>• <a href="#">2.4.3 Detail of each Problem Phenomenon (p. 106)</a> : partially revised.</li> <li>• <a href="#">2.6 Fuse Positions (p. 128)</a> : content was added.</li> </ul> <p>Chapter 3</p> <ul style="list-style-type: none"> <li>• <a href="#">3.4.4.18 Pump Cap Unit (p. 212)</a> : partially revised.</li> <li>• <a href="#">3.4.4.27 Cutter Rail (p. 229)</a> : "ADJUSTMENT REQUIRED" was added.</li> <li>• <a href="#">3.4.5.11 PF Encoder (p. 245)</a> : partially revised.</li> <li>• <a href="#">3.4.5.12 PF Scale (p. 246)</a> : partially revised.</li> <li>• <a href="#">3.4.5.13 PF Belt (p. 247)</a> : partially revised.</li> <li>• <a href="#">3.4.5.18 ASF Unit (p. 254)</a> : partially revised.</li> </ul> <p>Chapter 4</p> <ul style="list-style-type: none"> <li>• <a href="#">4.1.2 Adjustment Items and the Order by Repaired Part (p. 269)</a> : partially revised and added.</li> <li>• <a href="#">4.1.3 Adjustment Items (p. 284)</a> : partially revised.</li> <li>• <a href="#">4.1.5 Service Program Basic Operations (p. 295)</a> : partially revised.</li> <li>• <a href="#">4.2.1 Parameter Backup procedure (p. 297)</a> : partially revised.</li> <li>• <a href="#">4.5 Installing Firmware (p. 307)</a> : "CHECK POINT" was added.</li> <li>• <a href="#">4.7 References (p. 311)</a> : partially revised.</li> <li>• <a href="#">4.8.1 Head ID Check &amp; Input (p. 312)</a> : partially revised.</li> <li>• <a href="#">4.8.2 PG Check &amp; Adjustment (p. 313)</a> : partially revised.</li> <li>• <a href="#">4.8.3 Head Inclination Check &amp; Adjustment (CR direction) (p. 316)</a> : "CHECK POINT" was added, partially revised.</li> <li>• <a href="#">4.8.4 Head Slant Check &amp; Adjustment (PF direction) (p. 320)</a> : "CHECK POINT" was added, partially revised.</li> <li>• <a href="#">4.8.5 CR Belt Tension Check &amp; Adjustment (p. 324)</a> : partially revised, adjustment was added.</li> <li>• <a href="#">4.8.18 Print Head Counter Reset (p. 343)</a> : partially revised.</li> <li>• <a href="#">4.8.19 CR Motor Counter Reset (p. 344)</a> : partially revised.</li> <li>• <a href="#">4.9.3 Initial Ink Charge (p. 347)</a> : partially revised.</li> <li>• <a href="#">4.9.4 Ink Leak Flag Reset (p. 348)</a> : partially revised.</li> </ul>

Revision	Date of Issue	Description
B	December 26, 2018	<p>Chapter 4</p> <ul style="list-style-type: none"> <li>• <a href="#">4.9.5 Initial Ink Charge Flag ON/OFF (p. 349)</a> : partially revised.</li> <li>• <a href="#">4.9.7 Pump Cap Counter Reset (p. 351)</a> : partially revised.</li> <li>• <a href="#">4.10.1 PF Belt Tension Check &amp; Adjustment (p. 355)</a> : partially revised.</li> <li>• <a href="#">4.10.4 Cutter Home Position Adjustment (p. 361)</a> : partially revised.</li> <li>• <a href="#">4.10.9 PF Scale Check (p. 369)</a> : partially revised.</li> <li>• <a href="#">4.10.15 PF Motor Counter Reset (p. 375)</a> : partially revised.</li> <li>• <a href="#">4.11.1 RTC Input (p. 376)</a> : partially revised.</li> <li>• <a href="#">4.11.2 MAC Address Check &amp; Input (p. 377)</a> : partially revised.</li> <li>• <a href="#">4.11.3 Serial Number &amp; USB-ID Check &amp; Input (p. 379)</a> : partially revised.</li> <li>• <a href="#">4.11.4 NVRAM Backup/Restore (p. 381)</a> : newly added.</li> <li>• <a href="#">4.11.5 Main Board Initial Setting (p. 382)</a> : partially revised.</li> <li>• <a href="#">4.12.1 Panel Check (p. 386)</a> : partially revised.</li> <li>• Touch Panel Adjustment : deleted.</li> </ul> <p>Chapter 6</p> <ul style="list-style-type: none"> <li>• <a href="#">6.2 Connection Diagram (p. 406)</a> : partially revised.</li> <li>• <a href="#">6.4 Part names used in this manual (p. 417)</a> : partially added.</li> </ul>
C	August 30, 2019	<p>Revised All chapter</p> <ul style="list-style-type: none"> <li>• Added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> </ul> <p>Chapter 1</p> <ul style="list-style-type: none"> <li>• <a href="#">1.1 Product Description (p. 15)</a>: Table 1-1, "Models" was added, added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">1.2.1 Basic Specifications (p. 17)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">1.2.2 Electric Specifications (p. 17)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">1.2.3 Ink Specifications (p. 18)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">1.3.2 Supported Media (p. 19)</a>: partially revised, added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">1.3.3 Printable area (p. 23)</a>: partially revised.</li> <li>• <a href="#">1.4.1 Dimensions and Weight (p. 25)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">1.4.3 Part Names (p. 26)</a>: partially revised, added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">1.5.1 Control Panel (p. 29)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">1.5.2 Menu Descriptions (p. 31)</a>: partially revised, added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> </ul> <p>Chapter 2</p> <ul style="list-style-type: none"> <li>• <a href="#">2.3.2 Service Call List (p. 64)</a>: added descriptions of Ink Tube Assy and Ink Tank Upper Porous Pad.</li> <li>• <a href="#">2.3.3 Details of Service Call (p. 66)</a>: updated 001136 (CR Movement Error (PG Lever Assy Interfere)) and 001000 (Life End Error).</li> <li>• <a href="#">2.4.2 Problem Phenomenon Overview (p. 104)</a>: partially added.</li> <li>• <a href="#">2.4.3 Detail of each Problem Phenomenon (p. 106)</a>: partially added.</li> </ul>

Revision	Date of Issue	Description
C	August 30, 2019	<p>Chapter 3</p> <ul style="list-style-type: none"> <li>• <a href="#">3.2 Parts Diagram (p. 134)</a>: Figure 3-5, "Ink Supply Mechanism (SC-T3100X Series/SC-T3100D Series/SC-F500 Series)" was added.</li> <li>• <a href="#">3.3 Disassembly Flowchart (p. 140)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series, "Ink Supply Mechanism (SC-T3100X Series/SC-T3100D Series/SC-F500 Series)" was added.</li> <li>• <a href="#">3.4.2 Housing (p. 147)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">3.4.2.3 Front Cover (p. 149)</a>: "Ink Tank Upper Cover" and "Ink Tank Front Cover" was added.</li> <li>• <a href="#">3.4.2.16 Ink Tank Upper Cover Sensor (p. 175)</a>: newly added.</li> <li>• <a href="#">3.4.3 Electric Circuit Components (p. 177)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">3.4.4 Carriage Mechanism/Ink System Mechanism (p. 185)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series. <ul style="list-style-type: none"> <li>• <a href="#">3.4.4.1 CR Cover (p. 185)</a>: procedure of SC-T3100X Series/SC-T3100D Series/SC-F500 Series was added.</li> <li>• <a href="#">3.4.4.4 CSIC Assy (p. 191)</a>: "ASSEMBLY" was added</li> <li>• <a href="#">3.4.4.5 PIS (p. 193)</a>: "CHECK POINT" was added</li> <li>• <a href="#">3.4.4.19 Ink Tank Upper Porous Pad (p. 215)</a>: newly added.</li> <li>• <a href="#">3.4.4.20 Ink Tank Cap (p. 216)</a>: newly added.</li> <li>• <a href="#">3.4.4.21 Ink Tank Cap Rubber (p. 217)</a>: newly added.</li> <li>• <a href="#">3.4.4.22 Ink Tube Assy (p. 219)</a>: newly added.</li> </ul> </li> <li>• <a href="#">3.4.5 Paper Feed Mechanism (p. 230)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series. <ul style="list-style-type: none"> <li>• <a href="#">3.4.5.1 Eject Roller Gear Assy (p. 230)</a>: procedure was partially added.</li> <li>• <a href="#">3.4.5.16 ASF Paper Sensor Cover (p. 251)</a>: procedure was partially added.</li> <li>• <a href="#">3.4.5.18 ASF Unit (p. 254)</a>: "CHECK POINT" and "ASSEMBLY" were added.</li> </ul> </li> </ul> <p>Chapter 4</p> <ul style="list-style-type: none"> <li>• <a href="#">4.1.2 Adjustment Items and the Order by Repaired Part (p. 269)</a>: updated item of ASF Unit, added items of Ink Tube Assy and Ink Tank Upper Porous Pad.</li> <li>• <a href="#">4.1.5 Service Program Basic Operations (p. 295)</a>: Figure 4-1, "Startup screen" was changed.</li> <li>• <a href="#">4.2.2 NVRAM Viewer Basic Operation (p. 298)</a>: added Ink Tube Assy and Ink Tank Upper Porous Pad to Life Parts Operation History, added Ink Bottle to Utilization.</li> <li>• <a href="#">4.8.7 Uni-D Outward Adjustment (Home -&gt; Full) (p. 328)</a>: partially revised.</li> <li>• <a href="#">4.8.8 Uni-D Homeward Adjustment (Full -&gt; Home) (p. 330)</a>: partially revised.</li> <li>• <a href="#">4.9.3 Initial Ink Charge (p. 347)</a>: partially revised.</li> <li>• <a href="#">4.9.8 Ink Tank Upper Porous Pad Counter Reset (p. 352)</a>: newly added.</li> <li>• <a href="#">4.9.9 Ink Tube Assy Counter Reset (p. 353)</a>: newly added.</li> <li>• <a href="#">4.9.10 Power Ink Flushing (p. 354)</a>: newly added.</li> <li>• <a href="#">4.10.14 ASF Unit Counter Reset (p. 374)</a>: newly added.</li> </ul>

Revision	Date of Issue	Description
C	August 30, 2019	<p>Chapter 5</p> <ul style="list-style-type: none"> <li>• <a href="#">5.2.1 Moving (p. 394)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">5.2.3 Moving and Transporting Ink Tank Models (p. 395)</a>: newly added.</li> <li>• <a href="#">5.3 Exchange Parts (p. 397)</a>: added descriptions of Ink Tube Assy and Ink Tank Upper Porous Pad.</li> </ul> <p>Chapter 6</p> <ul style="list-style-type: none"> <li>• <a href="#">6.1 Block Wiring Diagram (p. 405)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">6.2 Connection Diagram (p. 406)</a>: "Ink Tank Upper Cover Sensor" was added.</li> <li>• <a href="#">6.3 Panel Menu Map (p. 413)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> <li>• <a href="#">6.4 Part names used in this manual (p. 417)</a>: added descriptions of SC-T3100X Series/SC-T3100D Series/SC-F500 Series.</li> </ul>
D	March 27, 2020	<p>Revised</p> <p>All chapter</p> <ul style="list-style-type: none"> <li>• Information about the fluorescent ink models is added.</li> </ul> <p>Chapter 6</p> <ul style="list-style-type: none"> <li>• <a href="#">6.4 Part names used in this manual (p. 417)</a> : Part names were added.</li> </ul>
E	June 20, 2021	<p>Revised</p> <p>All chapter</p> <ul style="list-style-type: none"> <li>• Information about SC-T2100 Series is added.</li> </ul> <p>Chapter 1</p> <ul style="list-style-type: none"> <li>• <a href="#">1.5.3.2 Firmware Update Mode (p. 56)</a>: partially revised.</li> </ul> <p>Chapter 2</p> <ul style="list-style-type: none"> <li>• <a href="#">2.2 Maintenance Call (p. 61)</a>: partially revised.</li> <li>• <a href="#">2.3.3 Details of Service Call (p. 66)</a>: updated 001F80 (Fuse Blow Error)</li> </ul> <p>Chapter 3</p> <ul style="list-style-type: none"> <li>• <a href="#">3.4.4.2 Print Head Assy (p. 187)</a>: "CAUTION" was added.</li> <li>• <a href="#">3.4.4.3 Print Head (p. 190)</a>: "CAUTION" was partially added.</li> </ul> <p>Chapter 4</p> <ul style="list-style-type: none"> <li>• <a href="#">4.8.10 Nozzle Verification Technology Noise Check (p. 334)</a>: partially revised.</li> </ul> <p>Chapter 5</p> <ul style="list-style-type: none"> <li>• <a href="#">5.4 Lubrication (p. 398)</a>: partially revised.</li> </ul>

Revision	Date of Issue	Description
F	November 12, 2021	<p>Revised Chapter 2</p> <ul style="list-style-type: none"> <li>• <a href="#">2.2 Maintenance Call (p. 61)</a>: "CAUTION" was added.</li> </ul> <p>Chapter 4</p> <ul style="list-style-type: none"> <li>• <a href="#">4.8.9 Bi-D Adjustment (p. 332)</a>: partially revised.</li> </ul>
G	April 21, 2023	<p>Revised Chapter 3</p> <ul style="list-style-type: none"> <li>• <a href="#">3.4.4.2 Print Head Assy (p. 187)</a>: "CAUTION" was partially added.</li> <li>• <a href="#">3.4.4.13 CR Unit (p. 205)</a>: "ASSEMBLY" was partially added</li> </ul> <p>Chapter 4</p> <ul style="list-style-type: none"> <li>• <a href="#">4.1.2 Adjustment Items and the Order by Repaired Part (p. 269)</a>: partially revised.</li> <li>• <a href="#">4.1.3 Adjustment Items (p. 284)</a>: partially revised.</li> <li>• <a href="#">4.12.4 Initial Password Check &amp; Input (EMEA only) (p. 390)</a>: newly added.</li> </ul>

# Contents

## Chapter 1 PRODUCT DESCRIPTION

1.1 Product Description .....	15
1.2 Basic Specifications .....	17
1.2.1 Basic Specifications .....	17
1.2.2 Electric Specifications .....	17
1.2.3 Ink Specifications .....	18
1.3 Printing Specifications .....	19
1.3.1 Paper Feed Specifications .....	19
1.3.2 Supported Media .....	19
1.3.3 Printable area .....	23
1.4 Hardware Specifications .....	25
1.4.1 Dimensions and Weight .....	25
1.4.2 Installation Room Requirement .....	25
1.4.3 Part Names .....	26
1.5 Control Panel Specifications .....	29
1.5.1 Control Panel .....	29
1.5.2 Menu Descriptions .....	31
1.5.3 Various Startup Mode .....	55

## Chapter 2 Troubleshooting

2.1 Overview .....	59
2.1.1 Preliminary Check .....	59
2.1.2 Troubleshooting Procedure .....	60
2.1.3 Procedure after troubleshooting .....	60
2.2 Maintenance Call .....	61
2.3 Troubleshooting from Service Call .....	63
2.3.1 Service Call Classification Table .....	63
2.3.2 Service Call List .....	64
2.3.3 Details of Service Call .....	66
2.4 Troubleshooting from Problem Phenomenon .....	103
2.4.1 Problem Phenomenon Classification Table .....	103

2.4.2 Problem Phenomenon Overview .....	104
2.4.3 Detail of each Problem Phenomenon .....	106

2.5 Resistance Values .....	127
-----------------------------	-----

2.6 Fuse Positions .....	128
--------------------------	-----

## Chapter 3 DISASSEMBLY & ASSEMBLY

3.1 Overview .....	130
3.1.1 Precautions .....	130
3.1.2 Cautions after assembling .....	132
3.1.3 Orientation Definition .....	132
3.1.4 Recommended Tools .....	133
3.2 Parts Diagram .....	134
3.3 Disassembly Flowchart .....	140
3.4 Disassembly and Assembly Procedure .....	146
3.4.1 Preparation for servicing .....	146
3.4.2 Housing .....	147
3.4.3 Electric Circuit Components .....	177
3.4.4 Carriage Mechanism/Ink System Mechanism .....	185
3.4.5 Paper Feed Mechanism .....	230

## Chapter 4 ADJUSTMENT

4.1 Overview .....	268
4.1.1 Precautions .....	268
4.1.2 Adjustment Items and the Order by Repaired Part .....	269
4.1.3 Adjustment Items .....	284
4.1.4 List of Tools/Software/Consumables for Adjustments .....	294
4.1.5 Service Program Basic Operations .....	295
4.2 NV-RAM BACKUP / NVRAM Viewer .....	297
4.2.1 Parameter Backup procedure .....	297
4.2.2 NVRAM Viewer Basic Operation .....	298
4.3 Individual Adjustments .....	305

4.4 Adjustment (Sequential) .....	306
4.5 Installing Firmware .....	307
4.6 Image Print .....	310
4.7 References .....	311
4.8 CR/Head Related Adjustments .....	312
4.8.1 Head ID Check & Input .....	312
4.8.2 PG Check & Adjustment .....	313
4.8.3 Head Inclination Check & Adjustment (CR direction) .....	316
4.8.4 Head Slant Check & Adjustment (PF direction) .....	320
4.8.5 CR Belt Tension Check & Adjustment .....	324
4.8.6 PG Switching Lever Position Adjustment .....	327
4.8.7 Uni-D Outward Adjustment (Home -> Full) .....	328
4.8.8 Uni-D Homeward Adjustment (Full -> Home) .....	330
4.8.9 Bi-D Adjustment .....	332
4.8.10 Nozzle Verification Technology Noise Check .....	334
4.8.11 Nozzle Verification Technology Rank Sort .....	335
4.8.12 Nozzle Verification Technology Check .....	336
4.8.13 CR Scale Check .....	338
4.8.14 Head Alignment Check .....	339
4.8.15 CR Active Dumper Adjustment .....	340
4.8.16 CR Motor Measurement & Auto Adjustment .....	341
4.8.17 CR Scale Replacement Date & Time Setting .....	342
4.8.18 Print Head Counter Reset .....	343
4.8.19 CR Motor Counter Reset .....	344
4.9 Ink Supply Related Adjustments .....	345
4.9.1 Pump Cap Unit Measurement & Auto Adjustment .....	345
4.9.2 Cleaning .....	346
4.9.3 Initial Ink Charge .....	347
4.9.4 Ink Leak Flag Reset .....	348
4.9.5 Initial Ink Charge Flag ON/OFF .....	349
4.9.6 PIS Replacement Date & Time Setting .....	350
4.9.7 Pump Cap Counter Reset .....	351
4.9.8 Ink Tank Upper Porous Pad Counter Reset .....	352
4.9.9 Ink Tube Assy Counter Reset .....	353
4.9.10 Power Ink Flushing .....	354
4.10 Media Feed Related Checks and Adjustments .....	355
4.10.1 PF Belt Tension Check & Adjustment .....	355
4.10.2 Paper Feed Adjustment (A area) .....	357
4.10.3 Paper Feed Adjustment (B area) .....	359
4.10.4 Cutter Home Position Adjustment .....	361
4.10.5 Cut Position Check & Adjustment .....	362
4.10.6 PW Sensor Check & Adjustment .....	364
4.10.7 T&B&S Check & Adjustment .....	365
4.10.8 1st Dot Position Adjustment .....	367
4.10.9 PF Scale Check .....	369
4.10.10 PF Motor Measurement & Auto Adjustment .....	370
4.10.11 ATC Motor Measurement & Auto Adjustment .....	371
4.10.12 ATC Motor Replacement Date & Time Setting .....	372
4.10.13 PF Scale Replacement Date & Time Setting .....	373
4.10.14 ASF Unit Counter Reset .....	374
4.10.15 PF Motor Counter Reset .....	375
4.11 Boards Related Adjustments .....	376
4.11.1 RTC Input .....	376
4.11.2 MAC Address Check & Input .....	377
4.11.3 Serial Number & USB-ID Check & Input .....	379
4.11.4 NVRAM Backup/Restore .....	381
4.11.5 Main Board Initial Setting .....	382
4.11.6 Main Board Replacement Date & Time Setting .....	384
4.11.7 Power Supply Board Replacement Date & Time Setting .....	385
4.12 Others .....	386
4.12.1 Panel Check .....	386
4.12.2 Print Head Ground Resistance Check .....	388
4.12.3 Reset for Password of Administrator .....	389
4.12.4 Initial Password Check & Input (EMEA only) .....	390
4.13 Maintenance .....	391
4.13.1 Sensor Check .....	391
<b>Chapter 5 MAINTENANCE</b>	
5.1 Overview .....	393
5.2 Moving/Transporting/Storing .....	394
5.2.1 Moving .....	394
5.2.2 Transporting to/Storing in Environment of -10 °C or Less .....	395
5.2.3 Moving and Transporting Ink Tank Models .....	395
5.3 Exchange Parts .....	397
5.4 Lubrication .....	398
5.5 Difference between Standard Models and Fluorescent Ink Models .....	403

## Chapter 6 Appendix

6.1 Block Wiring Diagram .....	405
6.2 Connection Diagram .....	406
6.3 Panel Menu Map .....	413
6.4 Part names used in this manual .....	417
6.5 Power-On Sequence .....	420
6.6 Exploded Diagram/Parts List .....	429

CHAPTER

1

## PRODUCT DESCRIPTION

## 1.1 Product Description

**Table 1-1. Models**

Item	SC-T2100 Series	SC-T3100 Series	SC-T3100N Series	SC-T3100X Series	SC-T3100D Series	SC-T5100 Series	SC-T5100N Series	SC-F500 Series
Supported Paper Sizes	210~610 mm (24 inch)				210~914 mm (36 inch)		210~610 mm (24 inch)	
Ink Type	Pigment ink		Black: Pigment ink Color: Dye ink		Dye ink	Pigment ink		Sublimation dye ink
Ink Supply Method	Ink cartridge		Ink tank		Ink cartridge		Ink tank	
Stand (Paper basket)	Standard Equipment	Option			Standard Equipment	Option		

**REALIZES HIGH RESOLUTION (SC-T2100/SC-T3100/SC-T3100N/SC-T3100X/SC-T3100D/SC-T5100/SC-T5100N SERIES)** **CAD diagram with superior quality and waterproof**

By the newly developed ink, superior quality with both Grayscale and color diagram printing is realized. You can bring diagrams outside without any suspense since superior waterproof is realized by using pigmented ink for all colors.\*<sup>1</sup> For printer driver, line drawing mode that can easily print the optimum diagram is mounted. Optimum printing for diagram, which is superior to output connection of lines, line drawing such as oblique/curved line, and thin line, is possible.

 **Poster with high light fastness\*<sup>2</sup>**

Superior quality poster printing is possible by only selecting poster (photo)/perspective drawing with printing purpose of printer driver.

Since high light fastness is obtained by using pigmented ink for all color, the printed image does not wash out easily and possible to display it where the light falls.

**SUBLIMATION DYE INK (SC-F500 SERIES)**

Printing onto Epson special transfer paper is performed using sublimation dye ink. Transfer can be made to fabric materials, such as cushions, and to rigid materials, such as smartphone cases.

**INK SUPPLY VIA INK TANK (SC-T3100X SERIES/SC-T3100D SERIES/SC-F500 SERIES)**

A 140-ml ink bottle is included. Ink can be added during the printing process.

**USABILITY** **Space-saving LFP**

Comparing to other LFP, this printer is compact/lightweight and does not bother where to place. Model without stand can be placed on a cabinet or depository.

 **Switching ASF (cut sheet) and roll paper automatically**

Multiple paper smaller than A3 size can be set to Auto Sheet Feeder while roll paper is set at the same time.

 **Clear and accessible color touch panel**

Display design that can be operated intuitively, and possible to check operation method such as setting paper with illustration.

 **Printer driver with easy setting and able to prevent mistake**

It is possible to perform optimum printing by selecting expansion/reduction setting, paper feed method, and printing object with basic configuration menu. When selected the paper feed method, paper size and paper type set to the printer is automatically reflected. Printing failure can be reduced since the warning icon will be displayed when the output size and paper set to the printer does not match. Also, preview function is improved and is possible to see details such as cutting position of when printing on the roll paper. This reduces more failure of when printing.

 **Corresponding to wireless LAN**

Since connecting PC and the printer with wireless LAN is possible, printer can be placed without considering cable routing. Also, if the device is not connected to wireless LAN, it is possible to connect the device and printer directly with Wi-Fi Direct and perform printing. From iOS device, printing can be performed easily using AirPrint.

Note \*\*1": Make sure to laminate the printed paper before using it outside.

\*\*2": Not the same result is guaranteed with all paper.

## 1.2 Basic Specifications

### 1.2.1 Basic Specifications

**Table 1-2. Basic Specifications**

Item	Specification	
Printing method	On-demand ink jet	
Nozzle configuration	800 nozzles x 4 colors (Matte Black <sup>*4</sup> /Black <sup>*5</sup> , Cyan, Magenta/Fluorescent pink, Yellow/Fluorescent yellow)	
Resolution (maximum)	2,400 × 1,200 dpi	
Control code	ESC/P2 <sup>*4</sup> , ESC/P raster (undisclosed command), ESC/P3 <sup>*4</sup> , ESC/P-R <sup>*4</sup> , HP-GL/2, HP RTL, PJL <sup>*4</sup>	
Media feed method	Friction feed	
Built-in memory	1.0 GB	
Interface	<input type="checkbox"/> SuperSpeed USB (For PC connection) <input type="checkbox"/> High-Speed USB (Option port) <sup>*4</sup> <input type="checkbox"/> Ethernet <sup>*1</sup> (100BASE-T <sup>*4</sup> /100BASE-TX/1000BASE-T/ Energy Efficient Ethernet <sup>*2</sup> ) <input type="checkbox"/> Wireless LAN (Wi-Fi Direct corresponding <sup>*3</sup> )	
Tem- perature	Operating	10 to 35 °C (15 to 25 °C recommended)
	Storage (before unpacking)	-20 to 60 °C (within 120 hours at 60 °C, a month at 40 °C)
	Storage (after unpacking)	When ink charged: -10 to 40 °C (within a month at 40 °C) When ink ejected: -20 to 40 °C (within a month at 40 °C)
Humid- ity	Operating	20 to 80% (40 to 60% recommended. Without condensation)
	Storage	5 to 85% (Without condensation)

Note " \*1" : Make sure to use STP (Shield Twist Pair) cable more than category 5.

" \*2" : Connecting device corresponding IEEE802.3az is needed.

" \*3" : IEEE802.11b not corresponded.

" \*4" : SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series

" \*5" : SC-T3100X Series/SC-T3100D Series/SC-F500 Series

Note : Nozzle set configuration is;

Row A	Row B	Row C	Row D	Row E	Row F	Row G	Row H
C	Y/FY	M/FP	K/Mk	K/Mk	M/FP	Y/FY	C

### 1.2.2 Electric Specifications

**Table 1-3. Electric Specifications**

Item	Specification	
	SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series	SC-T3100X Series/SC-T3100D Series/SC-F500 Series
Rated voltage	AC100-240 V	
Rated current	1.4 A	
Rated frequency	50/60 Hz	
Power consumption	Operating	Approx. 28 W
	Ready mode	Approx. 8 W
	Sleep mode	Approx. 1.6 W
	Power OFF	Approx. 0.2 W

## 1.2.3 Ink Specifications

Table 1-4. Ink Specifications

Item	Specification			SC-F500 Series		
	SC-T3100X Series	SC-T3100D Series				
Type	Special ink cartridges	Dedicated ink bottles				
Ink type	Matte Black, Cyan, Magenta, Yellow	Black (Pigment ink), Cyan, Magenta, Yellow (Dye ink)	Black, Cyan, Magenta, Yellow (Dye ink)	Black, Cyan, Magenta/ Fluorescent pink, Yellow/ Fluorescent yellow (Sublimation dye ink)		
Use by date	See the date printed on the package (at normal temperature)	5 years from date of manufacture (Ink tank bag not opened)	5 years from date of manufacture (Ink tank bag not opened)	2 years from date of manufacture (Ink tank bag not opened)		
Print quality guarantee expiry	6 months (after opened)	6 months (Ink tank bag not opened)				
Storage temperature	Uninstalled	-20 to 40 °C (within 4 days at -20 °C, a month at 40 °C)				
	Installed in printer	10 to 40 °C (within 4 days at -20 °C, a month at 40 °C)	-20 to 40 °C (within 4 days at -20 °C, a month at 40 °C)			
	Transporting	-20 to 60 °C (within 4 days at -20 °C, a month at 40 °C, 72 hours at 60 °C)				
Capacity	26 ml, 50 ml, 80 ml	140 ml				
Cartridge dimensions	<input type="checkbox"/> 80 ml : (W) 41.0 x (D) 97.0 x (H) 49.5 mm* <input type="checkbox"/> 50 ml/26 ml : (W) 27.0 x (D) 97.0 x (H) 49.5 mm*	Body diameter: φ53.7mm Height: 138.7mm				

Note " \*": Without protrusion

## 1.3 Printing Specifications

### 1.3.1 Paper Feed Specifications

**Table 1-5. Paper Feed Specifications**

Item	Specification
Paper feed method	Friction feed
Return pitch	2.65 µm (1/9600 inch)
Paper feeder	<input type="checkbox"/> Roll paper <input type="checkbox"/> ASF <input type="checkbox"/> Manual
Feed speed	6 inch/sec.

### 1.3.2 Supported Media

#### 1.3.2.1 Epson Special Media Table

##### ROLL PAPER

- SC-T2100/SC-T3100/SC-T3100N/SC-T3100X/SC-T3100D/SC-T5100/SC-T5100N Series

Name	Size		ICC profile
	mm	inch	
Singleweight Matte Paper	420 (A2)	---	Epson SC-T3100_5100 Singleweight Matte Paper
	432	17	
	515 (B2)	---	
	594 (A1)	---	
	610	24	
	728 (B1) *	---	
	914*	36*	
Doubleweight Matte Paper	594 (A1)	---	Epson SC-T3100_5100 Doubleweight Matte Paper
	610	24	
	728 (B1) *	---	
	914*	36*	
	420 (A2)	---	
Premium Glossy Photo Paper (170)	594 (A1)	---	Epson SC-T3100_5100 Premium Glossy Photo Paper 170
	610	24	
	728 (B1) *	---	
	914*	36*	
	420 (A2)	---	
Premium Semigloss Photo paper (170)	594 (A1)	---	Epson SC-T3100_5100 Premium Semigloss Photo Paper 170
	610	24	
	728 (B1) *	---	
	914*	36*	
	420 (A2)	---	

Name	Size		ICC profile
	mm	inch	
Enhanced Adhesive Synthetic Paper	610	24	Epson SC-T3100_5100 Enhanced Adhesive Synthetic Paper
	914*	36*	
Enhanced Low Adhesive Synthetic Paper	610	24	Epson SC-T3100_5100 Enhanced Low Adhesive Synthetic Paper
	914*	36*	

Note " \*": SC-T5100 Series/SC-T5100N Series only

SC-F500 Series

Name	Size		ICC profile
	mm	inch	
DS Transfer General Purpose 17 inch Roll	432	17	An ICC profile is allocated to each paper type.
DS Transfer General Purpose 24 inch Roll	610	24	<input type="checkbox"/> General Purpose/Textile: Epson_SCF500_GeneralPurpose(Textile).icc
DS Transfer General Purpose A3 Roll	A3	---	<input type="checkbox"/> General Purpose/Rigid: Epson_SCF500_GeneralPurpose(Rigid).icc
DS Transfer General Purpose A4 Roll	A4	---	

### CUT SHEET

SC-T2100/SC-T3100/SC-T3100N/SC-T3100X/SC-T3100D/SC-T5100/SC-T5100N Series

Name	Size	ASF		ICC profile
		Corre-spond	Settable number	
Photo Quality InkJet Paper	A4	\	5	Epson SC-T3100_5100 Photo Quality Inkjet Paper
	Letter			
	Legal			
	A3			

Name	Size	ASF		ICC profile	
		Corre-spond	Settable number		
Archival Matte Paper	A4	\	5	Epson SC-T3100_5100 Archival Matte Paper	
	Letter				
	A3				
Photo Paper Glossy	A4	\	5	Epson SC-T3100_5100 Photo Paper Glossy	
	Letter				
	A3				
Premium Glossy Photo Paper	A4	\	5	Epson SC-T3100_5100 Premium Glossy PhotoPaper	
	Letter				
	11 x 14 in.				
	A3				
Premium Semigloss Photo Paper	A4	\	5	Epson SC-T3100_5100 Premium Semigloss Photo Paper	
	Letter				
	A3				
Premium Luster Photo Paper	A4	\	5		
	Letter				
	A3				

SC-F500 Series

Name	Size		ICC profile
	mm	inch	
DS Transfer General Purpose A3 Sheet	A3	---	An ICC profile is allocated to each paper type. <input type="checkbox"/> General Purpose/Textile: Epson_SCF500_GeneralPurpose(Textile).icc
DS Transfer General Purpose A4 Sheet	A4	---	<input type="checkbox"/> General Purpose/Rigid: Epson_SCF500_GeneralPurpose(Rigid).icc

### 1.3.2.2 Usable Commercially Available Paper Size

This printer supports the following paper specifications for non-Epson media.



- Do not use paper that is wrinkled, scuffed, torn, or dirty.
- Load paper just before printing. Do not leave paper loaded on the printer when not printing. Store paper properly following the instruction that comes with the paper.
- When large quantities of paper need to be prepared in advance, make a test print using the paper before purchase.
- Non-Epson media in the “Paper type” column in the table below can be used if satisfying the standard below, but quality is not guaranteed.
- Non-Epson media not in the “Paper type” column in the table below can be set to the printer if satisfying the standard below, but quality is not guaranteed.

**ROLL PAPER (SC-T2100 SERIES/SC-T3100 SERIES/SC-T3100N SERIES/SC-T3100X SERIES/SC-T3100D SERIES/SC-T5100 SERIES/SC-T5100N SERIES)**

**Table 1-6. Roll paper**

Item	Specification
Paper type	Plain paper, coated paper, photo paper, tracing paper, matte film
Roll core size	2 inch
Roll paper outer diameter	110 mm or less
Paper Width	<input type="checkbox"/> SC-T5100 Series/SC-T5100N Series: 210 to 914 mm (36 inch) <input type="checkbox"/> SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T3100X Series/SC-T3100D Series: 210 to 610 mm (24 inch)
Thickness	0.05 to 0.21 mm
Paper Weight	3 kg or less

**CUT SHEET (SC-T2100 SERIES/SC-T3100 SERIES/SC-T3100N SERIES/SC-T3100X SERIES/SC-T3100D SERIES/SC-T5100 SERIES/SC-T5100N SERIES)**

**Table 1-7. Cut sheet (Auto Sheet Feeder)**

Item	Specification
Paper type	Plain paper, coated paper, photo paper
Size	A4 to A3
Thickness	0.12 to 0.27 mm

**Table 1-8. Cut sheet (manual)**

Item	Specification
Paper type	Plain paper, coated paper, photo paper, tracing paper, matte film
Paper Width	<input type="checkbox"/> SC-T5100 Series/SC-T5100N Series: 210 to 914 mm (36 inch) <input type="checkbox"/> SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T3100X Series/SC-T3100D Series: 210 to 610 mm (24 inch)
Paper Length	279.4 mm (Letter) to 1,292 mm
Thickness	0.12 to 0.27 mm

## BEFORE PRINTING ON COMMERCIALLY AVAILABLE PAPER

When using Commercially Available Paper, select the paper type setting of when set paper from the following.

- Plain paper
- Coated paper <other>
- Photo paper <other>
- Tracing paper
- Tracing paper <other>
- Matte film

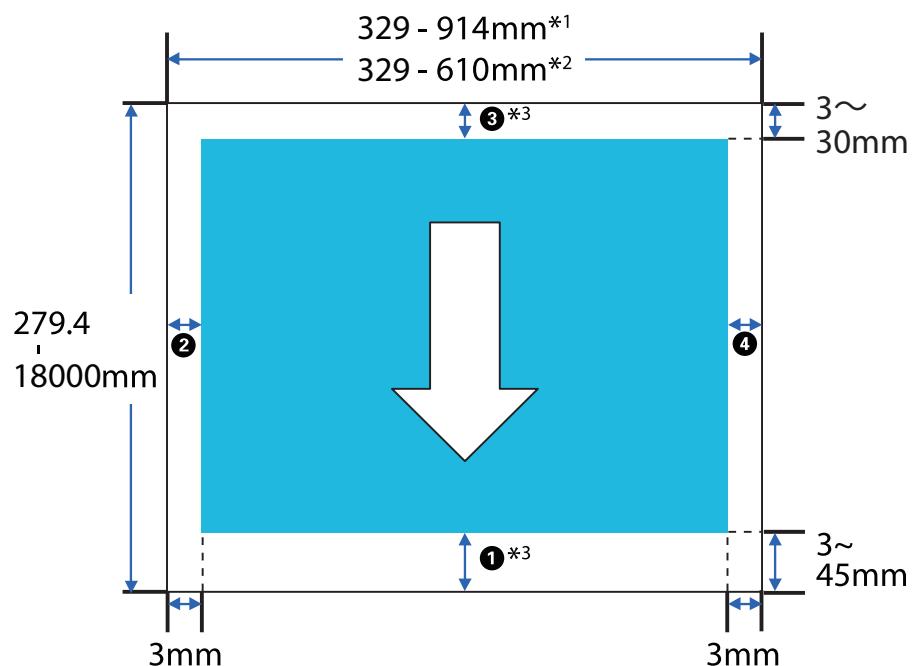
CHECK  
POINT



When banding, ink smear or wrinkle, or color density unevenness occurred, perform paper adjustment.

### 1.3.3 Printable area

#### ROLL PAPER



Note " \*1": SC-T5100 Series/SC-T5100N Series

" \*2": SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T3100X Series/SC-T3100D Series/SC-F500 Series

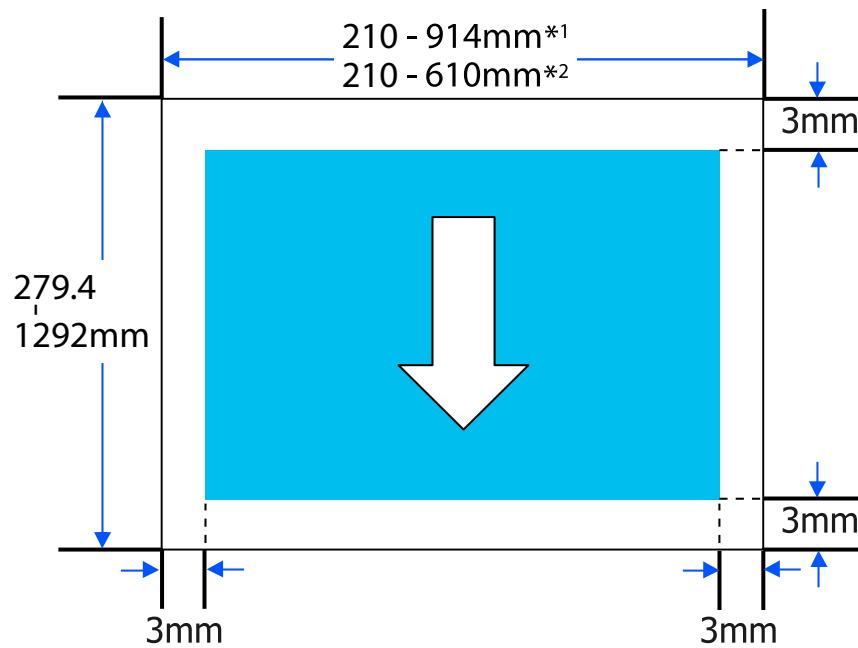
" \*3": If banner printing is selected in the layout screen of the printer driver, the top and bottom margins are 0 mm.

Table 1-9. Margin of roll paper

Top/Bottom margin setting	Margin Values
Normal	(1), (3) = 30 mm *
	(2), (4) = 3 mm
Top 3 mm/Bottom 3 mm	(1), (3) = 3 mm
	(2), (4) = 3 mm
Top 15 mm/Bottom 15 mm	(1), (2) = 15 mm
	(2), (4) = 3 mm
Top 35 mm/Bottom 15mm	(1) = 45 mm
	(3) = 15 mm
	(2), (4) = 3 mm
3 mm	(1), (2), (3), (4) = 3 mm
15 mm	(1), (2), (3), (4) = 5 mm

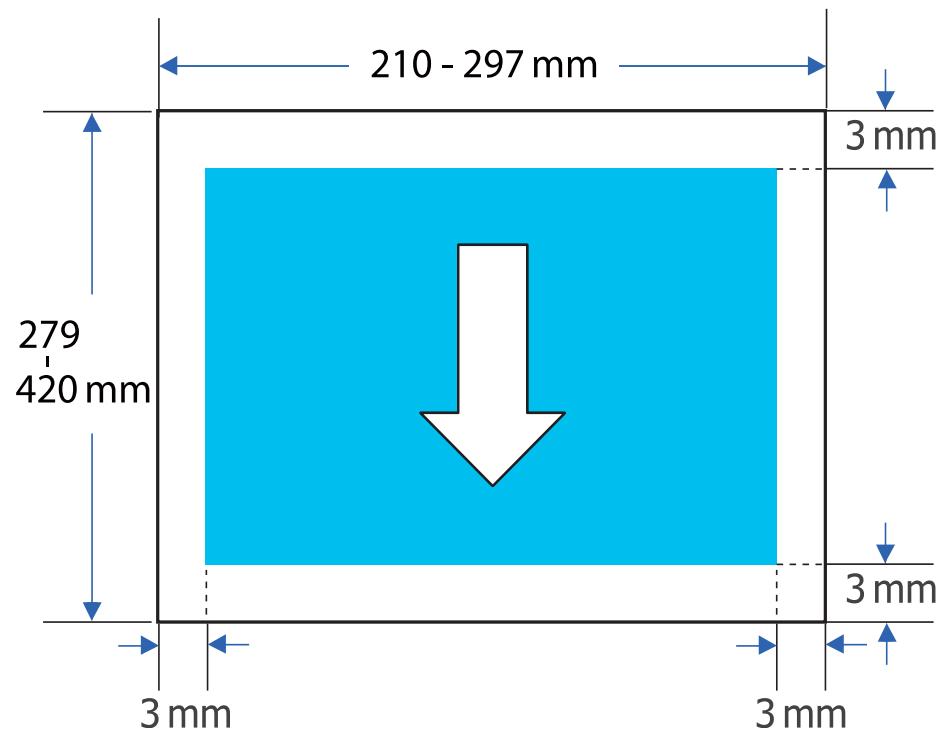
Note " \*": If normal is selected when satisfying two conditions below, top margin and bottom margin become 3 mm. (SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only.)

- Paper type setting is set to one of the below.  
Singleweight Matte, Coated Paper <Generic>, Plain paper, Tracing paper, Tracing Paper<LowDuty>, Matte Film
- One of the following is selected by printing purpose of printer driver.  
CAD/line drawing - black, CAD/line drawing - color, CAD/line drawing - Grayscale 2 gradation

**CUT SHEET**

Note "\*1": SC-T5100 Series/SC-T5100N Series

"\*2": SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T3100X Series/SC-T3100D Series

**CUT SHEET (AUTO SHEET FEEDER)**

## 1.4 Hardware Specifications

This section provides the printer dimensions and shows the main components.

### 1.4.1 Dimensions and Weight

**Table 1-10. Dimensions and Weight**

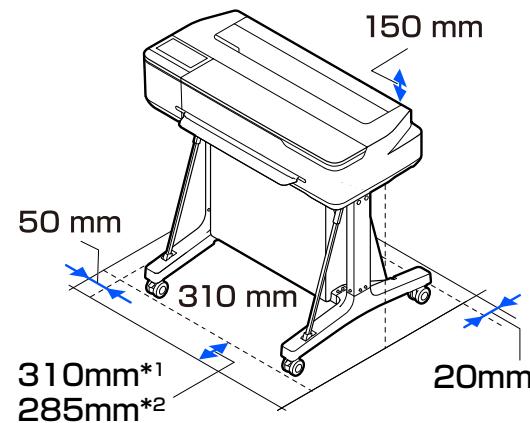
Model		Width	Depth	Height	Weight* <sup>2</sup>
SC-T5100 Series	Maximum* <sup>1</sup>	1268 mm	982 mm	913 mm	Approx. 46 kg
	Normal		696 mm		
SC-T5100N Series	Maximum* <sup>1</sup>	1268 mm	811 mm	230 mm	Approx. 33 kg
	Normal		505 mm		
SC-T2100 Series/ SC-T3100 Series	Maximum* <sup>1</sup>	970 mm	982 mm	913 mm	Approx. 38 kg
	Normal		696 mm		
SC-T3100N Series	Maximum* <sup>1</sup>	970 mm	811 mm	230 mm	Approx. 27 kg
	Normal		505 mm		
SC-T3100X Series/ SC-T3100D Series/ SC-F500 Series	---	970mm	577mm	245mm	Approx. 29 kg

Note "1": Installed the Eject Stacker and opened the Eject Basket.

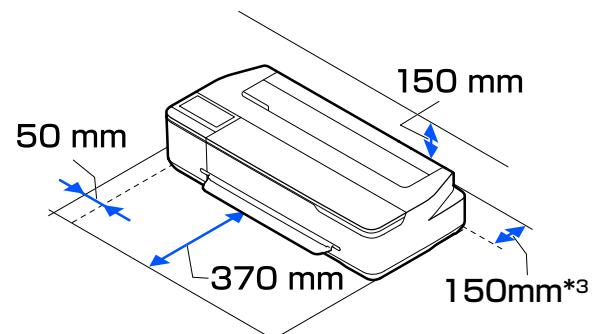
"2": Ink cartridge and the Eject Stacker not included.

### 1.4.2 Installation Room Requirement

SC-T5100 Series/SC-T3100 Series/SC-T2100 series/SC-F500 Series



SC-T5100N Series/SCT3100N Series/SC-T3100X Series/SC-T3100D Series/  
SC-F500 Series



Note "1": SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series

"2": SC-T3100X Series/SC-T3100D Series/SC-F500 Series

"3": You need at least 150 mm of space at the back when replacing the maintenance

**Figure 1-1. Installation Room Requirement**

### 1.4.3 Part Names



Illustration of the SC-T3100 Series is used.

#### FRONT SIDE

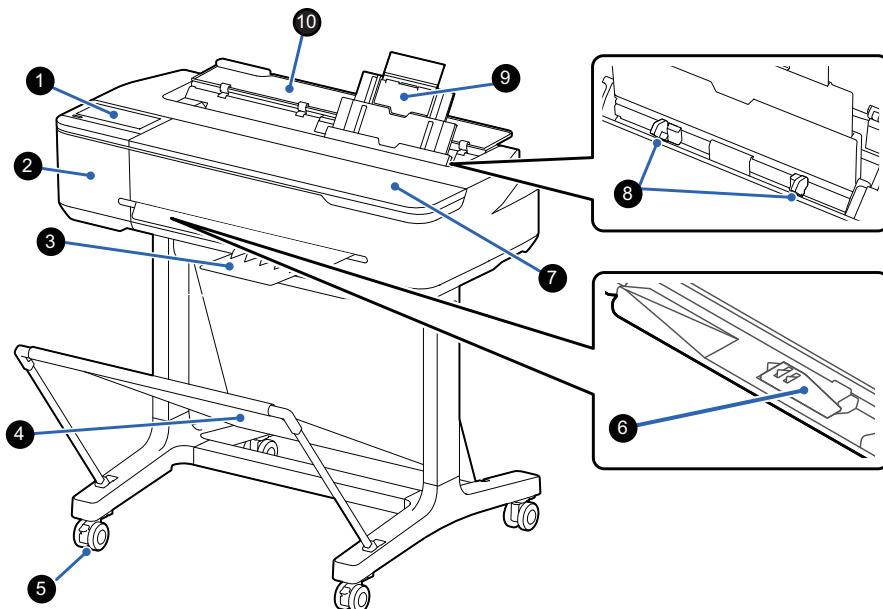
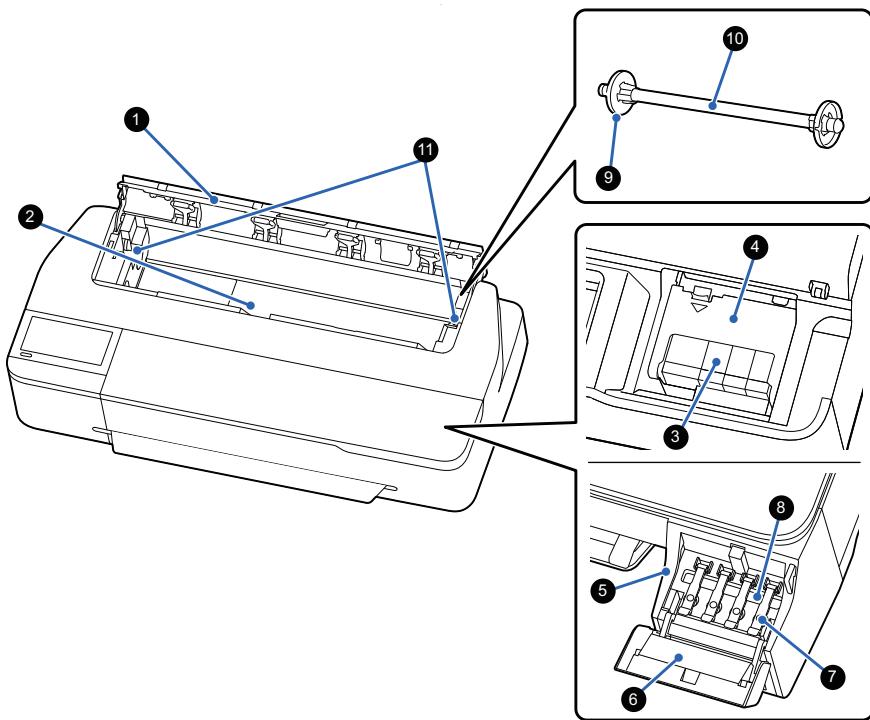


Figure 1-2. Front side

Table 1-11. Front side

No.	Name
1	Control panel
2	Cutter Cover
3	Eject Stacker
4*	Eject Basket
5*	Caster
6	B1 width paper support (SC-T5100 Series/SC-T5100N Series only)
7	Front Cover
8	Edge Guide
9	Auto Sheet Feeder
10	Cut Sheet Cover

Note \*\*: SC-T2100 Series/SC-T3100 Series/SC-T5100 Series: Equipped with the Eject Basket (Stand) normally. SC-T3100N Series/SC-T5100N Series/SC-T3100X Series/SC-T3100D Series/SC-F500 Series: Able to equip the Eject Basket (Stand) optionally.

**INSIDE****Figure 1-3. Inside****Table 1-12. Inside**

No.	Name
1	Roll Paper Cover
2	Paper slot
3	Ink cartridge *1
4	Cartridge Cover *1
5	Ink Tank *2
6	Ink Tank Upper Cover *2
7	Ink Tank Cap *2
8	Movable Flange (clear)
9	Spindle
10	Spindle Holder

Note \*1: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series

\*2: SC-T3100X Series/SC-T3100D Series/SC-F500 Series

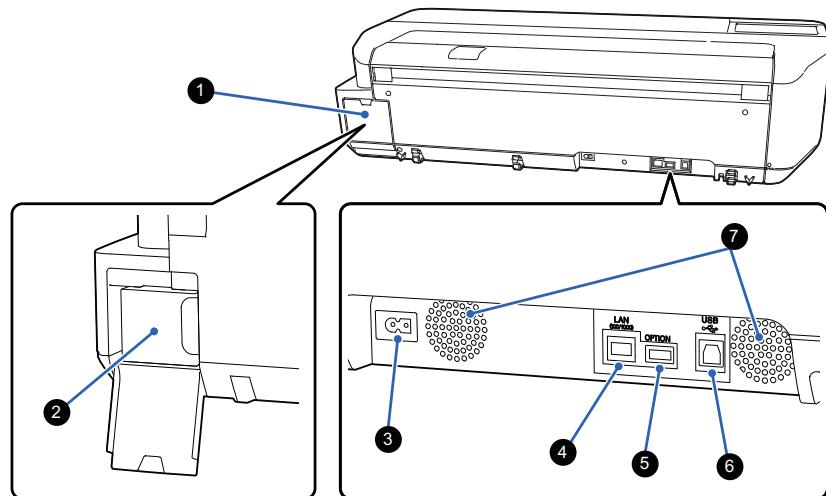
**BACK**

Figure 1-4. Back

**Table 1-13. Back**

No.	Name
1	Maintenance Box Cover
2	Maintenance Box
3	AC Inlet
4	LAN Port
5	Option Port
6	USB Port
7	Vent

## 1.5 Control Panel Specifications

### 1.5.1 Control Panel

#### CONTROL PANEL

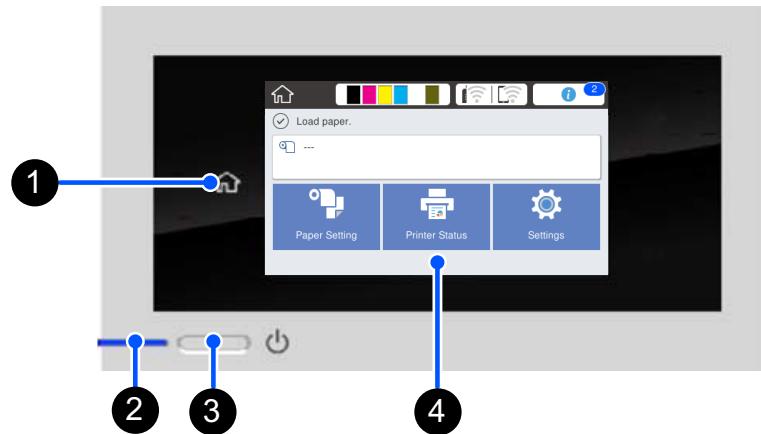


Figure 1-5. Control Panel

Table 1-14. Control Panel

Name	Function
(1) Home button	Able to return to home screen by pressing it while menu is displayed. It turns off while it cannot be used such as paper feeding is performed.
(2) Power light	<input type="checkbox"/> On: The power is on. <input type="checkbox"/> Flashing: The printer is receiving data or cleaning the Print Head or performing other operations in the course of being shut down. <input type="checkbox"/> Off: The power is off.
(3) Power button	Turns the power on and off.
(4) Screen	Touch panel that displays printer's status, menu, error and so on. Able to select menu item and option displayed on the screen by pressing lightly (tapping), and also able to scroll the screen by moving the finger while pressing the screen.

## HOME MENU

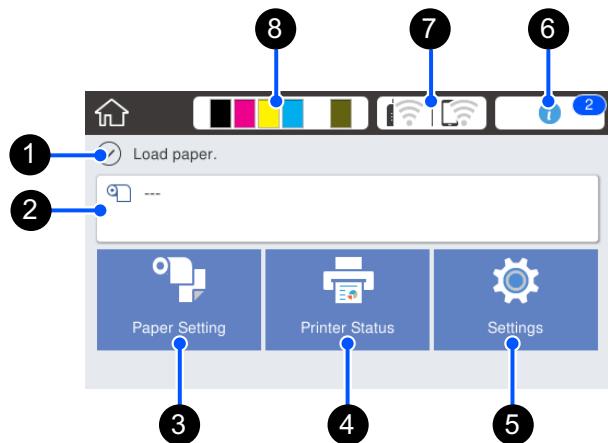


Figure 1-6. LCD

Table 1-15. LCD

Name	Function
(1) Information display area	Displays printer's status, error and so on.
(2) Roll paper information area	<input type="checkbox"/> When roll paper is set Displays the information of set roll paper. If the Manage Remaining Amount is on, approximate remaining (remaining length) of roll paper is displayed. Displays menu for setting/adjusting roll paper by pressing this area. <input type="checkbox"/> When roll paper is not set [---] is displayed. Displays procedure for setting roll paper by pressing this area.
(3) Paper setting menu button	Press to install, remove, set, or adjust paper.
(4) Printer status menu button	Press to check the state of consumables or notification.
(5) Setting menu button	Able to perform maintenance, operation setting of the printer, network setting, and so on.

Table 1-15. LCD

Name	Function
(6) Information icon (SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)	Displays the number of notification on upper right of the icon with badge when there are any notification such as remaining of consumable is little. Displays the list of notifications not dealt with by pressing the icon when the badge is displayed. Display remedies for notifications by pressing each item. Badge remains until you deal with the notification.
(7) Network icon	Displays the connection state of network with icon as shown below. Able to switch the connection state of network by pressing the icon. <ul style="list-style-type: none"> <li> Wired LAN not connected, network not set</li> <li> Wired LAN connected</li> <li> Wireless LAN (Wi-Fi) unavailable</li> <li> Searching SSID, IP address not set, radio wave intensity is zero or bad</li> <li> Wireless LAN (Wi-Fi) connected. The number of line represents the radio wave intensity. Radio wave intensity becomes better as line increases.</li> <li> Wi-Fi Direct (simple AP) connection unavailable</li> <li> Wi-Fi Direct (simple AP) connection available</li> </ul>
(8) Consumable information icon	Indicate remaining quantity of ink cartridge (SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only) and empty capacity of Maintenance Box with the length of the bar. The bar gets shorter as remaining quantity or empty capacity is little. When  is displayed on the right side of the icon, remaining of either one is little. Displays consumable state menu by pressing the icon, and is able to see the detail.

## 1.5.2 Menu Descriptions

Note \*1: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only

\*2: SC-F500 Series only

\*3: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T3100X Series/SC-T3100D Series/SC-T5100 Series/SC-T5100N Series only

\*4: SC-T3100X Series/SC-T3100D Series only

**Table 1-16. Menu Descriptions**

Menu	Menu Item	Setting Value	Explanation
Paper Settings	Roll Paper	Remove	Rewind roll paper until ejected from the printer.
		Feed/Cut	Back Feed Cut
		Media Adjust	Start Perform when the printing result has any problem or when registered user paper setting. Adjustment pattern is printed by pressing start. After that, follow the instruction and perform adjustment. The optimum setting for printing obtained from adjustment result is saved as selected paper type setting.
		Advanced Media Setting	
		Platen Gap	1.6 2.1 2.6 Displays when selecting user paper in paper type. Changing platen gap (gap between the Print Head and paper) is not necessary normally since the platen gap is set as the one for paper selected from the reference paper type when setting user paper. Widen the platen gap (change the setting value larger) when the print result is smeared with ink.
		Top/Bottom Margins	Standard Top 3 mm/Bottom 3 mm Top 15 mm/Bottom 15 mm Top 45 mm/Bottom 15 mm By selecting standard, top/bottom margin is set as below according to the print purpose of printer driver. • CAD line drawing : 3 mm / 3 mm • Others : 30 mm / 30 mm Margin on the left and right side is always 3 mm. When smear or smudge appears on the top part, set top margin to 30 mm or 45 mm.
		Back Tension	Auto Normal High Extra High When the slack occurs while printing, set to High or Extra High.

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation					
Paper Settings	Roll Paper	Drying Time	<p>Drying Time per Pass</p> <p>0.0 to 10.0 sec.</p> <p>Select the time the Print Head pauses to allow drying after each pass. Choose from values between 0.0 and 10.0 seconds. Depending on the paper type, the ink may take a while to dry. If the ink blurs on the paper, set a longer time for drying the ink.</p> <p>Increasing the drying time increases the time needed to print.</p>					
		Drying Time per Page	<p>0.0 to 60 min.</p> <p>Specify how long the printer pauses to allow the ink to dry after printing each page; choose from values between 0 and 60 minutes. Depending on the ink density or paper type, the ink may take a while to dry. If the ink blurs on the paper, set a longer time for drying the ink.</p> <p>The longer the drying time, the more time required for printing.</p>					
		Auto Cut	<p>On</p>					
			<p>Off</p> <p>Select On to automatically cut roll paper using the built-in cutter as each page is printed or Off to disable auto paper cutting. If On is selected, paper is cut automatically even if paper tip is not set horizontally. The setting selected with the printer driver takes priority when the printer driver is used.</p>					
		Manage Remaining Amount						
		Setup	<p>On</p> <p>Selects [On] to indicate and record the remaining amount of the set roll paper, or [Off] to set it to off. If selected on, Remaining Amount and Remaining Alert becomes valid.</p>					
			<p>Off</p>					
		Remaining Amount	<p>5.0 to 150.0 m</p> <p>By inputting the length of the set roll paper in Remaining Amount, approximate remaining of the roll paper is displayed on home menu and printer driver.</p>					
		Remaining Alert	<p>1.0 to 15.0 m</p> <p>In Remaining Alert, set to display a warning when the amount of remaining roll paper drops below the limit. You can set in 0.1 m increments.</p>					
		Change Paper Type/Paper Width	<p>Paper Type</p> <table border="1"> <tr> <td>Plain Paper *<sup>3</sup></td> </tr> <tr> <td>General Purpose/ Textile *<sup>2</sup></td> </tr> <tr> <td>Coated Paper &lt;Generic&gt; *<sup>3</sup></td> </tr> <tr> <td>General Purpose/ Rigid *<sup>2</sup></td> </tr> <tr> <td>Photo Paper *<sup>3</sup></td> </tr> <tr> <td>01 *<sup>2</sup></td> </tr> <tr> <td>Custom Paper</td> </tr> </table> <p>Select the type of set paper. For three options other than Custom Paper, paper type selected newly is displayed. If the objective paper type is not displayed, press Custom Paper to indicate the objective paper type, and then select it.</p>	Plain Paper * <sup>3</sup>	General Purpose/ Textile * <sup>2</sup>	Coated Paper <Generic> * <sup>3</sup>	General Purpose/ Rigid * <sup>2</sup>	Photo Paper * <sup>3</sup>
Plain Paper * <sup>3</sup>								
General Purpose/ Textile * <sup>2</sup>								
Coated Paper <Generic> * <sup>3</sup>								
General Purpose/ Rigid * <sup>2</sup>								
Photo Paper * <sup>3</sup>								
01 * <sup>2</sup>								
Custom Paper								

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
	Media Adjust	Start	Perform when the printing result has any problem or when registered user paper setting. Adjustment pattern is printed by pressing Start. After that, follow the instruction and perform adjustment. The optimum setting for printing obtained from adjustment result is saved as selected paper type setting.
Change Paper Type/Paper Size			
Paper Settings Auto Sheet Feeder	Paper Type	Plain Paper * <sup>3</sup> General Purpose/ Textile * <sup>2</sup>	Select the type of set paper. For three options other than Custom Paper, paper type selected newly is displayed. If the objective paper type is not displayed, press Custom Paper to indicate the objective paper type, and then select it.
		Coated Paper <Generic> * <sup>3</sup> General Purpose/ Rigid * <sup>2</sup>	
		Photo Paper * <sup>3</sup> 01 * <sup>2</sup>	
		Custom Paper	
		A4	Select the size of set paper. If the objective size is not available, select User Define to input the paper width and length.
		A3	
		B4	
		ISO B4 250 x 353 mm	
		Letter	
		Legal	
		US B tabloid 11x17 in	
		ARCH A 9 x 12 in	
		User Define	

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation	
Paper Settings	Cut Sheet	Remove	Press when removing set cut sheet (manual) without printing. Paper get ejected from front side.	
		Media Adjust	Perform when the printing result has any problem or when registered user paper setting. Adjustment pattern is printed by pressing Start. After that, follow the instruction and perform adjustment. The optimum setting for printing obtained from adjustment result is saved as selected paper type setting.	
		Change Paper Type/Paper Size		
		Paper Type	Select the type of set paper. For three options other than Custom Paper, paper type selected newly is displayed. If the objective paper type is not displayed, press Custom Paper to indicate the objective paper type, and then select it.	
		Paper Size	Select the size of set paper. If the objective size is not available, select User Define to input the paper width and length.	

Table 1-16. Menu Descriptions

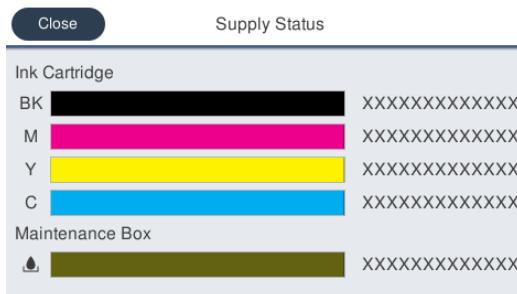
Menu	Menu Item	Setting Value	Explanation
Printer Status	Consumables Status		<p>Displays approximate remaining quantity/model number of ink cartridge for each color (SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only) and approximate empty capacity/model number of the Maintenance Box.</p>  <p>The screenshot shows a 'Supply Status' window with a 'Close' button. It displays four ink cartridges (BK, M, Y, C) with their respective remaining quantities represented by colored bars (black, magenta, yellow, cyan) and an 'XXXXXXXXXXXX' placeholder. Below them is a 'Maintenance Box' section with a green bar and the same 'XXXXXXXXXXXX' placeholder. A warning icon (!) is visible near the cartridge bars.</p>
	Message List		<p>The bar gets shorter as remaining quantity or empty capacity is little. Printing is possible until the replacement notification is indicated even if ! is displayed. However, prepare the new ink cartridge of specified color or new Maintenance Box as soon as possible.</p> <p>The code of ink color indicated on the side of the bar represents: BK: Matte Black*<sup>1</sup>/Black*<sup>2*4</sup>/M: Magenta/Y: Yellow/C: Cyan</p>
	Firmware Version		<p>The list of messages which notifies the printer status is displayed. Detail is displayed by selecting the message from the list.</p>
	Print Status Sheet		<p>You can see the firmware version.</p>
	Configuration Status Sheet		<p>Prints the list of current status and settings. You can check each piece of information at once.</p>

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation	
Settings General Settings - Basic Settings	LCD Brightness	1 to 9	Adjust the brightness of the screen.	
	Sound			
	Mute	On	By selecting Off, sound when pressed menu or the like on control panel and operation check sound when inserted paper to paper slot for setting paper can be turned off.	
		Off		
	Normal Mode			
	Button Press	0 to 10	Set the volume of sound when pressed menu or the like on control panel and operation check sound when inserted paper to paper slot for setting paper.	
		0 to 10		
		Pattern 1		
	Sound Type	Pattern 2	Set the type of sound when pressed menu or the like on control panel and operation check sound when inserted paper to paper slot for setting paper.	
	Sleep Timer	1 to 210 min. * <sup>1</sup> 1 to 60 min. * <sup>2*4</sup>	The printer automatically switch to sleep mode when printer operations such as receiving the print job, operating the control panel, and so on are not performed for a continuous period without any error. Set the time to switch to sleep mode in this setting.	
	Power Off Timer	Off	The printer automatically turns off when printer operations such as receiving the print job, operating the control panel, and so on are not performed for a continuous period without any error.	
		30 min.		
		1 h		
		2 h		
		4 h		
		8 h		
		12 h		
	Circuit Breaker Interlock Startup	On	Select On to automatically turn on the printer when the breaker is turned on or Off to disable turning the printer on.	
	Date/Time Settings	Off		
		Date/Time	-	Enters current date and time.
		Time Difference	-12:45 to +13:45 (0.00)	Set the time difference from Coordinated Universal Time (UTC) in unit of 15 minutes.

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings	General Settings - Basic Settings	Language	Select the language for the screen display.
		Japanese	
		English	
		French	
		Italian	
		German	
		Portuguese	
		Spanish	
		Dutch	
		Polish	
		Russian	
		Korean	
		Simplified Chinese	
		Traditional Chinese	
		Operation Time Out	You are returned to the Home screen if no operations are performed for a while on each menu.
		On	
		Off	
		Keyboard	Select the keyboard layout displayed when entering the name of user paper and so on.
		QWERTY	
		AZERTY	
		QWERTZ	
		Length Unit	Select the unit for when displaying the length of roll paper.
		m	
		inch	

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation		
Settings	General Settings - Printer Settings	Paper Source Settings			
		Error Notice			
		Paper Size Notice	<table border="1"> <tr> <td>On</td> <td rowspan="2">When selected On, error message is displayed when the output size or the paper type of print job which the printer received differs from printer setting.</td> </tr> <tr> <td>Off</td> </tr> </table>	On	When selected On, error message is displayed when the output size or the paper type of print job which the printer received differs from printer setting.
On	When selected On, error message is displayed when the output size or the paper type of print job which the printer received differs from printer setting.				
Off					
Paper Type Notice	<table border="1"> <tr> <td>On</td> <td rowspan="2"></td> </tr> <tr> <td>Off</td> </tr> </table>	On		Off	
On					
Off					
Roll Paper Setup					
Detect Paper Meandering	<table border="1"> <tr> <td>On</td> <td>Select On to display an error in the control panel's screen and stop printing when the paper is fed in at a slant or Off to continue printing. On is recommended, as feeding the paper at a slant can cause the paper to jam.</td> </tr> <tr> <td>Off</td> <td></td> </tr> </table>	On	Select On to display an error in the control panel's screen and stop printing when the paper is fed in at a slant or Off to continue printing. On is recommended, as feeding the paper at a slant can cause the paper to jam.	Off	
On	Select On to display an error in the control panel's screen and stop printing when the paper is fed in at a slant or Off to continue printing. On is recommended, as feeding the paper at a slant can cause the paper to jam.				
Off					
Print Cutting Guideline	<table border="1"> <tr> <td>On</td> <td>When auto cut is Off, select to print a dotted line on roll paper (On) or not (Off). A dotted line will not be printed when auto cut is On or on cut sheet.</td> </tr> <tr> <td>Off</td> <td>However, vertical dotted line will be printed regardless to auto cut setting if the paper width of roll paper set to the printer is smaller than the width specified with PC.</td> </tr> </table> <p>Setting of the printer driver will be enabled when printing via the printer driver.</p>	On	When auto cut is Off, select to print a dotted line on roll paper (On) or not (Off). A dotted line will not be printed when auto cut is On or on cut sheet.	Off	However, vertical dotted line will be printed regardless to auto cut setting if the paper width of roll paper set to the printer is smaller than the width specified with PC.
On	When auto cut is Off, select to print a dotted line on roll paper (On) or not (Off). A dotted line will not be printed when auto cut is On or on cut sheet.				
Off	However, vertical dotted line will be printed regardless to auto cut setting if the paper width of roll paper set to the printer is smaller than the width specified with PC.				
Position of After Pint	<table border="1"> <tr> <td>Nip</td> <td>Select to hold the bottom tip of cut paper or auto cut roll paper (Nip) or to eject paper completely (Eject) after printing. Nip is recommended to prevent damaging the printed surface by dropping the printed paper.</td> </tr> <tr> <td>Eject</td> <td>When selected Nip, hold the tip of the printed paper not to drop it.</td> </tr> </table>	Nip	Select to hold the bottom tip of cut paper or auto cut roll paper (Nip) or to eject paper completely (Eject) after printing. Nip is recommended to prevent damaging the printed surface by dropping the printed paper.	Eject	When selected Nip, hold the tip of the printed paper not to drop it.
Nip	Select to hold the bottom tip of cut paper or auto cut roll paper (Nip) or to eject paper completely (Eject) after printing. Nip is recommended to prevent damaging the printed surface by dropping the printed paper.				
Eject	When selected Nip, hold the tip of the printed paper not to drop it.				

Table 1-16. Menu Descriptions

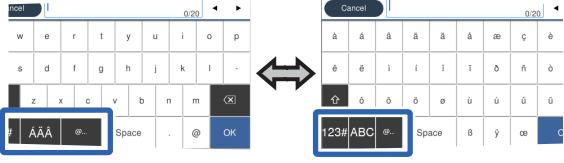
Menu	Menu Item	Setting Value	Explanation
Settings General Settings - Printer Settings	Custom Paper Setting Displays the setting item by pressing the registered number. (01 to 10)	Change Name	<p>Saves/Changes the name of user paper setting. The name saved here will be displayed in the paper type list.</p> <p>Paper setting for optimum printing differs between cut sheet and roll paper even if the paper type is the same. Make sure to save the user paper individually when using the same paper type for both cut sheet and roll paper. In this case, save the name as [Roll -XX paper]/[Cut sheet -XX paper] to distinguish roll paper or cut sheet when selecting the paper type.</p> <p>Keyboard screen will be displayed by pressing. Maximum 20 characters can be entered for the name. By pressing the area shown below, screen can be changed.</p>  <p>Input method changes as icons on bottom left is pressed.</p> <p>ABC : Alphabet 123# : Number/Symbol ÁÄÂ : Accented character @... : Number/Symbol</p> <p>To change the layout of the full key keyboard, set in the keyboard icon the basic configuration menu.</p>
	Change Reference Paper	Plain Paper Coated Paper Photo Paper CAD Custom Paper	Select the paper type nearest to the using paper.
	Advanced Media Setting	Platen Gap 1.6 2.1 2.6	Changing platen gap (gap between the Print Head and paper) is not necessary normally since the platen gap is set as the one for paper selected in the reference paper type when setting user paper. Widen the platen gap (change the setting value larger) when the print result is smeared with ink.

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings General Settings - Printer Settings	Top/Bottom Margins	Standard	By selecting standard, top/bottom margin is set as below according to the print purpose of printer driver. <ul style="list-style-type: none"> <li>CAD line drawing : 3 mm / 3 mm</li> <li>Others : 30 mm / 30 mm</li> </ul> Margin on the left and right side is always 3 mm. When smear or smudge appears on the top part, set top margin to 30 mm or 45 mm.
		Top 3 mm/Bottom 3 mm	
		Top 15 mm/Bottom 15 mm	
		Top 45 mm/Bottom 15 mm	
	Back Tension	Auto	When the slack occurs while printing, set to High or Extra High.
		Standard	
		High	
		Extra High	
	Drying Time	Drying Time per Pass	Select the time the Print Head pauses to allow drying after each pass. Choose from values between 0.0 and 10.0 seconds. Depending on the paper type, the ink may take a while to dry. If the ink blurs on the paper, set a longer time for drying the ink.  Increasing the drying time increases the time needed to print.
		Drying Time per Page	Specify how long the printer pauses to allow the ink to dry after printing each page; choose from values between 0 and 60 minutes. Depending on the ink density or paper type, the ink may take a while to dry. If the ink blurs on the paper, set a longer time for drying the ink.  The longer the drying time, the more time required for printing.
		Auto Cut	Select On to automatically cut roll paper using the built-in cutter as each page is printed or Off to disable auto paper cutting. If On is selected, paper is cut automatically even if paper tip is not set horizontally. The setting selected with the printer driver takes priority when the printer driver is used.
	Restore Default		Return the setting from user paper setting to default value.

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings	General Settings - Printer Settings	Printing Language	
		USB	Auto HP-GL/2
		Network	Auto HP-GL/2
		Universal Print Settings (Defines the basic print setting of when printing in HP-GL/2 or HP RTL mode.)	
		Paper Source	Roll Paper Auto Sheet Feeder Cut Sheet
		Print Quality	Standard Speed Fine Quality
		Color Mode	Color Grayscale
			Select the paper feeding method. Error occurs if paper is not set as selected paper feeding method when printing.
			Select the print quality. Printing is performed in quality according to paper type setting selected in the paper feeding method normally.
			Select to print in color or convert to Grayscale.

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings General Settings - Printer Settings	Page Margins Option	Clip By Margins	<p>From the basic output size setting, add the value selected in the Page Margins (area B shown below) inside the hard clip area of the PS command of the data or size selected in basic output size setting (area A shown below). When printing object exist in the margin part, it will not be printed.</p>

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings General Settings - Printer Settings	Page Margins Option	Oversize	<p>The position at which the margin is added depends on the Output Size setting, as shown below.</p> <ul style="list-style-type: none"> <li>When set to Auto</li> </ul> <p>Adds the value selected for Margin (area B shown below) outside the hard clip area of the PS command of the data (area A shown below).</p>

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings General Settings - Printer Settings	Page Margins Option	Oversize	<ul style="list-style-type: none"> <li>When set to a standard size or User Defined</li> </ul> <p>Adds the value selected for Margin (area B shown below) outside the size selected for Output Size (area A shown below). With the actual Output Size, the margin section becomes larger than the selected size (the area A of in the following illustration).</p>
	Page Margins	3 mm	Select the margin for each direction.
	Page Margins	5 mm	For cut sheet, margin of each direction will be 3 mm regardless to the setting.
	Smoothing	On	This setting is enabled when the resolution is set to standard but the received print data has no resolution specification. When turned On, printing will be performed in highest resolution that correspond to paper type setting of paper selected in the paper feed method, but printing time may get longer or printing may fail due to memory shortage.

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings General Settings - Printer Settings	Base Output Size	Auto	<p>The hard clip area of the PS command of the data becomes the base output size. The actual output size depends on the Margin Options setting.</p> <p>When the data does not contain a PS command, the smallest rectangle area A of in the following illustration including the print object becomes the base output size.</p>
	A Series		Choose the base output size from the compatible standard sizes. The actual output size depends on the Page Margins Option.
	US-ANSI		For a cut sheet, this setting is available only when the data does not contain a PS command. If the data contains a command, this setting is not available, and the hard clip area of the PS command becomes the base output size.
	US-ARCH		
	B Series (ISO)		
	B Series (JIS)		
	Others		
	User Defined		<p>Select this option when outputting at non-standard sizes. After selecting this setting, set Paper Width and Paper Height. You can set in 0.1 mm increments.</p> <p>The actual output size depends on the Page Margins Option.</p> <p>The smallest size supported by the printer is 210 mm wide × 279.4 mm long. If a smaller size is entered for this setting, the document will print with wider-than-expected margins, which must be trimmed.</p>

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings General Settings - Printer Settings	Resolution	Standard	This setting is enabled when the resolution is set to standard but the received print data has no resolution specification. Printing is performed according to the paper type setting of paper selected in the paper feed method and resolution according to the print quality setting normally.
		300 dpi	
		600 dpi	
		1200 dpi	
	Color Mode (Common)	EPSON Standard (sRGB)	Optimum color correction for sRGB space is performed.
		Business Graphics	Perform sharp color correction based on sRGB space.
		GIS	Optimum color correction for printing topographic map of GIS (Geographic Information System) is performed.
		Line Drawing	Optimum color correction for data mainly consist of line drawing such as CAD diagram is performed.
		Off (No Color Management)	Color correction is not performed.
	HP-GL/2 Unique Print Configuration (Defines the print setting particular to HP-GL/2 or HP RTL mode.)		
	Rotate	0°	You can rotate the coordinates of the drawn data counterclockwise in units of 90 degree before printing. Note that objects drawn by RTL are not rotated.
		90°	When both this setting and the RO command specify rotation, rotation is performed using the combined amount of both values. Note that rotation by the RO command is for objects only (the arrow section in the following illustration), and rotation is not performed for the drawn area (the square section in the following illustration). As a result, objects in a section that protrude from the drawn area are not printed.
		180°	
		270°	
		Left Edge	Designate the origin of the coordinate of the data.
		Center	

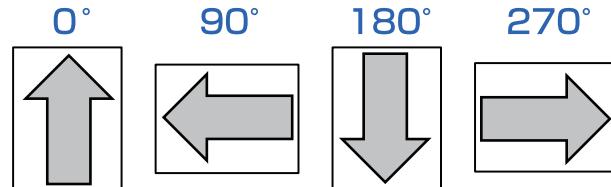


Table 1-16. Menu Descriptions

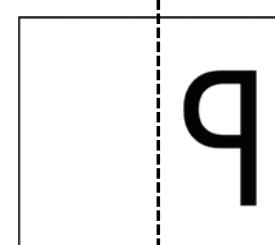
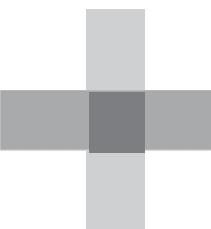
Menu	Menu Item	Setting Value	Explanation
Settings General Settings - Printer Settings	Mirror Image	On	Select whether to flip horizontally (mirror) using the center of the Output Size width as the basis line and then print (On) or print without flipping horizontally (Off). If an angle is specified for Rotate, the rotated result is flipped horizontally
		Off	 
	Line Merge	On	Select whether to merge the intersection of the overlapping lines within the image according to the MC command of the data (On) / Move lines to be printed later to the front at intersections (Off).
		Off	 
	Color Mode (Common)	EPSON Standard (sRGB)	Optimum color correction for sRGB space is performed.
		Business Graphics	Perform sharp color correction based on sRGB space.
		GIS	Optimum color correction for printing topographic map of GIS (Geographic Information System) is performed.
		Line Drawing	Optimum color correction for data mainly consist of line drawing such as CAD diagram is performed.
		Off (No Color Management)	Color correction is not performed.

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings  General Settings - Printer Settings	Select Palette	Software	From the following selections, choose the palette that specifies the color and thickness of the logical pen.
		Default	<ul style="list-style-type: none"> <li>• Software: Print according to the pen configurations set in the application, and ignore the built-in palette of the printer.</li> </ul>
		Palette A	<ul style="list-style-type: none"> <li>• Default: Print according to the settings of the built-in palette of the printer specified in advance. The settings of the palette cannot be changed. The built-in palette specifies a logical pen with a pen width of 0.35 mm and 256 colors.</li> </ul>
		Palette B	<ul style="list-style-type: none"> <li>• Palette A/Palette B: The printer prints according to the settings of the built-in palette that you specified for Define Palette. If Define Palette setting is not set, the results are the same as when Default is selected.</li> </ul> <p>When Default/Palette A/Palette B is set, the pen configurations set in the application are ignored.</p>
	Define Palette	Palette A	
		Pen 0 to Pen 15	
		Pen Width	0.13 to 12.00 mm
		Pen Color	0 to 255
		Palette B	
		Pen 0 to Pen 15	
	Restore default HP-GL/2 Configuration	Pen Width	0.13 to 12.00 mm
		Pen Color	0 to 255
	Thick Paper	No	If Yes is selected, the HP-GL/2 Settings are restored to default values.
		Yes	
	Bidirectional	Off	If the paper is thick, the print head may scuff the print surface. Choose On to prevent scuffing. This option can be used to temporarily change the value selected for Custom Paper Setting > Platen Gap in the Paper menu. Note, however, that On has no effect when Platen Gap is set to the largest value.
		On	
	PC Connection via USB	Off	If Yes is selected, printing is performed while moving to both left and right side. If No is selected, misalignment of lines may get improved but printing takes time.
		On	
	Enable	Enable	If enable is selected, access from PC connected with USB cable is accepted. If disable is selected, access is not accepted.
		Disable	

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
General Settings-Printer Settings	USB I/F Timeout Setting	20 to 600 sec.	If printing stops mid-way when the printer and computer are connected by a USB cable, set a longer time.
Settings General Settings - Network Settings	Wi-Fi Setup		
	Connect via Wi-Fi		<input type="checkbox"/> When not connected/disable Indicated in gray. By going on to the setting in the next screen, menu such as search access point is displayed and be able to perform connecting operation. <input type="checkbox"/> When connected Connection state and setting information will be displayed by pressing. By pressing change setting, menu such as search access point will be displayed and be able to switch the access point.
	Wi-Fi Setup Wizard		The list of SSID of detected access point is displayed. Select the SSID from the list to connect.
	Push Button Setup (WPS)		If the access point you use correspond to WPS (Wi-Fi Protected Setup), connection operation is able in this menu. SSID and password is not needed. After selecting this menu, press and hold the push button of the access point until it flashes. Then press start setting on the screen of the printer to connect.
	Others		
	PIN Code Setup (WPS)		If the access point you use correspond to WPS (Wi-Fi Protected Setup), connection operation is able in this menu. PIN code and start setting will be displayed by pressing. Enter the indicated PIN code within two minutes from the PC to the access point, and press start setting to connect.
	Wi-Fi Auto Connect		Menu used when installing the software from the software disk and connect printer following the wizard screen.
	Disable Wi-Fi		Wireless LAN connection is initialized and shut off by performing. Problem may get solved by shutting off the wireless LAN connection and connecting it again using this menu.

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings  General Settings - Network Settings	Wi-Fi Direct	<input type="checkbox"/> When not connected/disable Indicated in gray. By going on to the setting in the next screen, start setting is displayed. By pressing start setting, Wi-Fi Direct get enabled and the SSID and password of this printer is displayed. <input type="checkbox"/> When connected SSID and password of the printer, number of connected device, and so on will be displayed by pressing. By pressing change setting, menu such as change password will be displayed and be able to switch the access point.	
	Change Password		Able to change the password of Wi-Fi Direct. If changed the password, connection between all PCs and devices get shut off.
	Disable Wi-Fi Direct		Connection from all PCs and devices using Wi-Fi Direct get shut off by performing this. When you want to shut off specified device, make sure to shut off the connection between the printer and the device from the device.
	Delete Registered Device		Menu for Android smart device. When connecting the printer and the device using Wi-Fi Direct of Android smart device, screen to permit or deny connecting is displayed on the screen of the printer. If deny is selected, the device is unable to connect with the printer from the next time, too. When you want to connect denied device, delete the device information saved in this menu.
	Wired LAN Setup		Press when switching from wireless LAN connection to wired LAN connection. Wireless LAN connection get disabled when start setting is pressed.
	Network Status		
	Wired LAN/Wi-Fi Status		Current communication state, IP address, and so on is displayed.
	Wi-Fi Direct Status		Number of connected device and connection setting of SSID or the like is displayed.
	Print Status Sheet		Prints the detail of current network communication.
	Connection Check		Check the network connection state of the printer and prints the connection diagnosis report. When any problem exist, countermeasure following the diagnosis result.

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings	General Settings - Network Settings	Advanced	
		Device Name	Set the name of the printer used on the network.
		TCP/IP	Auto setting Manual setting
		Proxy Server	Used Not used
		IPv6 Address	Enable Disable
		Link Speed & Duplex	Auto 10BASE-T Half Duplex 10BASE-T Full Duplex 100BASE-TX Half Duplex 100BASE-TX Full Duplex
		Redirect HTTP to HTTPS	Enable Disable
		Disable IPsec/IP Filtering	Enable Disable
		Disable IEEE802.1X	Enable Disable

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings  General Settings - System Administration	Security Settings	Admin Settings	<p>Press Register and set the Admin Password when using the Lock Setting function. When changing the password, press Change to change the password.</p> <p>If set the password and select Lock Setting on, entering password is required when displaying specified setting menu such as network setting.</p> <p>Since specified menu cannot be displayed until the correct password is inputted, person not in charge changing the setting accidentally will not occur.</p>
		Lock Setting	<p>When On is selected, menu listed below requires the Admin Password to display, and changing setting and operating function cannot be performed until the password is inputted. Set Admin Password before selecting On.</p> <ul style="list-style-type: none"> <li>• Sleep Timer</li> <li>• Power Off Timer</li> <li>• Circuit Breaker Interlock Startup</li> <li>• Date/Time Settings</li> <li>• Operation Time Out</li> <li>• Printing Language</li> <li>• Universal Print Settings</li> <li>• PC Connection via USB</li> <li>• USB I/F Timeout Setting</li> <li>• Network Settings</li> <li>• Powerful Cleaning</li> <li>• Discharging/Charging Ink*<sup>1</sup></li> <li>• Refresh Ink Tubes*<sup>4</sup></li> </ul>
		Restore Default Settings	<p>Select Yes to restore defaults for network setting.</p>
			<p>Select Yes to restore defaults for all settings except the Date And Time, Language, and Unit: Length options in the Setup menu.</p>
		Firmware Update	<p>To perform this function, the printer need to be connected to the network that is possible to connect to the internet. By pressing Update, the printer is connected to the Epson website to search for a new firmware update. Make sure to update the firmware if the new firmware update is found.</p> <p>Do not turn the power off or disconnect the AC Inlet from outlet while updating. Otherwise, the printer may break.</p>
			<p>When On is selected, new firmware update is checked automatically on a regular basis. If the new firmware update is found, message will be indicated when turned the power on or the like.</p>

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Settings	Maintenance	Print Quality Adjustment	Start Perform the same adjustment as Media Adjust in paper setting menu. When performing from this menu, select the paper feed method in the first screen.
		Print Head Nozzle Check	Start Check if the nozzle is clogged by printing the check pattern.
		Print Head Cleaning	Start Perform if faint or missing areas is seen on the printed check pattern.
		Paper Guide Cleaning	Start Perform if smear is seen on the printed surface when printed from the ASF.
		Replace Ink Cartridge	Start When pressed Start, CR Unit moves to the ink cartridge replacing position and be ready to replace ink cartridge. Procedure will be displayed on the screen, so you can check the procedure while working.
		Replace Maintenance Box	Start Select when replacing the Maintenance Box while checking the procedure. If you are accustomed to replacing the Maintenance Box and checking procedure is not needed, you can replace the Maintenance Box without selecting this menu.
		Replace Cutter	Start Select when replacing the Cutter is necessary such as paper cannot be cut clearly. follow the instruction on the screen.
		Powerful Cleaning	Start Perform when faint or missing areas on the printed check pattern did not get improved after cleaning the Print Head three times continuously.
		Discharging/Charging Ink *1	Start Perform when storing the printer in the environment of -10 °C or transporting the printer. Press Start and follow the instruction on the screen to eject ink. The printer turns off automatically when finished.
	Printer Status/ Print	Refresh Ink Tubes*4	Start Replaces all of the ink in the ink tubes. Print quality may improve if this is performed after printing or cleaning when the ink is not visible through the ink tank window. However, this consumes more ink than Normal cleaning.
	Print Status Sheet	Configuration Status Sheet	Prints the list of current status and settings. You can check each piece of information at once.
		Network	Displays the detail of current network communication. Detail is as same as shown in General Settings - Network Settings - Network Status.

Table 1-16. Menu Descriptions

Menu	Menu Item	Setting Value	Explanation
Enlarged Copy * <sup>1</sup>	Copies	1 to 99	Specifies the number of copies.
	Color Mode	B & W	Choose whether to copy in color or in black and white.
		Color	
	Original Size	A4	Select the size of the document set to the scanner. The sizes available vary with the scanner. Document with size that is not displayed here cannot be used.
		A5	
		A3	
		B5	
		B4	
		Letter	
		5x7in	
	Zoom		
	Auto	On	When On is selected, short side of the document is matched to the paper width of roll paper set to the printer and starts Enlarged Copy.
		Off	If the short side of the document is larger than the width of roll paper, perform Actual Size copy. If the printer cannot detect the width of roll paper, error occurs when pressed Copy button.
	Custom Size	Actual Size	Choose the output size. Percentage of extension from selected document is displayed on the left side of each size. A0, US E and B1 is available only with the SC-T5100 Series/SC-T5100N Series.
		A0	
		US E	
		B1	
		A1	
		US D	
		B2	
		US C	
		A2	
		User Defined	User Defined screen is displayed by pressing. Input and set the arbitrary paper width.LS
	Density	-4 to 4	Choose copy density.
	Quality	Speed	Choose Copy Quality in view of image quality and print speed.
		Fine	

## 1.5.3 Various Startup Mode



- When executing in each mode, press the specified area obliquely with your finger or place something that is depth 20 mm x width 25 mm x height 2 mm or more (example: coin or the like).
- Pressing the panel with too much force may result in erroneous operation. In these cases, press the panel with less force and try to start the mode again.

### 1.5.3.1 Inspection Mode

The Inspection Mode is intended to be used by a service person for servicing the printer.

#### OPERATION

1. In a power off status, the printer is turned off, place a coin or the like on the left part of the touch panel shown below, or touch with your finger.
2. While placing the coin or the like, or pressing and holding with your finger, press and hold the power button.

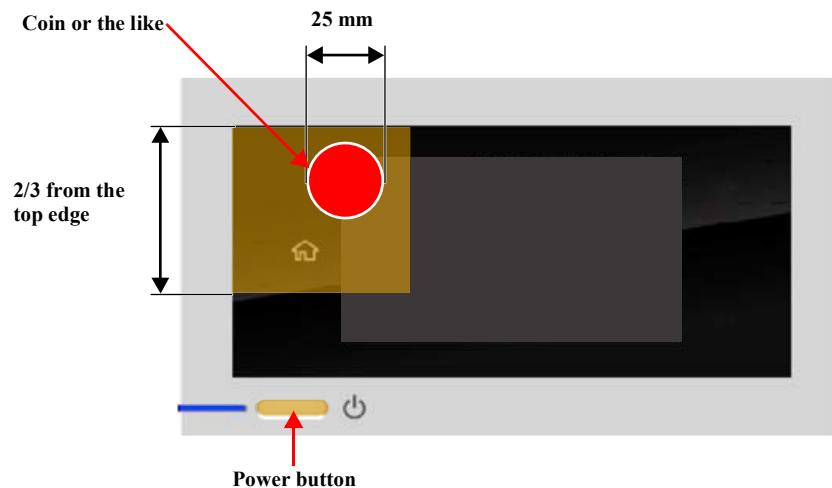
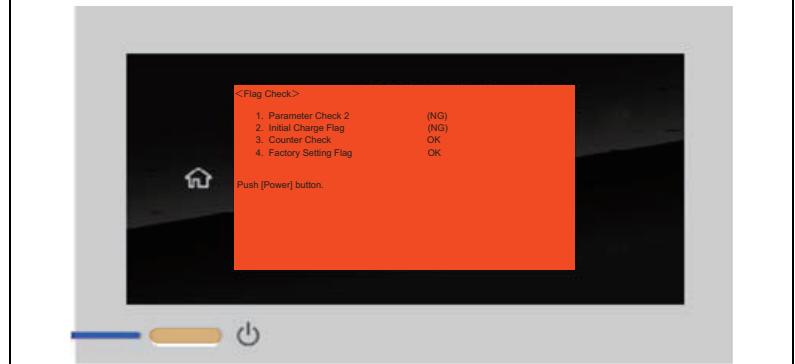


Figure 1-7. Operation

3. When the printer started in Inspection mode, remove a coin or the like, or release the finger.



Error in red screen will be displayed when turning the printer off, but ignore it and turn the printer off by pressing the power button again.



### 1.5.3.2 Firmware Update Mode

When updating the firmware, turn the printer on in the Firmware Update Mode.

#### OPERATION

1. In a power off status, the printer is turned off, place a coin or the like on the right part of the touch panel shown below, or touch with your finger.
2. While placing the coin or the like, or pressing and holding with your finger, press and hold the power button. (**16 seconds to 24 seconds**)
3. When the power LED lit, remove a coin or the like **as soon as possible**, or release the finger.

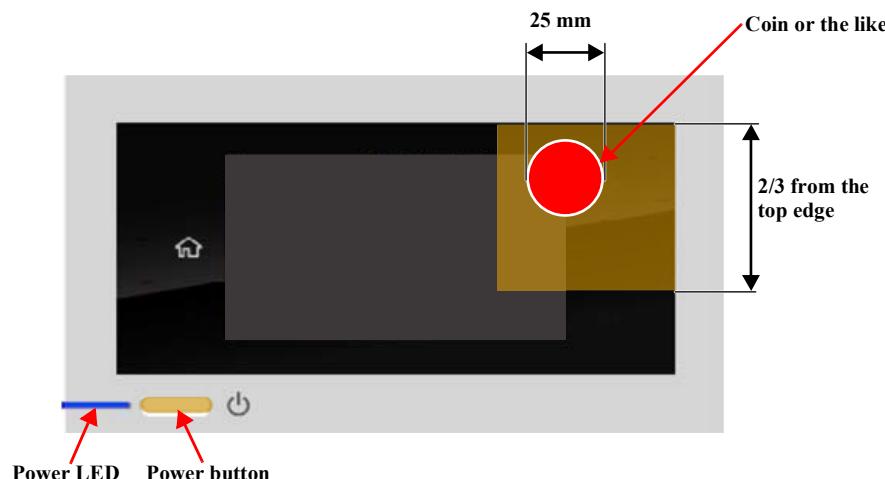


Figure 1-8. Operation

### 1.5.3.3 Repair Mode

This mode is for the maintenance of the printer.

When starting up the printer in the repair mode, the printer starts up quickly because the initializing operations and timer cleaning are skipped during boot-up. Other states are as same as normal mode.

#### OPERATION

1. In a power off status, the printer is turned off, place a coin or the like on the center part of the touch panel shown below, or touch with your finger.
2. While placing the coin or the like, or pressing and holding with your finger, press and hold the power button at least 15 seconds.

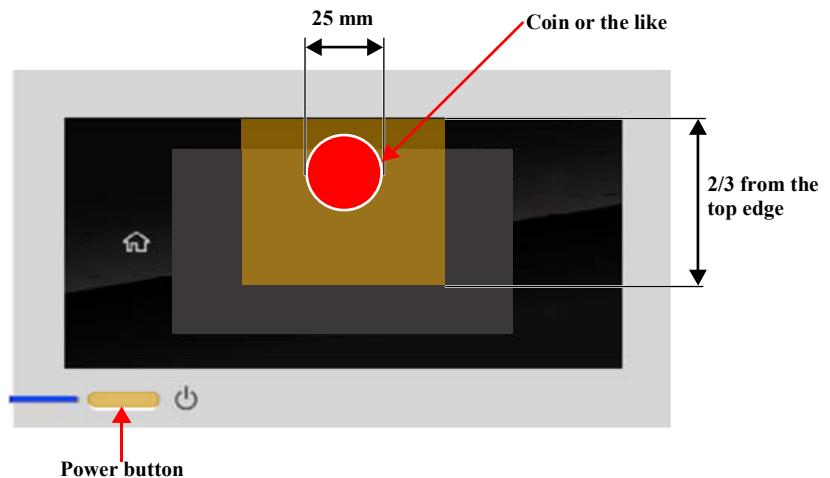
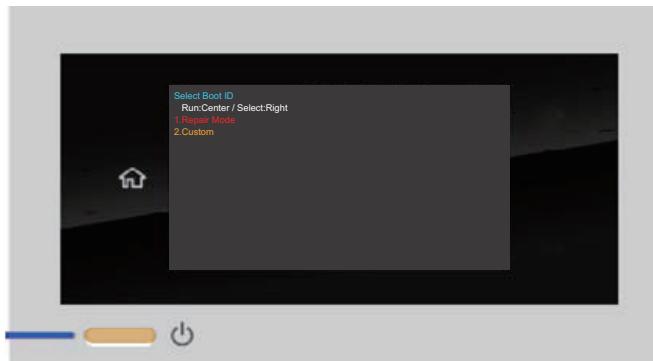


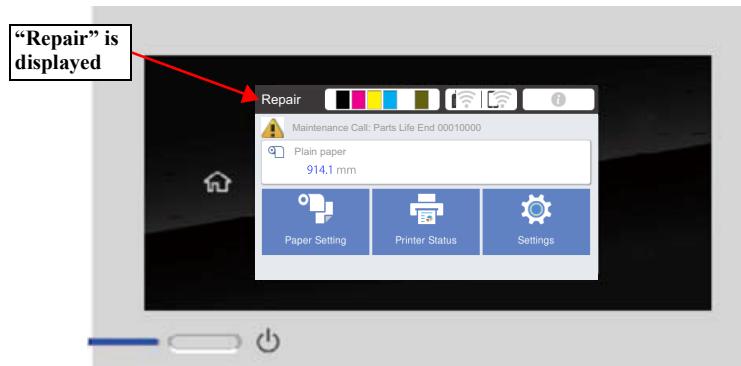
Figure 1-9. Operation

3. When the mode select screen is displayed, remove a coin or the like, or release the finger. The printer will restart in the repair mode by touching the center of the screen.

**Repair mode select screen**



**Repair mode screen**



**Figure 1-10. Repair mode select screen/Repair mode screen**

CHAPTER

2

## TROUBLESHOOTING

## 2.1 Overview

This section explains the basic procedure for troubleshooting problems on the printer quickly and efficiently.

When carrying out the troubleshooting procedures, take a flexible measure following your sales company's policy and considering the troubling situation.

### 2.1.1 Preliminary Check

Make sure to verify or perform the following basic items whenever servicing the printer.

#### 2.1.1.1 Before performing troubleshooting

Before troubleshooting, perform basic checks such as connection check of the power cable and installation check of the ink cartridges.

#### 2.1.1.2 Check for the usage environment

Check the user's usage environment.

- Temperature/humidity of the installation site  
(For the guaranteed environment, see Chapter 1 ([Page 14](#)))
- Drivers/RIP that the user uses
- Genuine media or 3rd party's media?
- Genuine ink or 3rd party's ink?
- F/W version (the latest?)
- Check also the following if necessary.

Phenomenon	Check Item
Bad print quality	The installation site inclined?
	Any vibrating equipment near the site?
	The user's panel settings
	Is the interior dirty? Clean it if dirty.
	Missing dots/bad print quality
Missing dots/bad print quality	Near a conditioner's ventilation duct?

#### 2.1.1.3 Recurrence check of the trouble

Check if the trouble the user claims recurs with the returned printer.

- If RIP was used, check if the trouble recurs when the driver is used.
- If 3rd party's media were used, check if the trouble recurs when a genuine medium is used.
- If 3rd party's ink was used, perform the repair according to the policy of each local sales subsidiary.
- If the F/W was not the latest, gain agreement with the user on the update of F/W, and check if the trouble recurs when the latest F/W is used.

#### 2.1.1.4 Check for the counter values/history

Download NVRAM and check the following with NVRAM Viewer. (For the check method, see Chapter 4 ([See P.298](#)))

- Counter history of the periodic replacement parts. (if any part's life is near.)
- Printer's operating history (if any cause for the trouble exists)
- Error history (the frequency/history of errors related with the trouble)

#### 2.1.1.5 Test print check

For the trouble related with print quality, carry out "Test Print" and check the current adjustment status. (For the procedure of test print, see Chapter 4 ([Page 310](#)))

## 2.1.2 Troubleshooting Procedure

Refer to the following items according to the observed symptom, carry out the corresponding troubleshooting following the procedures described in the next sections.

1. Trouble with a Maintenance Call
2. Trouble with a Service Call
3. Trouble on print quality
4. Trouble on paper feeding/Ejecting
5. Other troubles
6. Trouble on Service Program
7. Trouble on NVRAM Viewer

## 2.1.3 Procedure after troubleshooting

### 2.1.3.1 If the trouble has been successfully solved

- Check if the movement of the covers is normal (without any damage, noises).  
If any abnormality is found, lubricate or replace the faulty parts.
- Carry out the cleaning after repair.
- Prepare a report on the repair. (follow your company/local office's policy.)

### 2.1.3.2 If necessary to escalate the trouble case

Make a report with the following data.

- Backed-up NVRAM data
- F/W version
- Service Program version
- For bad print quality: a print sample with the marked symptom and a printed test pattern.
- For faulty parts: the faulty parts themselves and a photos of the troubling section.
- Information on the user/the repair listed below  
(This is a format of the escalation report. At least check out the items on the list and register the case in the escalation system.)
  - Model name
  - Serial number
  - With or without options
  - Content of the claim from the user
  - Date of occurrence
  - Trouble occurrence conditions/recurrence method
  - What the service person actually observed  
(Check items before check, the content of troubleshooting and repair.)
  - Date of escalation
  - Purpose of escalation  
(Measures which the user/service person)
  - Degree of urgency (S/A/B/C)  
S: High (those which may cause a death, ignition, etc.)  
A: Problems, bugs  
B: Strong request  
C: Inquiry
  - Deadline for the response
  - Repair history
  - Part-replacement history

## 2.2 Maintenance Call

Maintenance call (Maintenance request) number is a character string written in hexadecimal code displayed on the screen when the maintenance request/maintenance error occurred. Value obtained from the logical sum of the items assigned to each bit in the table below is used.

Table 2-1. Maintenance call list

	Bit assignment (binary code)																								hexadecimal code	Maintenance name							
	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
Near life end or other maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000001	Pump Cap Unit life near end	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000002	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000004	Ink Tube Assy life near end	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000008	Ink Tank Upper Porous Pad life near end	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000010	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000020	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000040	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000080	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000100	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000200	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000400	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000800	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00001000	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00002000	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	00004000	RTC date not set	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	00008000	Out of RTC battery	
Life end (life lengthening)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	00010000	Pump Cap Unit life end	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00020000	-	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00040000	Ink Tube Assy life end	
	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00080000	Ink Tank Upper Porous Pad life end	
	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00100000	-	
	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00200000	-	
	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00400000	-	
	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00800000	-	
	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	01000000	-	
	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	02000000	-	
	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	04000000	-	
	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	08000000	-	
	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10000000	-	
	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20000000	-	
	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40000000	-	
	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80000000	-	

Note "1": When "Maintenance Request 0000C000" is displayed.

As "0000C000" in hexadecimal means "00000000000000001100000000000000" in binary, you can find out the code is assigned to Bit-14 and Bit-15 referring to the above table. In this case, two errors are occurring simultaneously. (Bit-14: RTC date not set / Bit-15: Out of RTC battery)

"\*2": When the part reached the end of the life and the user decided to continue using the part, Maintenance Call (life lengthening) occurs and is able to continue printing.



**Do not perform counter reset without replacing parts.  
If correct measures are not taken, ink leakage and failure rate will  
increase, and sufficient quality cannot be guaranteed, which is  
disadvantageous to the user.**

## 2.3 Troubleshooting from Service Call

### 2.3.1 Service Call Classification Table

Error code	Classification	Ref.
00112X	HP detection related error	<a href="#">p64</a>
00113X	CR related error	<a href="#">p64</a>
00122X	PF related error	<a href="#">p64</a>
00141X	Pump Cap Unit related error	<a href="#">p64</a>
0014BX	Ink System exception related error	<a href="#">p64</a>
00159X	ATC related error	<a href="#">p64</a>
001AXX	Print Head related error	<a href="#">p64</a>
001F0X	CSIC related error	<a href="#">p64</a>
001F1X		
001FXX	Borads related error	<a href="#">p65</a>
Others	Others	<a href="#">p65</a>

## 2.3.2 Service Call List

Error code	Error	Ref.
<b>“00112X” (HP detection related error)</b>		
001125	CR HP Detection Error	p66
001127	ASF HP Detection Error	p67
001128	Cutter HP Detection Error	p68
<b>“00113X” (CR related error)</b>		
001135	CR Motor Cable Disconnection Error	p69
001136	CR Movement Error (PG Lever Assy Interfere)	p69
001137	CR Movement Prohibition Error	p70
001138	CR Motor Overcurrent Error	p71
001139	CR Motor Oscillation Error	p72
00113A	CR Motor Overload Error	p73
00113C	CR Motor Reversing Error	p74
00113D	CR Motor Driving time-out Error	p74
00113E	CR Motor Velocity Deviation Error	p75
00113F	CR Motor Lock Error	p76
<b>“00122X” (PF related error)</b>		
001229	PF Motor Oscillation Error	p77
00122A	PF Motor Overload Error	p78
00122C	PF Motor Reversing Error	p79
00122D	PF Motor Driving time-out Error	p79
00122E	PF Motor Velocity Deviation Error	p80
00122F	PF Motor Lock Error	p80
<b>“00141X” (Pump Cap Unit related error)</b>		
001418	Pump Cap Unit Overcurrent Error	p81
001419	Pump Cap Unit Oscillation Error	p81
00141A	Pump Cap Unit Overload Error	p82
00141C	Pump Cap Unit Reversing Error	p82
00141D	Pump Cap Unit Driving time-out Error	p83
00141E	Pump Cap Unit Velocity Deviation Error	p83
00141F	Pump Cap Unit Lock Error	p84

Error code	Error	Ref.
<b>“0014BX” (Ink System exception related error)</b>		
0014B0	Cannot Print In Cleaning Mode Error	p84
0014BD	Ink Leak Error	p85
0014BF	Pump Cap Unit Position Unsettled Error	p85
<b>“00159X” (ATC related error)</b>		
001599	ATC Motor Oscillation Error	p86
00159A	ATC Motor Overload Error	p87
00159C	ATC Motor Reversing Error	p88
00159D	ATC Motor Driving time-out Error	p88
00159E	ATC Motor Velocity Deviation Error	p89
00159F	ATC Motor Lock Error	p89
<b>“001AXX” (Print Head related error)</b>		
001A3A	Head Hot Error	p90
001A39	Head Fuse Error	p90
001A3C	VBS Overvoltage Error	p91
001A38	Transistor Environmental Temperature Error	p91
001A41	Head Rank ID Error	p92
001A42	Head Temperature Error	p92
001A43	Head Memory Read Error	p93
001A44	Head Failure Error	p93
<b>“001F0X,001F1X” (CSIC related error)</b>		
001F00	CSIC Slot 1 Error	p94
001F01	CSIC Slot 2 Error	p94
001F02	CSIC Slot 3 Error	p95
001F03	CSIC Slot 4 Error	p95
001F10	CSIC Maintenance Box 1 Error	p96

Error code	Error	Ref.
<b>“001FXX” (Boards related error)</b>		
001F80	Fuse Blow Error	<a href="#">p96</a>
001F81	EPC_Check Error	<a href="#">p97</a>
001F82	Main Board Parameter Error 1	<a href="#">p97</a>
001F90	SOC Operation Error	<a href="#">p98</a>
001F91	MR Data Error	<a href="#">p98</a>
001FB9	Main Board Parameter Error 2	<a href="#">p99</a>
001FC0	ASIC Communication Error (Read)	<a href="#">p99</a>
001FC8	ASIC Communication Error (Write)	<a href="#">p100</a>
<b>Others</b>		
001000	Life End Error	<a href="#">p100</a>
004000	Inspection Mode Printdata Receive Error	<a href="#">p101</a>
202620	WIFI Board Failure Error	<a href="#">p101</a>
203002	Optical Touch Panel Failure Error	<a href="#">p102</a>

### 2.3.3 Details of Service Call

#### 001125 (CR HP Detection Error)

Description

Could not detect the CR Unit touching the specified position when performing CR home position returning. (could not detect the home position)

Suspected cause

- Misreading of CR Scale (scratch, dirt)
- Sub C Board (CR Encoder) failure
- CR Motor failure

Parts/Components to be checked

1. CR Scale
2. Sub C Board (CR Encoder)
3. CR Motor

Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check whether the CR Unit is unlocked</b> <ul style="list-style-type: none"> <li>■ After turning the power on, check if the CR Unit is unlocked properly. If not, check the state of the Pump Cap Unit. If it is broken, replace it.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Check the CR Scale state</b> <ul style="list-style-type: none"> <li>■ Check visually if the CR Scale have any scratches or dirt.           <ul style="list-style-type: none"> <li>□ When the CR Scale is dirty: clean it.</li> <li>□ When there is a scratch on the CR Scale: replace it. <a href="#">(p196)</a></li> </ul> </li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<b>Check the CR Motor operation state</b> <ul style="list-style-type: none"> <li>□ When the CR Motor is malfunctioning, replace it. <a href="#">(p194)</a></li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<b>Replace the Sub C Board (CR Encoder) <a href="#">(p210)</a></b> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**001127 (ASF HP Detection Error)** Description

Could not detect the home position when performing ASF home position returning.

 Suspected cause

- ASF Unit connection failure
- ASF Unit installation failure
- ASF Unit failure

 Parts/Components to be checked

1. ASF Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the ASF Unit cable connection</b> ■ Check the ASF Unit connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	<b>Check the ASF Unit installation state</b> ■ Check if the ASF Unit is installed properly. If not, install it again. Does the product recover from the error?	End	Go to step 3
3	<b>Check the ASF Unit operation state</b> ■ When the ASF Unit is malfunctioning, replace it. <a href="#">(p254)</a> Does the product recover from the error?	End	Escalate to person in charge

**001128 (Cutter HP Detection Error)** Description

Detected that the Cutter cannot return to the home position, or cannot move from the home position.

 Suspected cause

- Cutter abnormality (installation, failure)
- Cutter Home Position Sensor abnormality (connection, installation, failure)

 Parts/Components to be checked

1. Cutter
2. Cutter Home Position Sensor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Cutter installation state</b> <ul style="list-style-type: none"> <li>■ Check if the Cutter is installed properly. If not, install it again.</li> </ul> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Cutter</b> <ul style="list-style-type: none"> <li>Does the product recover from the error?</li> </ul>	End	Go to step 3
3	<b>Check the Cutter Home Position Sensor cable connection</b> <ul style="list-style-type: none"> <li>■ Check the Cutter Home Position Sensor connection state. If there is any abnormality, connect it again.</li> </ul> Does the product recover from the error?	End	Go to step 4
4	<b>Check the Cutter Home Position Sensor installation state</b> <ul style="list-style-type: none"> <li>■ Check if the Cutter Home Position Sensor is installed properly. If not, install it again.</li> <li>■ Does the product recover from the error?</li> </ul>	End	Go to step 5
5	<b>Replace the Cutter Home Position Sensor (<a href="#">p227</a>)</b> <ul style="list-style-type: none"> <li>Does the product recover from the error?</li> </ul>	End	Escalate to person in charge

**001135 (CR Motor Cable Disconnection Error)** Description

CR Motor did not operate when CR Motor cable disconnection check with power on.

 Suspected cause

- CR Motor failure
- CR Motor cable abnormality (connection, broken)

 Parts/Components to be checked

1. CR Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the CR Motor cable connection</b> <ul style="list-style-type: none"> <li>■ Check the CR Motor connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Check the CR Motor operation state</b> <ul style="list-style-type: none"> <li>■ When the CR Motor is malfunctioning, replace it. <a href="#">(p194)</a></li> <li>■ Does the product recover from the error?</li> </ul>	End	Escalate to person in charge

**001136 (CR Movement Error (PG Lever Assy Interfere))** Description

Detected the possibility of contact with the APG Lever when moving the CR Unit.

 Suspected cause

- FW abnormality

 Parts/Components to be checked

---

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Turn the printer off and back it on again</b> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Update the F/W</b> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**001137 (CR Movement Prohibition Error)** Description

Detected the PG Lever Assy sticking out when about to move the CR Unit.

 Suspected cause

- PG Lever Assy failure
- F/W abnormality

 Parts/Components to be checked

1. PG Lever Assy

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the PG Lever Assy installation state</b> ■ Check if the PG Lever Assy is installed properly. If not, install it again. Does the product recover from the error?	End	Go to step 2
2	<b>Replace the PG Lever Assy (p263)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Update the F/W (p307)</b> Does the product recover from the error?	End	Escalate to person in charge

**001138 (CR Motor Overcurrent Error)** Description

The number of occurrences of overcurrent to the CR Motor has reached a predetermined limit.

 Suspected cause

- CR Motor failure
- CR Belt state abnormality (tension, installation position)
- CR Motor cable abnormality (connection, broken)
- Misreading of CR Scale (scratch, dirt)

 Parts/Components to be checked

1. CR Motor
2. CR Belt
3. CR Scale
4. Sub C Board (CR Encoder)
5. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the CR Motor operation state</b> <ul style="list-style-type: none"> <li>■ When the CR Motor is malfunctioning, replace it. <a href="#">(p194)</a></li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Check the CR Belt state</b> <ul style="list-style-type: none"> <li>■ Check if the CR Belt is installed properly. If not, install it again.</li> <li>■ Check if the CR Belt tension is in the standard range. <a href="#">(p324)</a> If not, check the CR Belt installation state again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<b>Check the CR Motor cable connection</b> <ul style="list-style-type: none"> <li>■ Check the CR Motor connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<b>Check the CR Scale state</b> <ul style="list-style-type: none"> <li>■ Check visually if the CR Scale have any scratches or dirt.           <ul style="list-style-type: none"> <li>□ When the CR Scale is dirty: clean it.</li> <li>□ When there is a scratch on the CR Scale: replace it. <a href="#">(p196)</a></li> </ul> </li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 5
5	<b>Replace the Sub C Board (CR Encoder) <a href="#">(p210)</a></b> <p>Does the product recover from the error?</p>	End	Go to step 6
6	<b>Replace the Main Board <a href="#">(p178)</a></b> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**001139 (CR Motor Oscillation Error)** Description

The number of oscillations exceeds the specified value.

 Suspected cause

- Main Board failure

 Parts/Components to be checked

1. Main Board
2. CR Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Main Board state</b> ■ Check if any foreign object is on the Main Board. If so, remove it. Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the CR Motor (p194)</b> Does the product recover from the error?	End	Escalate to person in charge

**00113A (CR Motor Overload Error)** Description

Overcurrent is detected more than predetermined limit since the CR Motor did not operate properly because of some kind of load.

 Suspected cause

- Load abnormality
- Sub C Board (CR Encoder) cable abnormality (connection, broken)
- CR Motor cable abnormality (connection, broken)
- Sub C Board (CR Encoder) failure
- CR Motor failure

 Parts/Components to be checked

1. CR Unit
2. Sub C Board (CR Encoder)
3. CR Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the obstacle in the carriage moving range</b> <ul style="list-style-type: none"> <li>■ Check if any obstacle is blocking the carriage movement. If so, remove the obstacle.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Checking the CR Unit state</b> <ul style="list-style-type: none"> <li>■ Check if the CR Unit is installed properly. If not, install it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<b>Check the Sub C Board (CR Encoder) cable connection</b> <ul style="list-style-type: none"> <li>■ Check the Sub C Board (CR Encoder) connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<b>Check the CR Motor cable connection</b> <ul style="list-style-type: none"> <li>■ Check the CR Motor connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 5
5	<b>Lubrication to the Oil Pad (p398)</b> <p>Does the product recover from the error?</p>	End	Go to step 6
6	<b>Replace the Sub C Board (CR Encoder) (p210)</b> <p>Does the product recover from the error?</p>	End	Go to step 7
7	<b>Replace the CR Motor (p194)</b> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**00113C (CR Motor Reversing Error)** Description

The number of occurrences of reversing the CR Motor has reached a predetermined limit.

 Suspected cause

- Sub C Board (CR Encoder) cable abnormality (polarity reversal)
- CR Motor cable abnormality (polarity reversal)
- Slipping of the teeth of the CR Belt
- Sub C Board (CR Encoder) failure

 Parts/Components to be checked

1. Sub C Board (CR Encoder)
2. CR Belt

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Sub C Board (CR Encoder) cable connection</b> <ul style="list-style-type: none"> <li>■ Check the Sub C Board (CR Encoder) connection state. If there is any abnormality, connect it again. Does the product recover from the error?</li> </ul>	End	Go to step 2
2	<b>Check the CR Motor cable connection</b> <ul style="list-style-type: none"> <li>■ Check the CR Motor connection state. If there is any abnormality, connect it again. Does the product recover from the error?</li> </ul>	End	Go to step 3
3	<b>Check the CR Belt state</b> <ul style="list-style-type: none"> <li>■ Check if the CR Belt is installed properly. If not, install it again.</li> <li>■ Check if the CR Belt tension is in the standard range. <a href="#">(p324)</a> If not, check the CR Belt installation state again. Does the product recover from the error?</li> </ul>	End	Go to step 4
4	<b>Replace the Sub C Board (CR Encoder) <a href="#">(p210)</a></b> Does the product recover from the error?	End	Escalate to person in charge

**00113D (CR Motor Driving time-out Error)** Description

Abnormally-long driving duration of the CR Motor was detected.

 Suspected cause

- Load abnormality
- Firmware becomes out of control

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Update the F/W <a href="#">(p307)</a></b> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Main Board <a href="#">(p178)</a></b> Does the product recover from the error?	End	Escalate to person in charge

**00113E (CR Motor Velocity Deviation Error)** Description

The CR Motor was driven at a speed abnormally faster than a predetermined one during acceleration or deceleration.

 Suspected cause

- Load abnormality
- Sub C Board (CR Encoder) failure
- CR Motor failure
- Main Board failure

 Parts/Components to be checked

1. Sub C Board (CR Encoder)
2. CR Motor
3. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Replace the Sub C Board (CR Encoder) (p210)</b> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the CR Motor (p194)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**00113F (CR Motor Lock Error)** Description

The CR Motor was driven at a speed abnormally slower than a predetermined one during operation.

 Suspected cause

- Sub C Board (CR Encoder) cable abnormality (connection, broken)
- CR Motor cable abnormality (connection, broken)
- Load abnormality
- Sub C Board (CR Encoder) failure
- CR Motor failure
- Cover Open Sensor cable abnormality (connection, broken)

 Parts/Components to be checked

1. Sub C Board (CR Encoder)
2. CR Motor
3. Top Cover Open Sensor
4. Roll Cover Open Sensor
5. Cutter Cover Open Sensor
6. Maintenance Box Cover Open Sensor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Sub C Board (CR Encoder) cable connection</b> <ul style="list-style-type: none"> <li>■ Check the Sub C Board (CR Encoder) connection state. If there is any abnormality, connect it again. Does the product recover from the error?</li> </ul>	End	Go to step 2
2	<b>Check the CR Motor cable connection</b> <ul style="list-style-type: none"> <li>■ Check the CR Motor connection state. If there is any abnormality, connect it again. Does the product recover from the error?</li> </ul>	End	Go to step 3
3	<b>Check the Cover Open Sensor cable connection</b> <ul style="list-style-type: none"> <li>■ Check each Cover Open Sensor connection state. If there is any abnormality, connect it again. Does the product recover from the error?</li> </ul>	End	Go to step 4
4	<b>Replace the Sub C Board (CR Encoder) (p210)</b> Does the product recover from the error?	End	Go to step 5
5	<b>Replace the CR Motor (p194)</b> Does the product recover from the error?	End	Go to step 6
6	<b>Replace the Cover Open Sensor</b> Does the product recover from the error?	End	Escalate to person in charge

**001229 (PF Motor Oscillation Error)** Description

The number of oscillations exceeds the specified value.

 Suspected cause

- Main Board failure

 Parts/Components to be checked

1. Main Board
2. PF Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Main Board state</b> ■ Check if any foreign object is on the Main Board. If so, remove it. Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the PF Motor (p237)</b> Does the product recover from the error?	End	Escalate to person in charge

**00122A (PF Motor Overload Error)** Description

Overcurrent is detected more than predetermined limit since the PF Motor did not operate properly because of some kind of load.

 Suspected cause

- Load abnormality
- PF Encoder cable abnormality (connection, broken)
- PF Motor cable abnormality (connection, broken)
- PF Encoder failure
- PF Motor failure

 Parts/Components to be checked

1. PF Encoder
2. PF Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the obstacle in the PF moving range</b> <ul style="list-style-type: none"> <li>■ Check if any obstacle is blocking the PF movement. If so, remove the obstacle.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Check the PF Encoder cable connection</b> <ul style="list-style-type: none"> <li>■ Check the PF Encoder connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<b>Check the PF Motor cable connection</b> <ul style="list-style-type: none"> <li>■ Check the PF Motor connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<b>Replace the PF Encoder (p245)</b> <p>Does the product recover from the error?</p>	End	Go to step 5
5	<b>Replace the PF Motor (p237)</b> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**00122C (PF Motor Reversing Error)** Description

The number of occurrences of reversing the PF Motor has reached a predetermined limit.

 Suspected cause

- PF Encoder cable abnormality (polarity reversal)
- PF Motor cable abnormality (polarity reversal)
- Slipping of the teeth of the PF Belt
- PF Encoder failure

 Parts/Components to be checked

1. PF Belt
2. PF Encoder

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the PF Encoder cable connection</b> <ul style="list-style-type: none"> <li>■ Check the PF Encoder connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Check the PF Motor cable connection</b> <ul style="list-style-type: none"> <li>■ Check the PF Motor connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<b>Check the PF Belt state</b> <ul style="list-style-type: none"> <li>■ Check if the PF Belt is installed properly. If not, install it again.</li> <li>■ Check if the PF Belt tension is in the standard range. <a href="#">(p355)</a> If not, perform the PF Belt tension check &amp; adjustment.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<b>Replace the PF Encoder <a href="#">(p245)</a></b> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**00122D (PF Motor Driving time-out Error)** Description

Abnormally-long driving duration of the PF Motor was detected.

 Suspected cause

- Load abnormality
- Firmware becomes out of control

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Update the F/W <a href="#">(p307)</a></b> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Replace the Main Board <a href="#">(p178)</a></b> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**00122E (PF Motor Velocity Deviation Error)** Description

The PF Motor was driven at a speed abnormally faster than a predetermined one during acceleration or deceleration.

 Suspected cause

- Load abnormality
- PF Encoder failure
- PF Motor failure
- Main Board failure

 Parts/Components to be checked

1. PF Encoder
2. PF Motor
3. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Replace the PF Encoder (p245)</b> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the PF Motor (p237)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**00122F (PF Motor Lock Error)** Description

The PF Motor was driven at a speed abnormally slower than a predetermined one during operation.

 Suspected cause

- PF Encoder cable abnormality (connection, broken)
- PF Motor cable abnormality (connection, broken)
- Load abnormality
- PF Encoder failure
- PF Motor failure

 Parts/Components to be checked

1. PF Encoder
2. PF Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the PF Encoder cable connection</b> ■ Check the PF Encoder connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	<b>Check the PF Motor cable connection</b> ■ Check the PF Motor connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 3
3	<b>Replace the PF Encoder (p245)</b> Does the product recover from the error?	End	Go to step 4
4	<b>Replace the PF Motor (p237)</b> Does the product recover from the error?	End	Escalate to person in charge

**001418 (Pump Cap Unit Overcurrent Error)** Description

The number of occurrences of overcurrent to the pump motor has reached a predetermined limit.

 Suspected cause

- Pump Cap Unit failure
- Pump Cap Unit cable abnormality (connection, broken)

 Parts/Components to be checked

1. Pump Cap Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Pump Cap Unit operation state</b> ■ When the Pump Cap Unit is malfunctioning, replace it. <a href="#">(p212)</a> Does the product recover from the error?	End	Go to step 2
2	<b>Check the Pump Cap Unit cable connection</b> ■ Check the Pump Cap Unit cable connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001419 (Pump Cap Unit Oscillation Error)** Description

The number of oscillations exceeds the specified value.

 Suspected cause

- Main Board failure

 Parts/Components to be checked

1. Main Board
2. Pump Cap Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Main Board state</b> ■ Check if any foreign object is on the Main Board. If so, remove it. Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Pump Cap Unit (p212)</b> Does the product recover from the error?	End	Escalate to person in charge

**00141A (Pump Cap Unit Overload Error)** Description

Overcurrent is detected more than predetermined limit since the Pump Motor did not operate properly because of some kind of load.

 Suspected cause

- Load abnormality
- Pump Cap Unit cable abnormality (connection, broken)
- Pump Cap Unit failure

 Parts/Components to be checked

1. Pump Cap Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the obstacle in the Pump Cap Unit moving range</b> <ul style="list-style-type: none"> <li>■ Check if any obstacle is blocking the Pump Cap Unit movement. If so, remove the obstacle.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Check the Pump Cap Unit cable connection</b> <ul style="list-style-type: none"> <li>■ Check the Pump Cap Unit connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<b>Check the Pump Cap Unit operation state</b> <ul style="list-style-type: none"> <li>■ When the Pump Cap Unit is malfunctioning, replace it. <a href="#">(p212)</a></li> </ul> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**00141C (Pump Cap Unit Reversing Error)** Description

The number of occurrences of reversing the pump motor has reached a predetermined limit.

 Suspected cause

- Pump Cap Unit cable abnormality (polarity reversal)

 Parts/Components to be checked

1. Pump Cap Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Pump Cap Unit cable connection</b> <ul style="list-style-type: none"> <li>■ Check the Pump Cap Unit connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Check the Pump Cap Unit operation state</b> <ul style="list-style-type: none"> <li>■ When the Pump Cap Unit is malfunctioning, replace it. <a href="#">(p212)</a></li> </ul> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**00141D (Pump Cap Unit Driving time-out Error)** Description

Abnormally-long driving duration of the pump motor was detected.

 Suspected cause

- Load abnormality
- Firmware becomes out of control

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Update the F/W (p307)</b> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Pump Cap Unit (p212)</b> Does the product recover from the error?	End	Escalate to person in charge

**00141E (Pump Cap Unit Velocity Deviation Error)** Description

The pump motor was driven at a speed abnormally faster than a predetermined one during acceleration or deceleration.

 Suspected cause

- Load abnormality
- Pump Cap Unit failure
- Main Board failure

 Parts/Components to be checked

1. Pump Cap Unit
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Pump Cap Unit operation state</b> ■ When the Pump Cap Unit is malfunctioning, replace it. (p212) Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**00141F (Pump Cap Unit Lock Error)** Description

The pump motor was driven at a speed abnormally slower than a predetermined one during operation.

 Suspected cause

- Pump Cap Unit cable abnormality (connection, broken)
- Load abnormality
- Pump Cap Unit failure

 Parts/Components to be checked

1. Pump Cap Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Pump Cap Unit cable connection</b> <ul style="list-style-type: none"> <li>■ Check the Pump Cap Unit connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Check the Pump Cap Unit operation state</b> <ul style="list-style-type: none"> <li>■ When the Pump Cap Unit is malfunctioning, replace it. <a href="#">(p212)</a></li> </ul> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**0014B0 (Cannot Print In Cleaning Mode Error)** Description

Received an unexpected printing data while cleaning or ejecting.

 Suspected cause

- Wrong operation (Performed printing while cleaning/ejecting)

 Parts/Components to be checked

1. ---

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p><b>Turn the printer off and back it on again</b></p> <ul style="list-style-type: none"> <li>■ Turn the printer off and back it on again with normal mode.</li> </ul> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**0014BD (Ink Leak Error)**

- Description  
Ink Leak Sensor detected ink leakage.
- Suspected cause
  - Ink leakage occurred inside the printer
  - False detection of the sensor
- Parts/Components to be checked
  1. Print Head
  2. Ink Cartridge
  3. Pump Cap Unit
  4. Ink Leak Sensor
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Specifying the ink leakage point</b> <ul style="list-style-type: none"> <li>■ Specify the point where ink leakage occurred, and replace the according parts.</li> <li>■ Replace the Right Lower Cover B (Ink Leak Sensor). <a href="#">(p166)</a></li> <li>■ Perform the Ink Leak Sensor reset from the Service Program. <a href="#">(p348)</a></li> <li>■ Escalate the information to the person in charge.</li> </ul> Does the product recover from the error?	End	Escalate to person in charge

**0014BF (Pump Cap Unit Position Unsettled Error)**

- Description  
Cover is opened when the Pump Cap Unit is working.
- Suspected cause
  - Wrong operation
- Parts/Components to be checked
  1. ---
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Turn the printer off and back it on again</b> <ul style="list-style-type: none"> <li>■ Turn the printer off and back it on again with normal mode.</li> </ul> Does the product recover from the error?	End	Escalate to person in charge

**001599 (ATC Motor Oscillation Error)** Description

The number of oscillations exceeds the specified value.

 Suspected cause

■ Main Board failure

 Parts/Components to be checked

1. Main Board
2. ATC Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Main Board state</b> ■ Check if any foreign object is on the Main Board. If so, remove it. Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the ATC Motor (p235)</b> Does the product recover from the error?	End	Escalate to person in charge

**00159A (ATC Motor Overload Error)** Description

Overcurrent is detected more than predetermined limit since the ATC Motor did not operate properly because of some kind of load.

 Suspected cause

- Load abnormality
- ATC Encoder cable abnormality (connection, broken)
- ATC Motor cable abnormality (connection, broken)
- ATC Encoder failure
- ATC Motor failure

 Parts/Components to be checked

1. ATC Assy
2. ATC Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the obstacle in the ATC moving range</b> <ul style="list-style-type: none"> <li>■ Check if any obstacle is blocking the ATC movement. If so, remove the obstacle.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<b>Check the ATC Encoder cable connection</b> <ul style="list-style-type: none"> <li>■ Check the ATC Encoder connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<b>Check the ATC Motor cable connection</b> <ul style="list-style-type: none"> <li>■ Check the ATC Motor connection state. If there is any abnormality, connect it again.</li> </ul> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<b>Replace the ATC Assy (p233)</b> <p>Does the product recover from the error?</p>	End	Go to step 5
5	<b>Replace the ATC Motor (p235)</b> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

**00159C (ATC Motor Reversing Error)** Description

The number of occurrences of reversing the ATC Motor has reached a predetermined limit.

 Suspected cause

- ATC Encoder cable abnormality (polarity reversal)
- ATC Motor cable abnormality (polarity reversal)
- ATC Encoder failure

 Parts/Components to be checked

1. ATC Assy

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the ATC Encoder cable connection</b> <ul style="list-style-type: none"> <li>■ Check the ATC Encoder connection state. If there is any abnormality, connect it again.</li> </ul> Does the product recover from the error?	End	Go to step 2
2	<b>Check the ATC Motor cable connection</b> <ul style="list-style-type: none"> <li>■ Check the ATC Motor connection state. If there is any abnormality, connect it again.</li> </ul> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the ATC Assy (p233)</b> Does the product recover from the error?	End	Escalate to person in charge

**00159D (ATC Motor Driving time-out Error)** Description

Abnormally-long driving duration of the ATC Motor was detected.

 Suspected cause

- Load abnormality
- Firmware becomes out of control

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Update the F/W (p307)</b> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**00159E (ATC Motor Velocity Deviation Error)** Description

The ATC Motor was driven at a speed abnormally faster than a predetermined one during acceleration or deceleration.

 Suspected cause

- Load abnormality
- ATC Encoder failure
- ATC Motor failure
- Main Board failure

 Parts/Components to be checked

1. ATC Assy
2. ATC Motor
3. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Replace the ATC Assy (p233)</b> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the ATC Motor (p235)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**00159F (ATC Motor Lock Error)** Description

The ATC Motor was driven at a speed abnormally slower than a predetermined one during operation.

 Suspected cause

- ATC Encoder cable abnormality (connection, broken)
- ATC Motor cable abnormality (connection, broken)
- Load abnormality
- ATC Encoder failure
- ATC Motor failure

 Parts/Components to be checked

1. ATC Assy
2. ATC Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the ATC Encoder cable connection</b> ■ Check the ATC Encoder connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	<b>Check the ATC Motor cable connection</b> ■ Check the ATC Motor connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 3
3	<b>Replace the ATC Assy (p233)</b> Does the product recover from the error?	End	Go to step 4
4	<b>Replace the ATC Motor (p235)</b> Does the product recover from the error?	End	Escalate to person in charge

**001A3A (Head Hot Error)** Description

Abnormal heat generation of IC inside the Print Head is detected.

 Suspected cause

- Head FFC abnormality (connection, broken)
- Print Head failure

 Parts/Components to be checked

1. Head FFC
2. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Head FFC connection state</b> <ul style="list-style-type: none"> <li>■ Check the Head FFC connection state (disconnection, skew, connected halfway, peeled terminal). If there is any abnormality, connect it again.</li> <li>■ When the Head FFC has any abnormality and reconnecting does not work, replace the Head FFC. <a href="#">(p200)</a></li> </ul> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Print Head <a href="#">(p190)</a></b> Does the product recover from the error?	End	Escalate to person in charge

**001A39 (Head Fuse Error)** Description

The driving circuit in the Print Head is damaged or the fuse of the Main Board is blown for some reason.

 Suspected cause

- Head FFC abnormality (connection, broken)
- Print Head failure
- Main Board failure

 Parts/Components to be checked

1. Head FFC
2. Print Head
3. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Head FFC connection state</b> <ul style="list-style-type: none"> <li>■ Check the Head FFC connection state (disconnection, skew, connected halfway, peeled terminal). If there is any abnormality, connect it again.</li> <li>■ When the Head FFC has any abnormality and reconnecting does not work, replace the Head FFC. <a href="#">(p200)</a></li> </ul> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Print Head <a href="#">(p190)</a></b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Main Board <a href="#">(p178)</a></b> Does the product recover from the error?	End	Go to step 4
4	<b>Replace the Print Head and Main Board at the same time <a href="#">(p190), (p178)</a></b> Does the product recover from the error?	End	Escalate to person in charge

**001A3C (VBS Overvoltage Error)** Description

Overvoltage of VBS is detected.

 Suspected cause

- Head FFC abnormality (connection, broken)
- Print Head failure
- Main Board failure

 Parts/Components to be checked

1. Head FFC
2. Print Head
3. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Head FFC connection state</b> <ul style="list-style-type: none"> <li>■ Check the Head FFC connection state (disconnection, skew, connected halfway, peeled terminal). If there is any abnormality, connect it again.</li> <li>■ When the Head FFC has any abnormality and reconnecting does not work, replace the Head FFC. <a href="#">(p200)</a></li> </ul> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Print Head <a href="#">(p190)</a></b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Main Board <a href="#">(p178)</a></b> Does the product recover from the error?	End	Go to step 4
4	<b>Replace the Print Head and Main Board at the same time <a href="#">(p190), (p178)</a></b> Does the product recover from the error?	End	Escalate to person in charge

**001A38 (Transistor Environmental Temperature Error)** Description

A temperature out of a predetermined range was detected by the Head thermistor.

 Suspected cause

- Print Head failure

 Parts/Components to be checked

1. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Replace the Print Head <a href="#">(p190)</a></b> Does the product recover from the error?	End	Escalate to person in charge

**001A41 (Head Rank ID Error)** Description

An invalid Head rank ID was written to the NVRAM.

 Suspected cause

- Head ID parameter fault

 Parts/Components to be checked

1. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform Head ID check &amp; adjustment (p312)</b> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Print Head (p190)</b> Does the product recover from the error?	End	Escalate to person in charge

**001A42 (Head Temperature Error)** Description

A temperature out of a predetermined range was detected in the Print Head.

 Suspected cause

- Print Head failure
- Drive waveform abnormality
- Head Thermistor abnormality (Print Head failure)

 Parts/Components to be checked

1. Head FFC
2. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Head FFC connection state</b> <ul style="list-style-type: none"> <li>■ Check the Head FFC connection state (disconnection, skew, connected halfway, peeled terminal). If there is any abnormality, connect it again.</li> <li>■ When the Head FFC has any abnormality and reconnecting does not work, replace the Head FFC. (p200)</li> </ul> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Print Head (p190)</b> Does the product recover from the error?	End	Escalate to person in charge

**001A43 (Head Memory Read Error)**

- Description  
Failed to read the head ID.
- Suspected cause
  - Head ID parameter fault
  - Print Head failure
- Parts/Components to be checked
  1. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform Head ID check &amp; adjustment (p312)</b> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Print Head (p190)</b> Does the product recover from the error?	End	Escalate to person in charge

**001A44 (Head Failure Error)**

- Description  
The Print Head is broken.
- Suspected cause
  - Print Head failure
- Parts/Components to be checked
  1. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Replace the Print Head (p190)</b> Does the product recover from the error?	End	Escalate to person in charge

**001F00 (CSIC Slot 1 Error)**

- Description  
CSIC related error of slot 1 is detected.
- Suspected cause
  - CSIC Assy FFC abnormality (connection, broken)
  - CSIC Assy failure
  - Main Board failure
- Parts/Components to be checked
  1. CSIC Assy
  2. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the CSIC Assy FFC connection</b> <ul style="list-style-type: none"> <li>■ Check the CSIC Assy connection state. If there is any abnormality, connect it again.</li> </ul> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the CSIC Assy (p191)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001F01 (CSIC Slot 2 Error)**

- Description  
CSIC related error of slot 2 is detected.
- Suspected cause
  - CSIC Assy FFC abnormality (connection, broken)
  - CSIC Assy failure
  - Main Board failure
- Parts/Components to be checked
  1. CSIC Assy
  2. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the CSIC Assy FFC connection</b> <ul style="list-style-type: none"> <li>■ Check the CSIC Assy connection state. If there is any abnormality, connect it again.</li> </ul> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the CSIC Assy (p191)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001F02 (CSIC Slot 3 Error)**

- Description  
CSIC related error of slot 3 is detected.
- Suspected cause
  - CSIC Assy FFC abnormality (connection, broken)
  - CSIC Assy failure
  - Main Board failure
- Parts/Components to be checked
  1. CSIC Assy
  2. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the CSIC Assy FFC connection</b> <ul style="list-style-type: none"> <li>■ Check the CSIC Assy connection state. If there is any abnormality, connect it again.</li> </ul> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the CSIC Assy (p191)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001F03 (CSIC Slot 4 Error)**

- Description  
CSIC related error of slot 4 is detected.
- Suspected cause
  - CSIC Assy FFC abnormality (connection, broken)
  - CSIC Assy failure
  - Main Board failure
- Parts/Components to be checked
  1. CSIC Assy
  2. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the CSIC Assy FFC connection</b> <ul style="list-style-type: none"> <li>■ Check the CSIC Assy connection state. If there is any abnormality, connect it again.</li> </ul> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the CSIC Assy (p191)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001F10 (CSIC Maintenance Box 1 Error)** Description

CSIC related error of Maintenance Box is detected.

 Suspected cause

- Maintenance Box CSIC FFC abnormality (connection, broken)
- Right Lower Cover B failure (Maintenance Box receiving part)
- Main Board failure

 Parts/Components to be checked

1. Right Lower Cover B (Maintenance Box receiving part)
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Maintenance Box CSIC FFC connection</b> ■ Check the Maintenance Box CSIC FFC connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Right Lower Cover B (Maintenance Box receiving part) (p166)</b> Does the product recover from the error?	End	Go to step 3
3	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001F80 (Fuse Blow Error)** Description

Blown fuse on the Main Board is detected.

 Suspected cause

- Head FFC abnormality (connection, broken)
- Main Board failure

 Parts/Components to be checked

1. Head FFC
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the Head FFC connection state</b> ■ Check the Head FFC connection state (disconnection, skew, connected halfway, peeled terminal). If there is any abnormality, connect it again. ■ When the Head FFC has any abnormality and reconnecting does not work, replace the Head FFC. (p200) Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001F81 (EPC\_Check Error)**

- Description  
Flash ROM on the Main Board is damaged.
- Suspected cause  
■ Main Board failure
- Parts/Components to be checked  
1. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001F82 (Main Board Parameter Error 1)**

- Description  
Parameter in the Main Board is abnormal.
- Suspected cause  
■ Main Board failure
- Parts/Components to be checked  
1. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001F90 (SOC Operation Error)**

- Description  
Flash ROM on the Main Board is damaged.
- Suspected cause  
■ Flash ROM on the Main Board is damaged.
- Parts/Components to be checked  
1. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001F91 (MR Data Error)**

- Description  
Flash ROM on the Main Board is damaged.
- Suspected cause  
■ Flash ROM on the Main Board is damaged.
- Parts/Components to be checked  
1. Main Board.
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001FB9 (Main Board Parameter Error 2)** Description

Parameter in the Main Board is abnormal.

 Suspected cause

- Main Board failure

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001FC0 (ASIC Communication Error (Read))** Description

Failed to connect (read) the CSIC Assy.

 Suspected cause

- CSIC Assy Cable (FFC) abnormality (connection, broken)
- CSIC Assy Board (CSIC Contact Module) is damaged.
- Main Board broken.

 Parts/Components to be checked

1. CSIC Assy Cable (FFC)
2. CSIC Assy
3. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the CSIC Assy Cable (FFC) connection <ul style="list-style-type: none"> <li>■ Check the CSIC Assy Cable (FFC) connection state. If there is any abnormality, connect it again.</li> </ul> Does the product recover from the error?	End	Go to step 2
2	Replace the CSIC Assy Cable (FFC) Does the product recover from the error?	End	Go to step 3
3	Replace the CSIC Assy (p191) Does the product recover from the error?	End	Go to step 4
4	<b>Replace the Main Board (p178)</b> Does the product recover from the error?	End	Escalate to person in charge

**001FC8 (ASIC Communication Error (Write))** Description

Failed to connect (write) the CSIC Assy.

 Suspected cause

- CSIC Assy Cable (FFC) abnormality (connection, broken)
- CSIC Assy Board (CSIC Contact Module) is damaged.
- Main Board broken.

 Parts/Components to be checked

1. CSIC Assy Cable (FFC)
2. CSIC Assy
3. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the CSIC Assy Cable (FFC) connection ■ Check the CSIC Assy Cable (FFC) connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Replace the CSIC Assy Cable (FFC) Does the product recover from the error?	End	Go to step 3
3	Replace the CSIC Assy ( <a href="#">p191</a> ) Does the product recover from the error?	End	Go to step 4
4	Replace the Main Board ( <a href="#">p178</a> ) Does the product recover from the error?	End	Escalate to person in charge

**001000 (Life End Error)** Description

Subject periodic replacement parts reached the end of the life.

 Suspected cause

- Periodic replacement parts reached the end of the life

 Parts/Components to be checked

1. Pump Cap Unit
2. Ink Tank Upper Porous Pad (SC-T3100X Series/SC-T3100D Series/SC-F500 Series)
3. Ink Tube Assy (SC-T3100X Series/SC-T3100D Series/SC-F500 Series)

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Replace the Pump Cap Unit (<a href="#">p212</a>)</b> ■ Replace the Pump Cap Unit, and perform the counter reset using Service Program. Does the product recover from the error?	End	Escalate to person in charge
2	<b>Replace the Ink Tank Upper Porous Pad (<a href="#">p215</a>)</b> ■ Replace the Ink Tank Upper Porous Pad, and perform the counter reset using Service Program. Does the product recover from the error?	End	Escalate to person in charge
3	<b>Replace the Ink Tube Assy (<a href="#">p219</a>)</b> ■ Replace the Ink Tube Assy, and perform the counter reset using Service Program. Does the product recover from the error?	End	Escalate to person in charge

**004000 (Inspection Mode Printdata Receive Error)** Description

Normal printing in inspection mode is detected.

 Suspected cause

- Normal printing cannot be performed in inspection mode.

 Parts/Components to be checked

1. ---

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Print in normal mode</b> Does the product recover from the error?	End	Escalate to person in charge

**202620 (WIFI Board Failure Error)** Description

WiFi Board failure is detected.

 Suspected cause

- WIFI Board cable abnormality (connection, broken)
- WIFI Board failure

 Parts/Components to be checked

1. WIFI Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the WIFI Board cable connection</b> <ul style="list-style-type: none"> <li>■ Check the WIFI Board connection state. If there is any abnormality, connect it again.</li> </ul> Does the product recover from the error?	End	Go to step 2
2	<b>Replace the WIFI Board (p179)</b> Does the product recover from the error?	End	Escalate to person in charge

**203002 (Optical Touch Panel Failure Error)** Description

Panel failure is detected.

 Suspected cause

- Panel FFC abnormality (connection, broken)
- Panel failure

 Parts/Components to be checked

1. Panel
2. Replace the Panel FFC

 Troubleshooting

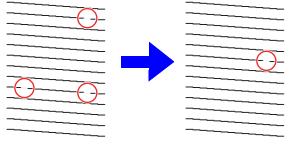
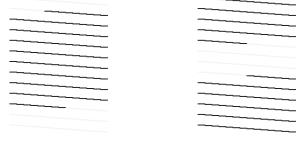
Step	Confirmation points and methods	YES	NO
1	<b>Check the Panel FFC connection</b> ■ Check the FFC connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	<b>Replace the Panel (p181)</b> Does the product recover from the error?	End	Go to step 3
	<b>Replace the Panel FFC</b> Does the product recover from the error?	End	Escalate to person in charge

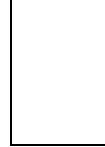
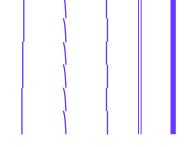
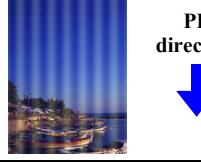
## 2.4 Troubleshooting from Problem Phenomenon

### 2.4.1 Problem Phenomenon Classification Table

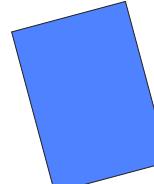
Phenomenon classification	Phenomenon	Ref.
Print quality related trouble	Problem Phenomenon related to print quality of the printer.	<a href="#">p104</a>
Paper ejection related trouble	Problem Phenomenon related to paper ejection of the printer.	<a href="#">p105</a>
Other troubles	Problem Phenomenon related to other troubles of the printer.	<a href="#">p105</a>
Service Program related trouble	Problem Phenomenon related to Service Program.	<a href="#">p105</a>
NVRAM Viewer related trouble	Problem Phenomenon related to NVRAM Viewer.	<a href="#">p105</a>

## 2.4.2 Problem Phenomenon Overview

Phenomenon	Image	Ref.
<b>Print quality related trouble</b>		
The nozzles are still clogging after cleaning.		p106
The nozzles are still clogging after cleaning. (Clogging due to thickened ink)		p107
The same nozzles are still clogging after cleaning. (Clogged nozzles (one or more) are not improved even after cleaning.)		p108
The nozzles are still clogging after cleaning. (Some of the limited nozzles are clogged, but the clogged nozzles vary after cleaning.)		p108
A large number of nozzles are clogged simultaneously, but they are improved after cleaning once. However, nozzles are clogged again after a while.		p109

Phenomenon	Image	Ref.
Some nozzles are clogged randomly.		p109
All nozzle clogging (Since printing was performed without ink, all the nozzles are clogged and there are still clogged after cleaning)		p110
Horizontal or vertical lines look misaligned, becomes a double line, becomes thick.		p110
Bandings in the carriage movement direction.		p111
Bandings in the paper feeding direction.		p112
Printed side is smudged or smeared with ink.		p113

Phenomenon	Image	Ref.
The backside of paper is smudged or smeared with ink.	 Backside	p115
Color or print density unevenness within a page or across pages.		p116
Blurred print		p117
Paper dust is attached or the traces of the rollers appear.		p118
Cockling (density uniformity by paper wrinkling) occurs.		p119

Phenomenon	Image	Ref.
<b>Paper ejection related trouble</b>		
Paper feeding or paper ejecting is abnormal.	---	p120
Paper is skewing.		
		p121
Actual margins differ from the specified margins.		p121
<b>Other troubles</b>		
The printer is not powered.	---	p122
Cannot access to the network.	---	p123
The printer makes a strange noise when the CR is moving.	---	p124
<b>Service Program related trouble</b>		
Service Program does not start	---	p125
MAC address cannot be set.	---	p126
<b>NVRAM Viewer related trouble</b>		
NVRAM Viewer does not start/File does not open	---	p126

## 2.4.3 Detail of each Problem Phenomenon

### The nozzles are still clogging after cleaning

Image



Suspected cause

- The Wiper is contaminated and wiping the Print Head cannot be performed properly.
- There is something wrong in the suction tube of the Pump Cap Unit and the cleaning cannot be performed properly.
- Ink leakage
- The head FFC is not connected correctly.
- Print Head failure

Parts/Components to be checked

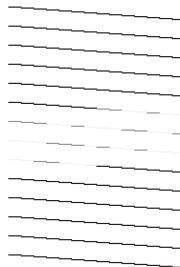
1. Pump Cap Unit
2. Head FFC
3. Print Head

Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the ink leak points (all ink flow paths)</b> <ul style="list-style-type: none"> <li>■ When the ink leakage occurred, take a measure according to where ink leakage occurs and escalate the information to the person in charge.</li> </ul>	End	Go to step 2
2	<b>Perform the head cleaning (CL4) again (p346)</b> Does the product recover from the nozzle clogging?	End	Go to step 3
3	<b>Check the wiper contamination</b> <ul style="list-style-type: none"> <li>■ When the wiper is contaminated, clean it.</li> </ul> Does the product recover from the nozzle clogging?	End	Go to step 4
4	<b>Check the Pump Cap Unit damage</b> <ul style="list-style-type: none"> <li>■ Check if the wiper, cap part, tube or the like is damaged. If so, replace the Pump Cap Unit. (p212)</li> </ul> Does the product recover from the nozzle clogging?	End	Go to step 5
5	<b>Check the disconnection, skew, peeled terminal of the Head FFC</b> <ul style="list-style-type: none"> <li>■ When the FFC is disconnected, skew (head, Main Board is not damaged) connect the Head FFC again</li> <li>■ Damaged such as peeled terminal (head, Main Board is not damaged) Replace the Head FFC (p200)</li> </ul> Does the product recover from the nozzle clogging?	End	Go to step 6
6	<b>Replace the Print Head (p190)</b>	End	Escalate to person in charge

**The nozzles are still clogging after cleaning  
(Clogging due to thickened ink)**

Image



Suspected cause

- Contamination on the cap part of Pump Cap Unit
- Damage on the cap part of Pump Cap Unit
- Dried up ink is attached on the nozzle surface and in the nozzle.

Parts/Components to be checked

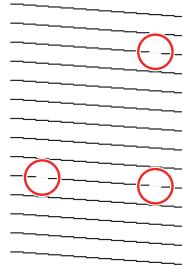
1. Pump Cap Unit
2. Print Head

Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform the head cleaning (CL4) again (p346)</b> Does the product recover from the nozzle clogging?	End	Go to step 2
2	<b>Check the contamination on the cap part of Pump Cap Unit</b> <ul style="list-style-type: none"> <li>■ Wipe off the ink or cleaning fluid from the inside of the Cap Unit using a cleaning stick. Then perform the head cleaning.</li> </ul> Does the product recover from the nozzle clogging?	End	Go to step 3
3	<b>Check the Pump Cap Unit damage</b> <ul style="list-style-type: none"> <li>■ Check if the wiper, cap part, tube or the like is damaged. If so, replace the Pump Cap Unit (p212)</li> </ul> Does the product recover from the nozzle clogging?	End	Go to step 4
4	<b>Replace the Print Head (p190)</b>	End	Escalate to person in charge

**The same nozzles are still clogging after cleaning  
(Clogged nozzles (one or more) are not improved even after cleaning.)**

Image

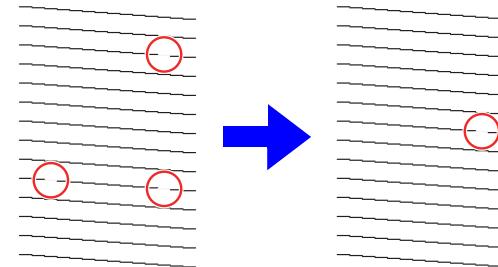


- Suspected cause
  - Nozzles are clogged because foreign material is stuck in the nozzles of the Print Head.
  - Inside of the Print Head is damaged.
  - Ink inside the Print Head is solidified.
- Parts/Components to be checked
  1. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform the head cleaning (CL4) again (p346)</b> Does the product recover from the nozzle clogging?	End	Go to step 2
2	<b>Replace the Print Head (p190)</b>	End	Escalate to person in charge

**The nozzles are still clogging after cleaning  
(Some of the limited nozzles are clogged, but the clogged nozzles vary after cleaning.)**

Image

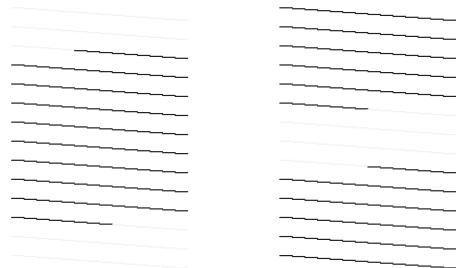


- Suspected cause
  - There is some foreign material on the Print Head.
- Parts/Components to be checked
  1. Pump Cap Unit
  2. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform the head cleaning (CL4) again (p346)</b> Does the product recover from the nozzle clogging?	End	Go to step 2
2	<b>Check the contamination on the cap part of Pump Cap Unit</b> <ul style="list-style-type: none"> <li>■ When the cap part of the Pump Cap Unit is contaminated, remove the lint or dirt with the cleaning stick. Then perform the head cleaning.</li> </ul> Does the product recover from the nozzle clogging?	End	Go to step 3
3	<b>Replace the Print Head (p190)</b>	End	Escalate to person in charge

**A large number of nozzles are clogged simultaneously, but they are improved after cleaning once.  
(However, nozzles are clogged again after a while)**

Image

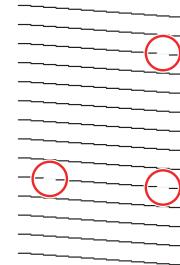


- Suspected cause
  - There are bubbles in the ink path.
- Parts/Components to be checked
  1. Ink Cartridge
  2. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform the head cleaning (CL4) again (p346)</b> Does the product recover from the nozzle clogging?	End	Go to step 2
2	<b>Perform the initial charge (p347)</b> Does the product recover from the nozzle clogging?	End	Go to step 3
3	<b>Replace the Ink Cartridge</b> ■ Replace the Ink Cartridge with a new one. Does the product recover from the nozzle clogging?	End	Go to step 4
4	<b>Replace the Print Head (p190)</b>	End	Escalate to person in charge

**Some nozzles are clogged randomly**

Image

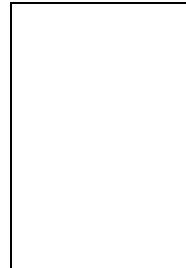


- Suspected cause
  - Lint or dust has entered the printer and then it is stuck on the Print Head.
- Parts/Components to be checked
  1. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform the head cleaning (CL4) again (p346)</b> Does the product recover from the nozzle clogging?	End	Go to step 2
2	<b>Check the environment of the installation site of the printer and see how contaminated inside the printer.</b> ■ Clean inside of the printer. Advise the customer to improve the environment of the installation site of the printer. Does the product recover from the nozzle clogging?	End	Go to step 3
3	<b>Replace the Print Head (p190)</b>	End	Escalate to person in charge

**All nozzle clogging**

(Since printing was performed without ink, all the nozzles are clogged and there are still clogged after cleaning)

 Image Suspected cause

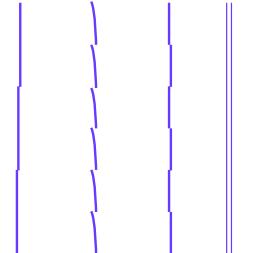
- Since printing was performed without ink, air bubbles remains in the Print Head.

 Parts/Components to be checked

1. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform the Power Ink Flushing (p354)</b> Does the product recover from the nozzle clogging?	End	Go to step 2
2	<b>Perform the head cleaning (CL4) (p346)</b> Does the product recover from the nozzle clogging?	End	Go to step 3
2	<b>Perform the head cleaning (CL4) again (p346)</b> Does the product recover from the nozzle clogging?	End	Go to step 4
3	<b>Replace the Print Head (p190)</b>	End	Escalate to person in charge

**Horizontal or vertical lines look misaligned, becomes a double line, becomes thick** Image Suspected cause

- Bi-D adjustment failure
- Print Head related adjustment failure (inclination, slant)
- PG adjustment failure

 Parts/Components to be checked

1. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform Bi-D adjustment (p332)</b> Does the product recover from the failure?	End	Go to step 2
2	<b>Perform head inclination adjustment (CR direction)/head slant adjustment (PF direction) (p316), (p320)</b> Does the product recover from the failure?	End	Go to step 3
3	<b>Perform PG check &amp; adjustment (p313)</b> Does the product recover from the failure?	End	Go to step 4
4	<b>Replace the Print Head (p190)</b>	End	Escalate to person in charge

**Banding in the paper feeding direction (horizontal banding)** Image Suspected cause

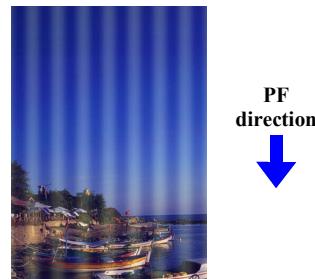
- Print Head related adjustment failure (inclination, slant)
- The paper was not fed properly.
- PF Scale, PF Encoder failure
- PF Belt tension failure
- PF Motor failure

 Parts/Components to be checked

1. Print Head
2. PF Scale
3. PF Encoder
4. PF Belt
5. PF Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform the head cleaning (CL4) again (p346)</b> Does the product recover from the failure?	End	Go to step 2
2	<b>Perform paper configuration with the control panel</b> Does the product recover from the failure?	End	Go to step 3
3	<b>Perform head inclination adjustment (CR direction)/head slant adjustment (PF direction) (p316), (p320)</b> Does the product recover from the failure?	End	Go to step 4
4	<b>Perform PF media feed adjustment</b> <ul style="list-style-type: none"> <li>■ Perform media feed adjustment (area A), media feed adjustment (area B). (p357), (p359)</li> </ul> Does the product recover from the failure?	End	Go to step 5
5	<b>Check PF Scale, PF Encoder contamination/damage</b> <ul style="list-style-type: none"> <li>■ Perform PF Scale contamination check with Service Program. (p369)</li> <li>■ Check if the PF Scale is damaged or contaminated.               <ul style="list-style-type: none"> <li>□ Clean the PF Scale if contaminated.</li> </ul> </li> <li>■ Check that the PF Encoder is installed correctly.</li> <li>■ If the PF Scale/PF Encoder is damaged, replace it. (p246), (p245)</li> </ul> Does the product recover from the failure?	End	Go to step 6
6	<b>Check PF Belt tension</b> <ul style="list-style-type: none"> <li>■ Perform PF Belt tension check &amp; adjustment. (p355)</li> </ul> Does the product recover from the failure?	End	Go to step 7
7	<b>Check the PF Motor</b> <ul style="list-style-type: none"> <li>■ Check if any service call related to the PF Motor has occurred using the NVRAM viewer.               <ul style="list-style-type: none"> <li>□ If so, replace the PF Motor. (p237)</li> </ul> </li> </ul> Does the product recover from the failure?	End	Escalate to person in charge

**Banding in the feeding direction (vertical banding)** Image Suspected cause

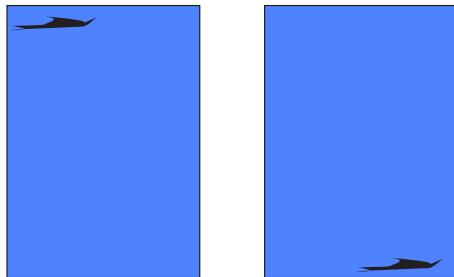
- CR active damper adjustment failure
- PG adjustment failure
- CR Scale, Sub C Board (CR Encoder) abnormality
- CR Belt tension abnormality
- Lubrication on the CR moving parts is insufficient.

 Parts/Components to be checked

1. Print Head
2. CR Scale
3. Sub C Board (CR Encoder)
4. CR Belt
5. Oil Pad
6. CR Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform the head cleaning (CL4) again (p346)</b> Does the product recover from the failure?	End	Go to step 2
2	<b>Perform the CR active damper (p340)</b> Does the product recover from the failure?	End	Go to step 3
3	<b>Perform PG check &amp; adjustment (p313)</b> Does the product recover from the failure?	End	Go to step 4
4	<b>Check CR Scale, Sub C Board (CR Encoder) contamination/damage</b> <ul style="list-style-type: none"> <li>■ Perform CR Scale contamination check with Service Program. (p338)</li> <li>■ Check if the CR Scale is damaged or contaminated.               <ul style="list-style-type: none"> <li>□ Clean the CR Scale if contaminated.</li> </ul> </li> <li>■ Check that the Sub C Board (CR Encoder) is installed correctly.</li> <li>■ If the CR Scale/Sub C Board (CR Encoder) is damaged, replace it. (p196), (p210)</li> </ul> Does the product recover from the failure?	End	Go to step 5
5	<b>Check CR Belt tension</b> <ul style="list-style-type: none"> <li>■ Perform CR Belt tension check &amp; adjustment. (p324)</li> </ul> Does the product recover from the failure?	End	Go to step 6
6	<b>Lubrication to the Oil Pad (p398)</b> Does the product recover from the failure?	End	Go to step 7
7	<b>Check the CR Motor</b> <ul style="list-style-type: none"> <li>■ Check if any service call related to the CR Motor has occurred using the NVRAM viewer.               <ul style="list-style-type: none"> <li>□ If so, replace the CR Motor. (p194)</li> </ul> </li> </ul> Does the product recover from the failure?	End	Escalate to person in charge

**Printed side is smudged or smeared with ink** Image Suspected cause

- Paper state abnormality
- Driven Roller Assy contamination
- Ink smudge due to dirt/lint attached to the Print Head
- Print Head rubs the print surface
- Print Head rubs the leading edge of the paper
- Print Head rubs the bottom edge of the paper
- Print Head rubs both right and left edges of the paper
- Print Head rubs the sections between the printed images

 Parts/Components to be checked

1. Driven Roller Assy
2. Print Head
3. Pump Cap Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check used paper state</b> <ul style="list-style-type: none"> <li>■ Check if the paper is wrinkled, bent, rippled, or warped.</li> <li>■ Check if the paper is too thick and contacting with the Print Head.</li> <li>■ Check if the paper is too thin and loosening when being fed. Does the product recover from the failure?</li> </ul>	End	Go to step 2
2	<b>Check the Driven Roller Assy contamination</b> <ul style="list-style-type: none"> <li>■ Check if the Driven Roller Assy is contaminated with ink.</li> <li><input type="checkbox"/> If so, Print some blank pages to clean it. If the Driven Roller Assy is contaminated badly, replace the Driven Roller Assy. (<a href="#">p260</a>)</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 3
3	<b>Check the contamination on the cap part of Pump Cap Unit</b> <ul style="list-style-type: none"> <li>■ When the cap part of the Pump Cap Unit is contaminated, remove the dirt with the cleaning stick. Then perform the head cleaning.</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 4
4	<b>Perform PG check &amp; adjustment (<a href="#">p313</a>)</b> <p>Does the product recover from the failure?</p>	End	Go to step 5
5	<b>&lt;When the Print Head rubs the leading edge of the paper&gt;</b> <ul style="list-style-type: none"> <li>■ Widening the leading edge margin.</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 6
6	<b>&lt;When the Print Head rubs the bottom edge of the paper&gt;</b> <ul style="list-style-type: none"> <li>■ Widening the bottom edge margin.</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 7
7	<b>&lt;When the Print Head rubs both right and left edges of the paper&gt;</b> <ul style="list-style-type: none"> <li>■ Widening both right and left edge margins.</li> <li>■ Turning the image to be printed at 90 degrees using the printer driver or the like.</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 8

Step	Confirmation points and methods	YES	NO
8	<When the Print Head rubs the sections between the printed images> ■ Widening the margins between pages. Does the product recover from the failure?	End	Escalate to person in charge

**The backside of paper is smudged or smeared with ink**

- Image



- Suspected cause  
■ The platen is contaminated.
- Parts/Components to be checked  
■ ---
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the platen contamination</b> ■ Check if any ink is attached on the platen. <input type="checkbox"/> If so, clean the platen. Does the product recover from the failure?	End	Escalate to person in charge

**Color or print density unevenness within a page or across pages** Image Suspected cause

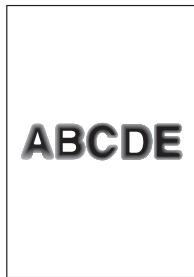
- The ink in the ink cartridge is not agitated enough
- Deterioration of ink quality
- PG adjustment failure

 Parts/Components to be checked

1. Ink Cartridge
2. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform the head cleaning (CL4) again (p346)</b> Does the product recover from the failure?	End	Go to step 2
2	<b>Check the expiration date of the Ink Cartridge</b> <ul style="list-style-type: none"> <li>■ Replace the expired ink cartridges with new ones.</li> </ul> Does the product recover from the failure?	End	Go to step 3
3	<b>Agitation of the Ink Cartridge</b> <ul style="list-style-type: none"> <li>■ Shake the ink cartridges so that ink droplets spread evenly inside the cartridges.</li> </ul> Does the product recover from the failure?	End	Go to step 4
4	<b>Perform PG check &amp; adjustment (p313)</b> Does the product recover from the failure?	End	Escalate to person in charge

**Blurred print** Image Suspected cause

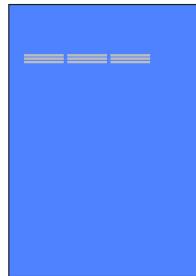
- Too much ink discharge.
- Dot size is not appropriate.
- Resolution of printed image is too low.
- Bi-D adjustment failure
- PG is set too high.

 Parts/Components to be checked

1. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform head ID Check &amp; Input (p312)</b> Does the product recover from the failure?	End	Go to step 2
2	<b>Check the print duty</b> <ul style="list-style-type: none"> <li>■ Check the print duty of RIP that the customer or the print driver uses.               <ul style="list-style-type: none"> <li>□ If the duty is too high, lower it and check the image.</li> </ul> </li> </ul> Does the product recover from the failure?	End	Go to step 3
3	<b>Check the RIP setting</b> <ul style="list-style-type: none"> <li>■ Check if the setting of RIP is proper. If not, change the RIP setting.</li> </ul> Does the product recover from the failure?	End	Go to step 4
4	<b>Check the resolution of printed image</b> <ul style="list-style-type: none"> <li>■ Check if the resolution of the original image is enough.               <ul style="list-style-type: none"> <li>□ If not, print in higher resolution.</li> </ul> </li> </ul> Does the product recover from the failure?	End	Go to step 5
5	<b>Check the Bi-D adjustment failure</b> <ul style="list-style-type: none"> <li>■ Print in Uni-D to see if the phenomenon can be recurred.               <ul style="list-style-type: none"> <li>□ If not, perform Bi-D adjustment. (p332)</li> </ul> </li> </ul> Does the product recover from the failure?	End	Go to step 6
6	<b>Perform PG check &amp; adjustment (p313)</b> Does the product recover from the failure?	End	Escalate to person in charge

**Paper dust is attached or the traces of the rollers appear** Image

- Suspected cause
  - Mark of the Driven Roller
  - Paper dust transferred to the paper.
- Parts/Components to be checked
  1. Driven Roller Assy
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the paper state</b> <ul style="list-style-type: none"><li>■ When the trace marks of the Driven Roller are attached on the media because the media is set in the printer for a while, advise the customer to remove the media when the printer is left unused for a long time. Does the product recover from the failure?</li></ul>	End	Go to step 2
2	<b>Check the Driven Roller Assy contamination</b> <ul style="list-style-type: none"><li>■ Check if any paper dust is attached to the roller of the Driven Roller Assy.<ul style="list-style-type: none"><li>□ If so, clean the roller.</li><li>■ If not improved, replace the Driven Roller Assy. (p260)</li></ul></li></ul> Does the product recover from the failure?	End	Escalate to person in charge

**Cockling (density uniformity by paper wrinkling) occurs** Image Suspected cause

- Too much ink discharge.
- Driven Roller Assy failure

 Parts/Components to be checked

1. Driven Roller Assy

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p><b>Check the print duty</b></p> <ul style="list-style-type: none"> <li>■ Check the print duty of RIP that the customer or the print driver uses.</li> <li>□ If the duty is too high, lower it and check the image. (Cockling may occur when performed printing on thin media with high duty)</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<p><b>Check the Driven Roller Assy failure</b></p> <ul style="list-style-type: none"> <li>■ Check if the Driven Roller Assy is installed correctly.           <ul style="list-style-type: none"> <li>□ If not, install the Driven Roller Assy again.</li> </ul> </li> <li>■ When the Driven Roller Assy is damaged, replace it. <a href="#">(p260)</a></li> </ul> <p>Does the product recover from the failure?</p>	End	Escalate to person in charge

**Paper feeding or paper ejecting is abnormal** Image

---

 Suspected cause

- PF Scale, PF Encoder abnormality
- PF Belt tension abnormality
- PF Motor failure
- Driven Roller Assy failure

 Parts/Components to be checked

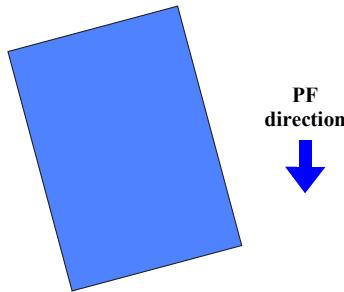
1. PF Scale
2. PF Encoder
3. PF Belt
4. PF Motor
5. Driven Roller Assy

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check PF Scale, PF Encoder contamination/damage</b> <ul style="list-style-type: none"> <li>■ Perform PF Scale contamination check with Service Program. <a href="#">(p369)</a></li> <li>■ Check if the PF Scale is damaged or contaminated.           <ul style="list-style-type: none"> <li>□ Clean the PF Scale if contaminated.</li> </ul> </li> <li>■ Check that the PF Encoder is installed correctly.</li> <li>■ If the PF Scale/PF Encoder is damaged, replace it. <a href="#">(p246), (p245)</a></li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<b>Check PF Belt tension</b> <ul style="list-style-type: none"> <li>■ Perform PF Belt tension check &amp; adjustment. <a href="#">(p355)</a></li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 3
3	<b>Check the PF Motor</b> <ul style="list-style-type: none"> <li>■ Check if any service call related to the PF Motor has occurred using the NVRAM viewer.           <ul style="list-style-type: none"> <li>□ If so, replace the PF Motor. <a href="#">(p237)</a></li> </ul> </li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 4
4	<b>Check the Driven Roller Assy failure</b> <ul style="list-style-type: none"> <li>■ Check if the Driven Roller Assy is installed correctly.           <ul style="list-style-type: none"> <li>□ If not, install the Driven Roller Assy again.</li> </ul> </li> <li>■ When the Driven Roller Assy is damaged, replace it. <a href="#">(p260)</a></li> </ul> <p>Does the product recover from the failure?</p>	End	Escalate to person in charge

**Paper is skewing (Cut Sheet)**

- Image

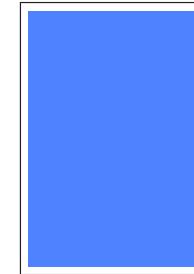


- Suspected cause
  - ASF Unit failure (cut paper)
- Parts/Components to be checked
  1. ASF Unit
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the ASF Unit failure</b> <ul style="list-style-type: none"> <li>■ Check if paper can be fed properly from the ASF Unit           <ul style="list-style-type: none"> <li><input type="checkbox"/> If not, install the ASF Unit again.</li> <li><input type="checkbox"/> If the ASF Unit is broken, replace it. <a href="#">(p254)</a></li> </ul> </li> </ul> <p>Does the product recover from the failure?</p>	End	Escalate to person in charge

**Actual margins differ from the specified margins**

- Image



- Suspected cause
  - Paper feed amount correction value abnormality
- Parts/Components to be checked
  1. ---
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Perform PF media feed adjustment</b> <ul style="list-style-type: none"> <li>■ Perform media feed adjustment (area A), media feed adjustment (area B). <a href="#">(p357)</a>, <a href="#">(p359)</a></li> </ul> <p>Does the product recover from the failure?</p>	End	Escalate to person in charge

**The printer is not powered** Image

---

 Suspected cause

- The power cable is unplugged.
- The power voltage is unstable.
- Connection failure of the Power Supply Board
- Connection failure of the panel board
- Power Supply Board failure
- AC Inlet failure
- Panel failure

 Parts/Components to be checked

1. Power Supply Board
2. AC Inlet
3. Panel

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the power cable</b> <ul style="list-style-type: none"> <li>■ Check if the power cable is plugged properly. Does the product recover from the failure?</li> </ul>	End	Go to step 2
2	<b>Check electrical outlet</b> <ul style="list-style-type: none"> <li>■ Check if the electrical outlet is overloaded since sharing with any other electric equipment.</li> <li>□ If so, use one electrical outlet for the printer only if possible.</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 3
3	<b>Check the board related cable routing</b> <ul style="list-style-type: none"> <li>■ Check the connection between the Power Supply Board and Main Board.</li> <li>□ Correct the problem if there is any.</li> <li>■ Check the connection between the Panel and Main Board.</li> <li>□ Correct the problem if there is any.</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 4
4	<b>Replace the Power Supply Board (p180)</b> Does the product recover from the failure?	End	Go to step 5
5	<b>Replace the AC Inlet (p183)</b> Does the product recover from the failure?	End	Go to step 6
6	<b>Replace the Panel (p181)</b> Does the product recover from the failure?	End	Escalate to person in charge

**Cannot access to the network**

- Image
  -
- Suspected cause
  - Network cable abnormality
  - LAN connector abnormality
  - MAC address abnormality
  - WIFI Board failure
- Parts/Components to be checked
  1. Network cable
  2. Main Board (LAN connector)
  3. WIFI Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the network cable</b> <ul style="list-style-type: none"> <li>■ Check if the network cable is connected correctly.</li> <li>■ Check if the network cable is broken.</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<b>Check the LAN connector</b> <ul style="list-style-type: none"> <li>■ Check if the LAN connector is deformed or damaged.</li> <li>□ If so, replace the Main Board. (<a href="#">p178</a>)</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 3
3	<b>Perform MAC address check &amp; input (<a href="#">p377</a>)</b> <p>Does the product recover from the failure?</p>	End	Go to step 4
4	<b>Replace the Main Board (<a href="#">p178</a>)</b> <p>Does the product recover from the failure?</p>	End	Go to step 5
6	<b>&lt;For wireless network&gt;</b> <ul style="list-style-type: none"> <li>■ Replace the WIFI Board (<a href="#">p179</a>)</li> </ul> <p>Does the product recover from the failure?</p>	End	Escalate to person in charge

**The printer makes a strange noise when the CR is moving** Image

---

 Suspected cause

- CR Belt tension abnormality
- Lubrication on the CR moving parts is insufficient.
- CR Scale, Sub C Board (CR Encoder) abnormality

 Parts/Components to be checked

1. CR Belt
2. Oil Pad
3. CR Scale
4. Sub C Board (CR Encoder)

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the CR Belt tension</b> ■ Perform CR Belt tension check & adjustment. <a href="#">(p324)</a> Does the product recover from the failure?	End	Go to step 2
2	<b>Lubrication to the Oil Pad <a href="#">(p398)</a></b> Does the product recover from the failure?	End	Go to step 3
3	<b>Check CR Scale, Sub C Board (CR Encoder) contamination/damage</b> <ul style="list-style-type: none"> <li>■ Perform CR Scale contamination check with Service Program. <a href="#">(p338)</a></li> <li>■ Check if the CR Scale is damaged or contaminated.           <ul style="list-style-type: none"> <li>□ Clean the CR Scale if contaminated.</li> </ul> </li> <li>■ Check that the Sub C Board (CR Encoder) is installed correctly.</li> <li>■ If the CR Scale/Sub C Board (CR Encoder) is damaged, replace it. <a href="#">(p196)</a>, <a href="#">(p210)</a></li> </ul> Does the product recover from the failure?	End	Escalate to person in charge

**Service Program does not start** Image

---

 Suspected cause

- The operating system is not supported.
- There is something wrong with the program file.
- License abnormality
- Communication abnormality due to connecting more than one printers to the computer.

 Parts/Components to be checked

1. ---

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p><b>Check the OS of the PC</b></p> <ul style="list-style-type: none"> <li>■ Check if the OS of the PC is supported. Use the PC with supported OS.           <ul style="list-style-type: none"> <li><input type="checkbox"/> Supported OS               <ul style="list-style-type: none"> <li>• Windows 7 (32/64 bit)</li> <li>• Windows 8/8.1 (32/64 bit)</li> <li>• Windows 10 (32/64 bit)</li> </ul> </li> </ul> </li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<p><b>Check the program file/license abnormality</b></p> <ul style="list-style-type: none"> <li>■ Obtain the Service Program from the system again to see if it recurs.           <ul style="list-style-type: none"> <li><input type="checkbox"/> If not, delete the old program file/license because they have some problem.</li> </ul> </li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 3
3	<p><b>Check the connection of multiple printers</b></p> <ul style="list-style-type: none"> <li>■ Check if any printer is connected to the PC other than the one for adjustment.           <ul style="list-style-type: none"> <li><input type="checkbox"/> If so, disconnect the printer which is not necessary for the adjustment.</li> </ul> </li> </ul> <p>Does the product recover from the failure?</p>	End	Escalate to person in charge

**MAC address cannot be set**

- Image  
---
- Suspected cause
  - Connection failure
  - LAN connector abnormality
- Parts/Components to be checked
  1. Main Board (LAN connector)
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Connection check</b> <ul style="list-style-type: none"> <li>■ Check if the printer and PC is connected with a USB cable and a network cable.</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<b>Check the LAN connector</b> <ul style="list-style-type: none"> <li>■ Check if the LAN connector is deformed or damaged.</li> <li>□ If so, replace the Main Board. (<a href="#">p178</a>)</li> </ul> <p>Does the product recover from the failure?</p>	End	Escalate to person in charge

**NVRAM Viewer does not start/File does not open**

- Image  
---
- Suspected cause
  - NVRAM Selection failure
  - Not logged in with administrator rights.
- Parts/Components to be checked
  1. ---
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<b>Check the NVRAM data</b> <ul style="list-style-type: none"> <li>■ Check if the NVRAM data is corresponding the model.</li> <li>□ If not, select the corresponding one.</li> </ul> <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<b>PC log in check</b> <ul style="list-style-type: none"> <li>■ Check if log in administrator rights.</li> <li>□ If not, log in administrator rights and start the NVRAM Viewer again.</li> </ul> <p>Does the product recover from the failure?</p>	End	Escalate to person in charge

## 2.5 Resistance Values

Resistance of motors

**Table 2-2. Resistance of motors**

Motor	Resistance value ( $\Omega$ )
CR	12.2 $\pm$ 16%
PF	12.2 $\pm$ 16%
ATC	21.2 $\pm$ 10%
Pump Cap	15.2 $\pm$ 10%

## 2.6 Fuse Positions

The table below describes which fuse on the Main Board needs to be checked when a Print Head trouble or Service Call 1F80 occurs.

**Table 2-3. Fuse Positions**

Fuse	Points to be measured when blown	Phenomenon when blown	Assuming a failed point	Reference	Remark
F500	F500 fuse	Service Call 1F80 occurred	<ul style="list-style-type: none"> <li>Main Board failure</li> <li>Print Head failure</li> <li>CSIC Assy failure</li> <li>Short-circuit due to the Head FFC connected askew.</li> </ul>	Figure 2-2	---
F502	F502 fuse	Service Call 1F80 occurred	<ul style="list-style-type: none"> <li>Main Board failure</li> <li>Print Head failure</li> <li>CSIC Assy failure</li> <li>Short-circuit due to the Head FFC connected askew.</li> </ul>	Figure 2-2	---
F300	F300 fuse	CSIC related error occurred	<ul style="list-style-type: none"> <li>Main Board failure</li> <li>CSIC Assy failure</li> </ul>	Figure 2-2	---

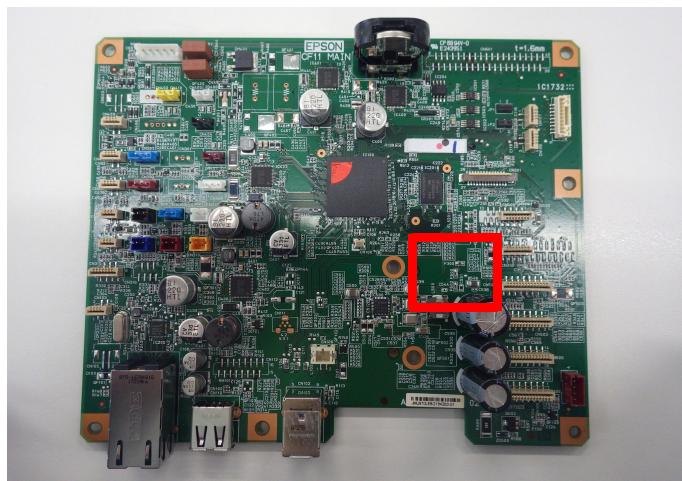


Figure 2-1. Main Board overall View

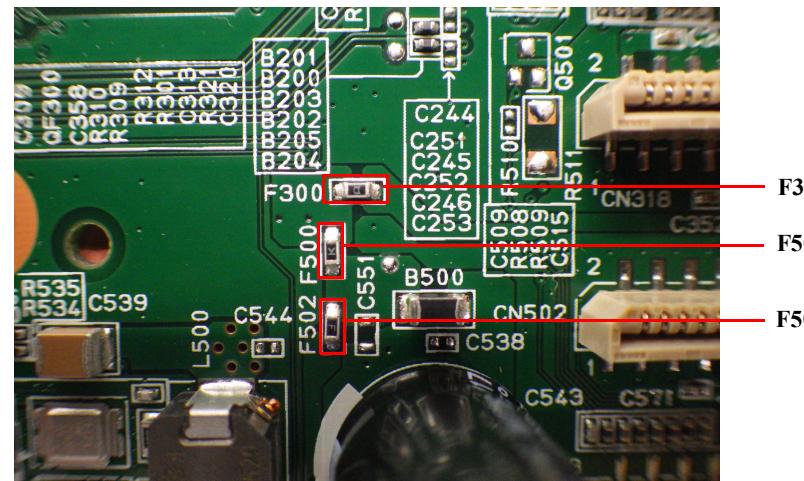


Figure 2-2. Fuse position

CHAPTER

3

## DISASSEMBLY & ASSEMBLY

## 3.1 Overview

This chapter describes procedures for disassembling the main components of products. Be sure to follow the steps when disassembling the unit.

Unless otherwise specified, disassembled units or components can be reassembled by reversing the disassembly procedure.

**WARNING**

Procedures which, if not strictly observed, could result in personal injury are described under the heading “WARNING”.

**CAUTION**

“CAUTION” signals a precaution which, if ignored, could result in damage to equipment.

**CHECK POINT**

Important tips for procedures are described under the heading “CHECK POINT”.

**REASSEMBLY**

If the assembly procedure is different from the reversed disassembly procedure, the correct procedure is described under the heading “REASSEMBLY”.

**ADJUSTMENT**

Any adjustments required after reassembly of components or parts are described under the heading “ADJUSTMENT”. Be sure to perform the specified adjustments with reference to Chapter 4 “ADJUSTMENT”.

**LUBRICATION**

“LUBRICATION” signals that the part needs to be lubricated when replacing or maintaining it after disassembling.

CHECK  
POINT

The disassembly/assembly procedures are provided based on SC-T5100 Series. The procedures for SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T3100X Series/SC-T3100D Series/SC-F500 Series/SC-T5100N Series are basically the same unless otherwise specified.

### 3.1.1 Precautions

Before starting the disassembly or reassembly of the product, read the following precautions given under the headings “WARNING” and “CAUTION”.



- When the printer cover is opened, a safety-interlock mechanism causes the CR Motor and the PF Motor to stop. When the interlock function is disabled, be sure to take safety precautions and turn the function back to enabled after the operation.
- This printer is equipped with a lithium battery. When handling the lithium battery, the following precautions should be followed.
  - When replacing the battery, replace it only with a specified type of battery. Using a different type of battery may cause excess heat or explosion.  
Recommended battery: CR2032
  - Dispose of used batteries according to manufacturer's instructions and local regulations. Contact your local government agency for information about battery disposal and recycling.
  - When disposing of the battery, be sure to securely cover its (+) end with tape to prevent combustion or explosion.
  - Do not recharge the battery.
  - Do not use the battery if it is discolored or damaged, or if any leakage of electrolyte is observed.
  - Do not dismantle, solder or heat the battery. Doing so could result in leakage of electrolyte, heat generation, or explosion.
  - Do not heat the battery or dispose of it in fire.
  - If the electrolyte leaked from the battery contacts with your skin or gets into your eyes, rinse it off with clean water and see a doctor immediately.

警告

如果更換不正確之電池型式會有爆炸的風險

請依製造商說明書處理用過之電池

Vorsicht

Explosionsgefahr, wenn die Batterie durch einen falschen Typ ersetzt wird. Entsorgen Sie gebrauchte Batterien gemäß den Anweisungen.



- The power switch for this printer is installed on the secondary side of the power circuit; therefore, the power is always supplied unless the AC cable is unplugged. To prevent electric shock and circuit damage during servicing, make sure to follow the instructions below.
  - Before removing a circuit board, make sure to unplug the AC Cable from the AC outlet and confirm the LEDs are turned off by pressing the Power button on the operating panel. This operation discharges the residual charge in the printer.
  - Make sure not to place the removed circuit boards on the metal and such directly.
- Always wear gloves for disassembly and reassembly to avoid injury from sharp metal edges.
- Never touch the ink or wasted ink with bare hands. If ink comes into contact with your skin, wash it off with soap and water immediately. If irritation occurs, contact a physician.
- If ink gets in your eye, flush the eye with fresh water and see a doctor immediately.
- When replacing the Main Board, PSH Board, or power harnesses and such, make sure to check visually if any harness is caught in between or any wrong connection exists.



- Locate the printer on stable and flat surface.
- Use only recommended or s for disassembly, assembly or adjustment of the printer.
- Apply lubricants and adhesives as specified.
- Be careful not to soil the printer or the floor with the leaked ink when removing the ink-path-related components or parts. Spread a sheet of paper or cloth on the floor in advance.
- Do not touch electrical circuit boards with bare hands as the elements on the board are so sensitive that they can be easily damaged by static electricity. If you have to handle the boards with bare hands, use static electricity discharge equipment such as anti-static wrist straps.
- When the printer has to be operated with the covers removed, take extra care not to get your fingers or clothes caught in moving parts.
- When you have to remove any parts or components that are provided as after-service-parts but are not described in this chapter, carefully observe how they are installed and make sure to remember it before removing them.
- Disassembling the frame and some components (platen, PF shaft) of the printer is prohibited because they are assembled with precise measurements in 1/100 mm unit at the factory.
- Never remove any screws because the platen of this printer is precisely adjusted in the manufacturing process.

### 3.1.2 Cautions after assembling



- The ink-path-related components or parts should be firmly and securely reinstalled on the printer to prevent the ink from leakage.
- When reassembling the printer, make sure to connect the connectors of the electric components or parts correctly and securely. Use extreme care when connecting FFCs (flexible flat cables). Improper connection of the FFCs, such as inserting them diagonally into the connectors, could cause shortcircuiting and lead to breakdown of the electric elements on the boards.
- When reassembling the printer, make sure to route the FFCs and other cables as specified in this chapter. Failure to do so may cause an unexpected contact of the cables with sharp metal edges, or lead to lower the noise immunity.
- When you removed any parts (especially cables) that are secured with acetate tape or two-sided tape, be sure to reinstall and secure them with the tape as exactly the same as they were.

### 3.1.3 Orientation Definition

The terms used for indicating the orientation/direction throughout this chapter are as follows.

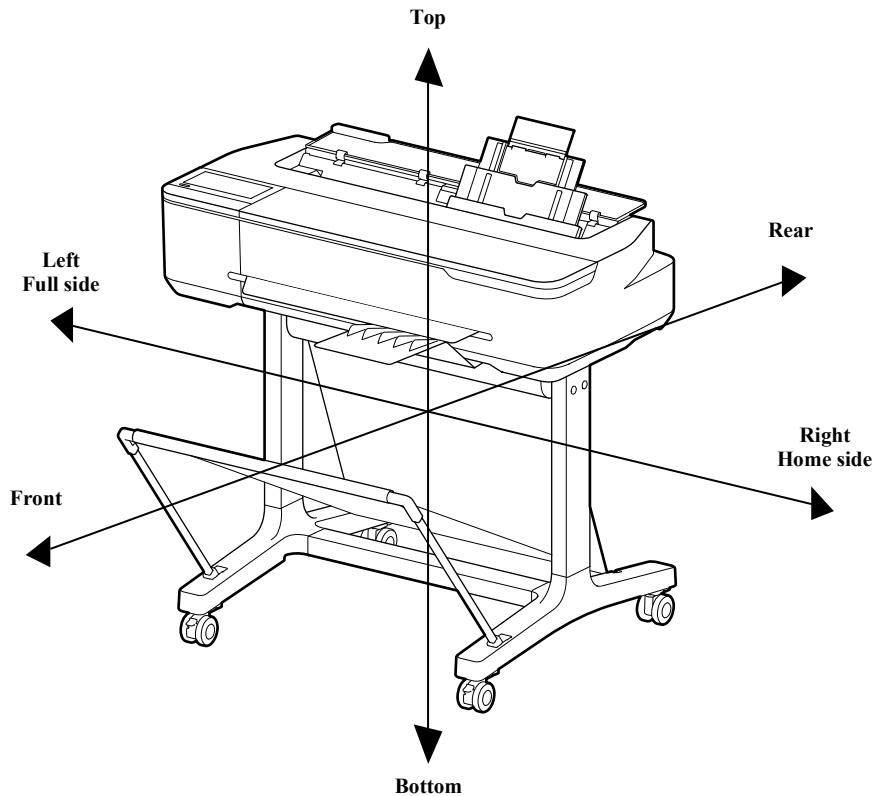


Figure 3-1. Orientation Definition

### 3.1.4 Recommended Tools

To protect this product from damage, use the tools indicated in the following table. For the tools required to perform the adjustment, refer to “Tools/Consumables for Adjustments” in Chapter 4.

**Table 3-1. Tools**

Name	Description	Target Part
Phillips screwdriver, No. 1	100 mm or longer shaft length (The one with a magnet is recommended)	<input type="checkbox"/> Head related parts <input type="checkbox"/> Some encoders/sensors
Phillips screwdriver, No. 2	150 mm or longer shaft length (The one with a magnet is recommended)	Parts in general
Flathead screwdriver	To release the hooks on the exterior parts.	Exterior related parts
C-ring pliers	To remove the C-ring securing the PF Scale.	PF Scale
Tweezers	Nothing in particular	Parts in general
Acetate tape	To secure the cable/harness, or for the protection against the sharp edge	Parts in general
Waste cloth	To prevent staining the printer with ink during operation	<input type="checkbox"/> Head related parts <input type="checkbox"/> Waste ink related parts

## 3.2 Parts Diagram

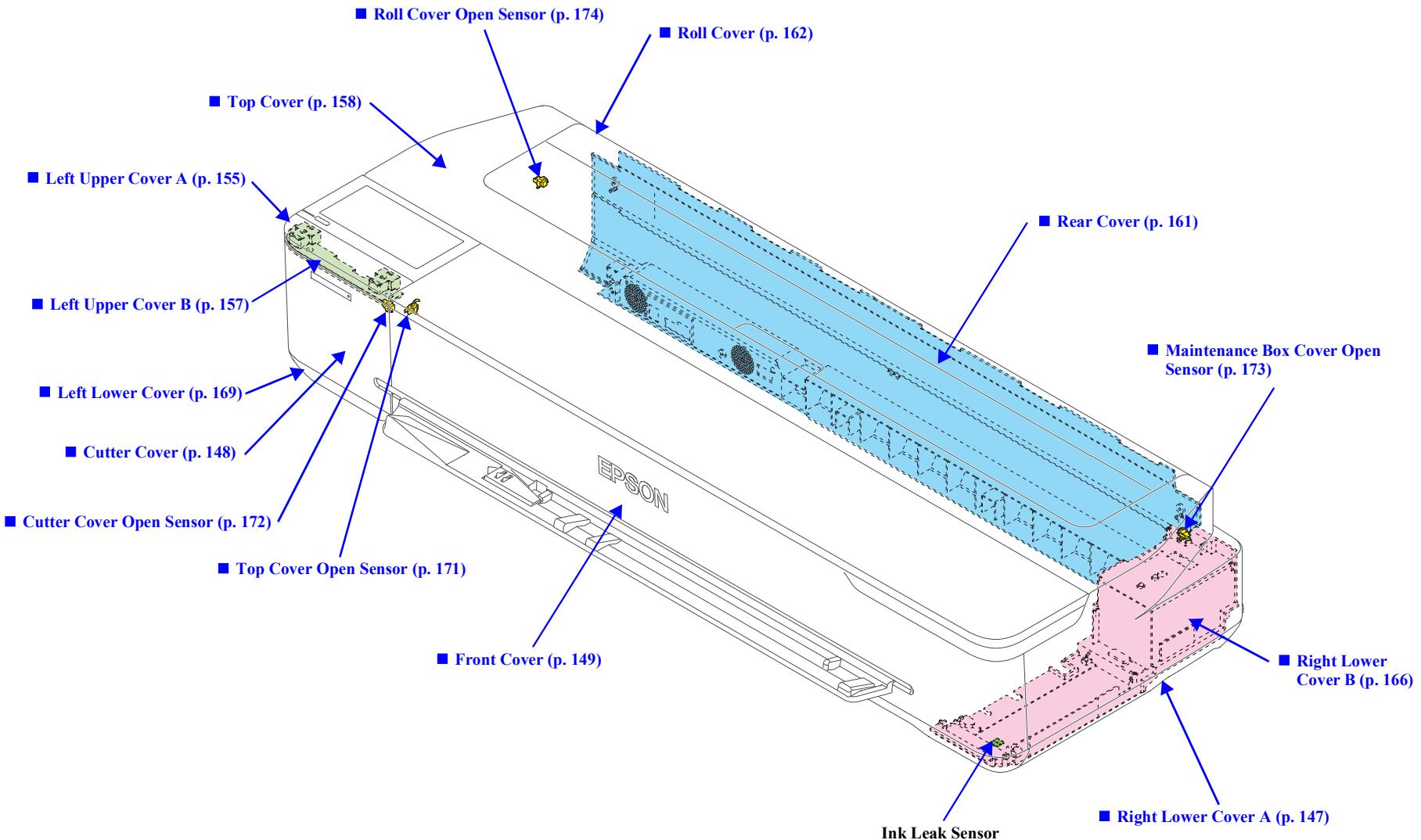


Figure 3-2. Housing

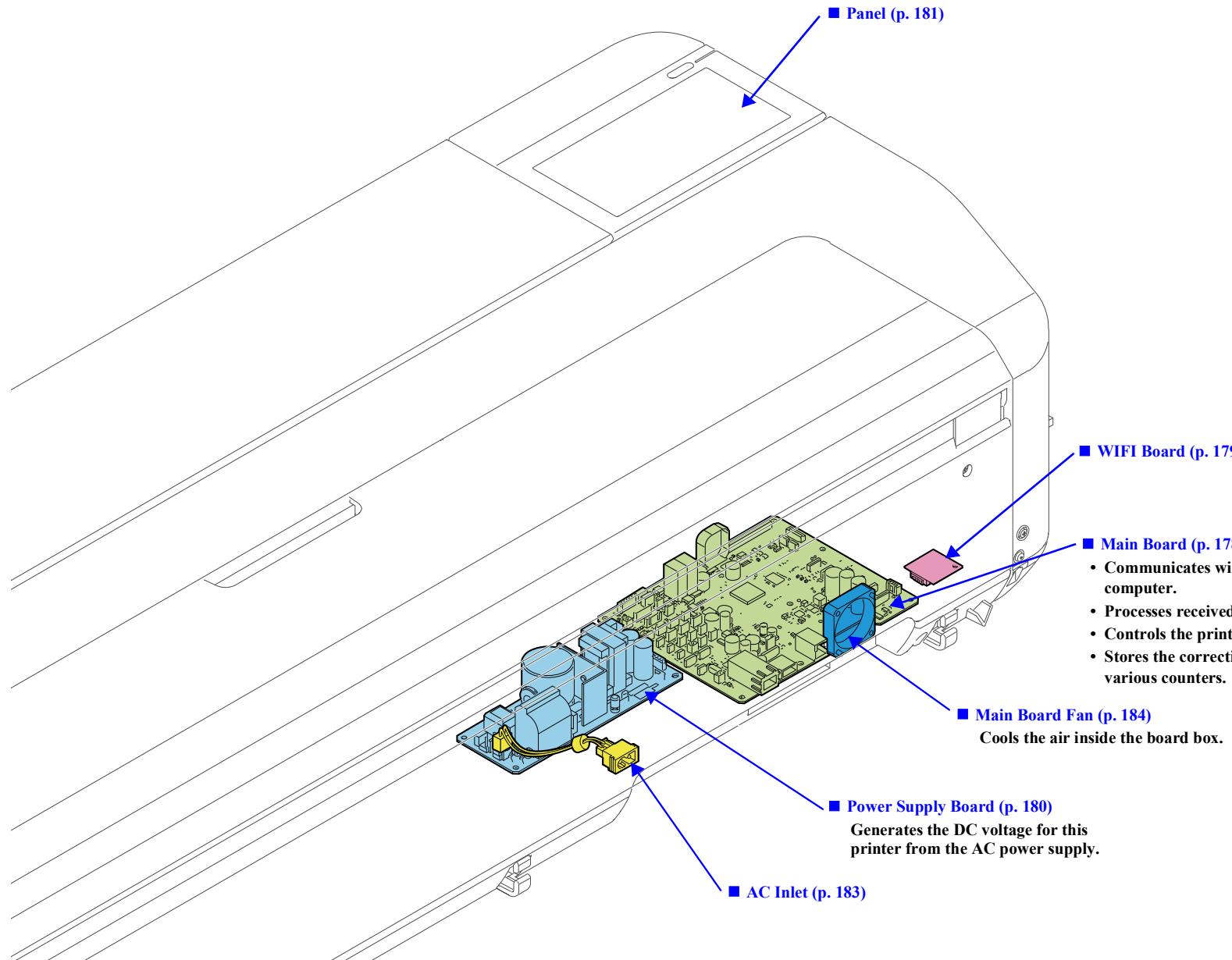


Figure 3-3. Electric Circuit Components

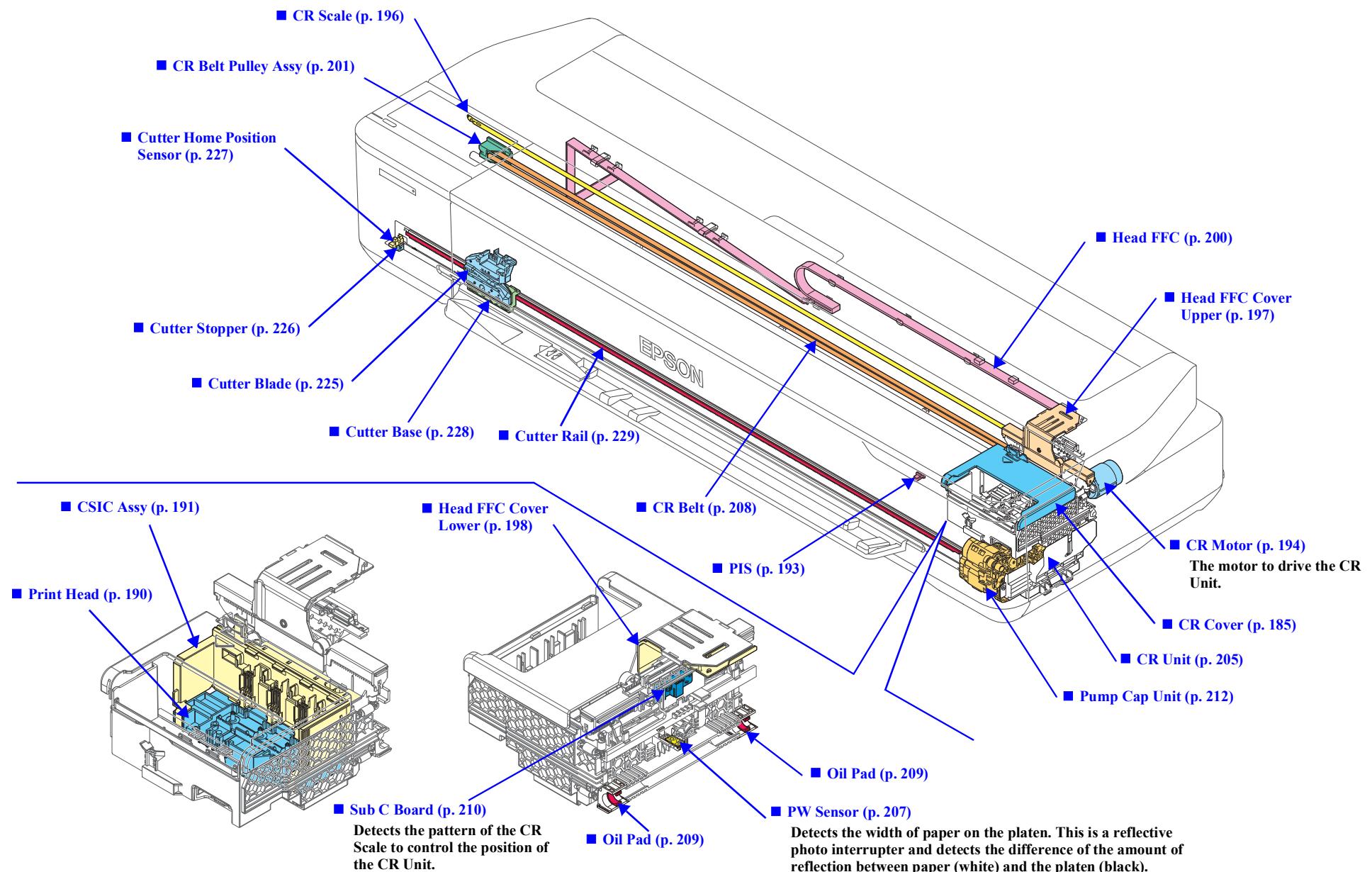


Figure 3-4. Carriage Mechanism

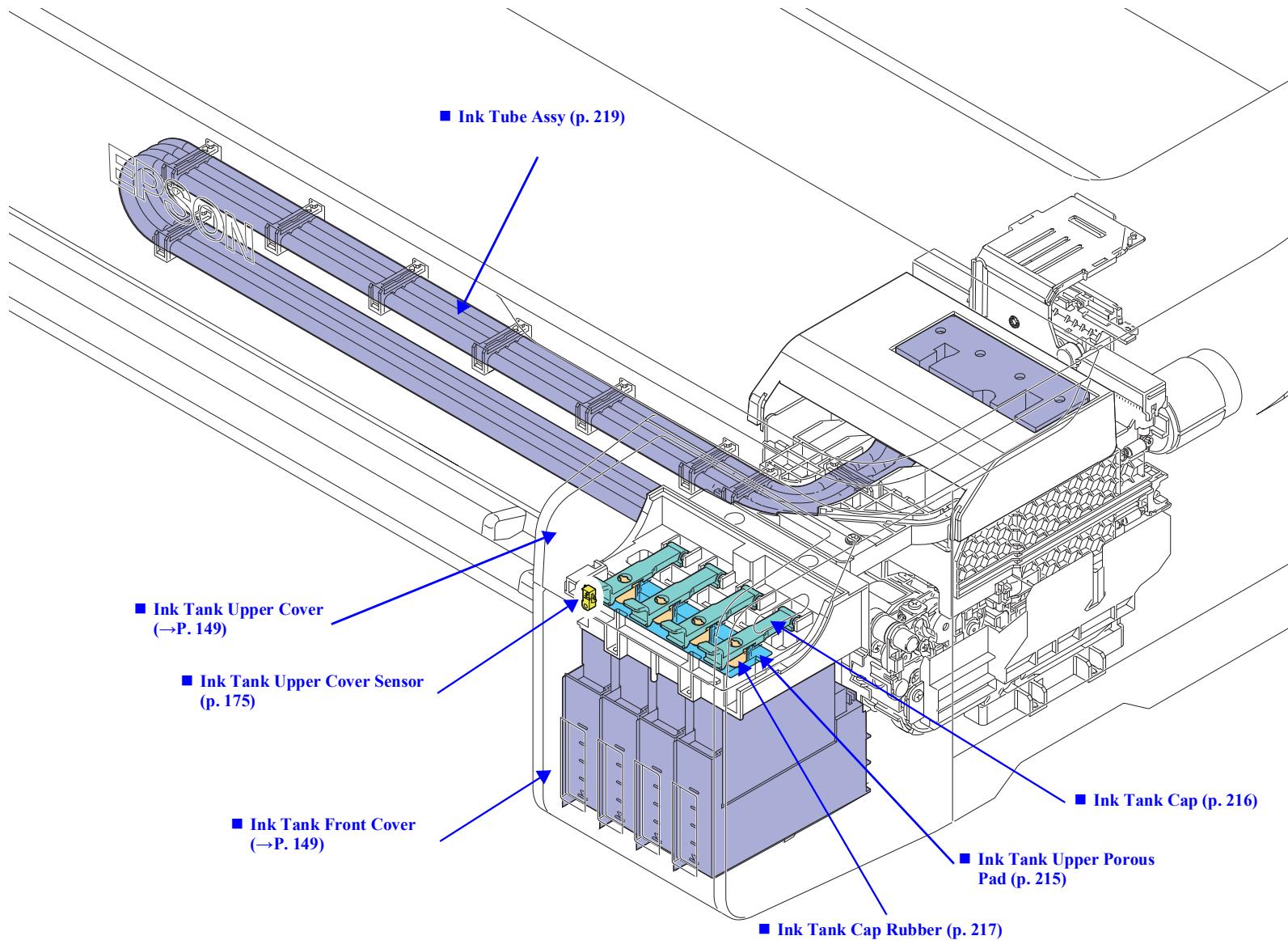


Figure 3-5. Ink Supply Mechanism (SC-T3100X Series/SC-T3100D Series/SC-F500 Series)

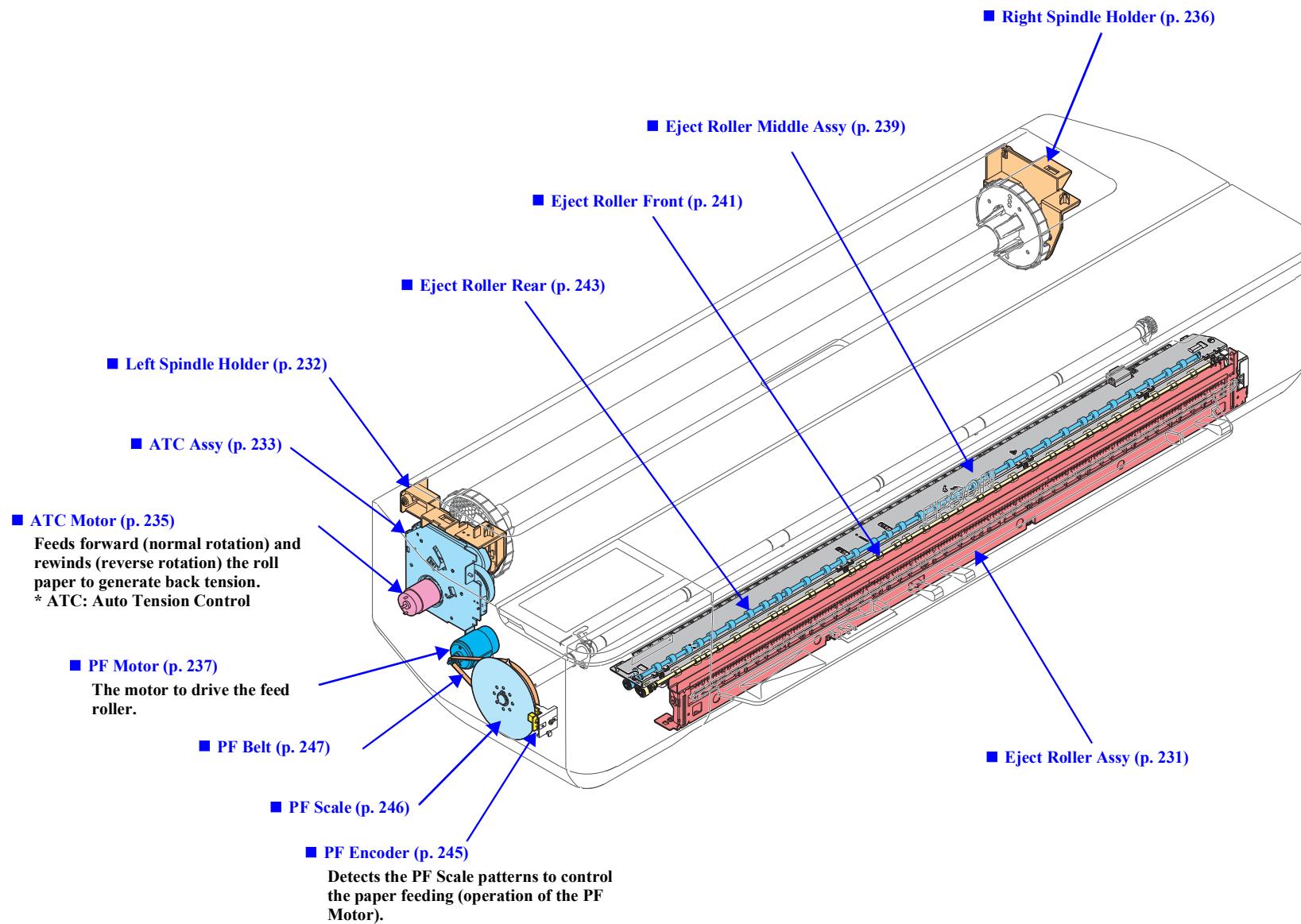


Figure 3-6. Paper Feed Mechanism

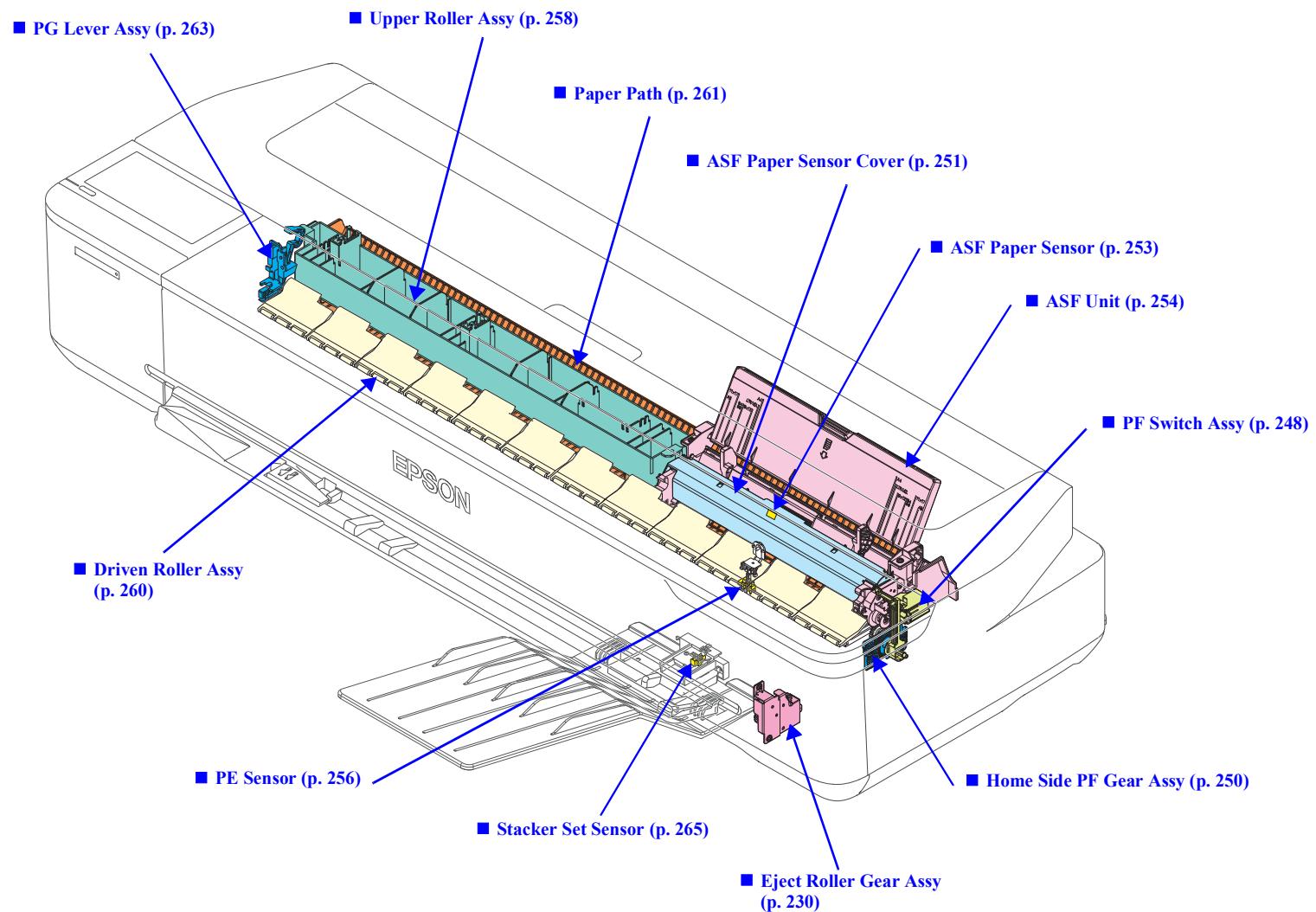
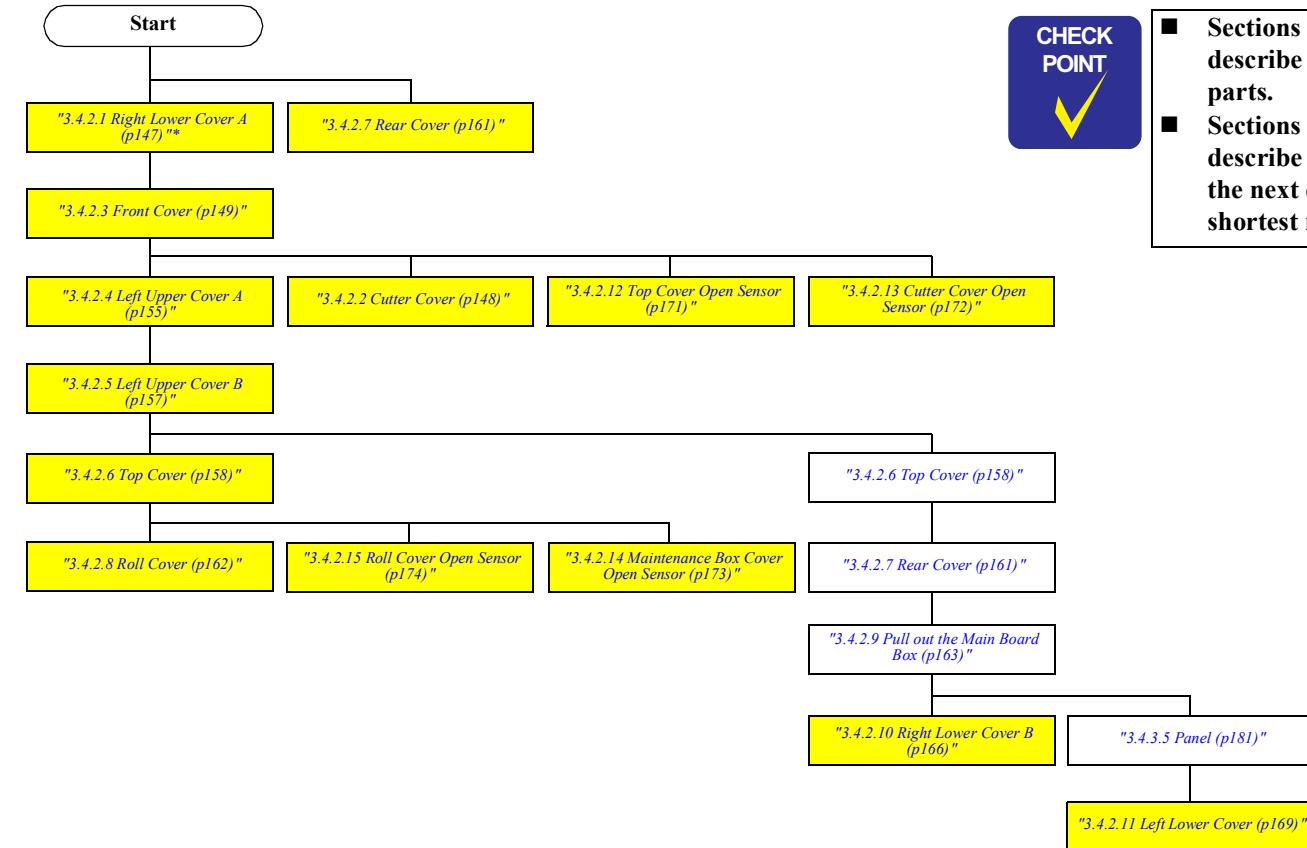


Figure 3-7. Paper Feed Mechanism

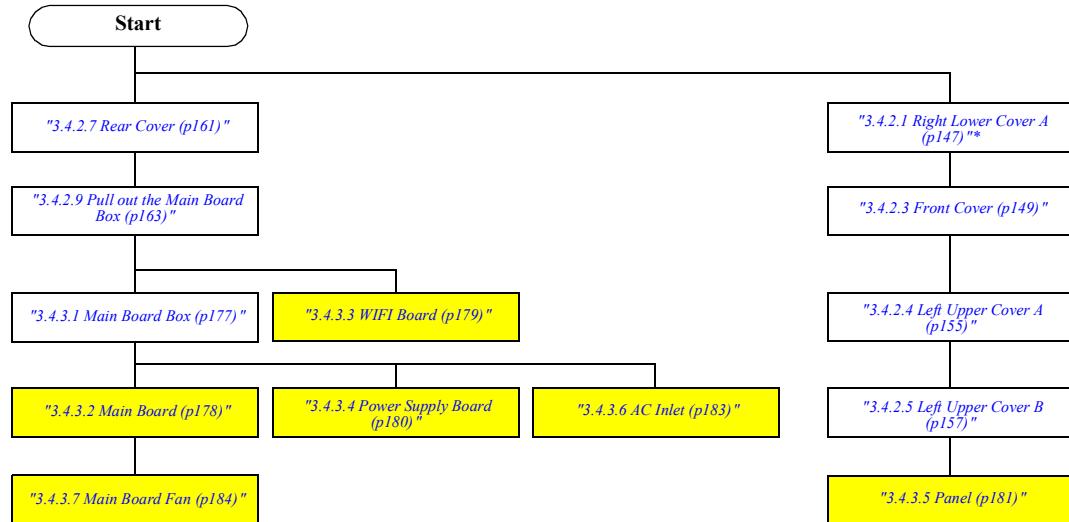
### 3.3 Disassembly Flowchart

#### HOUSING



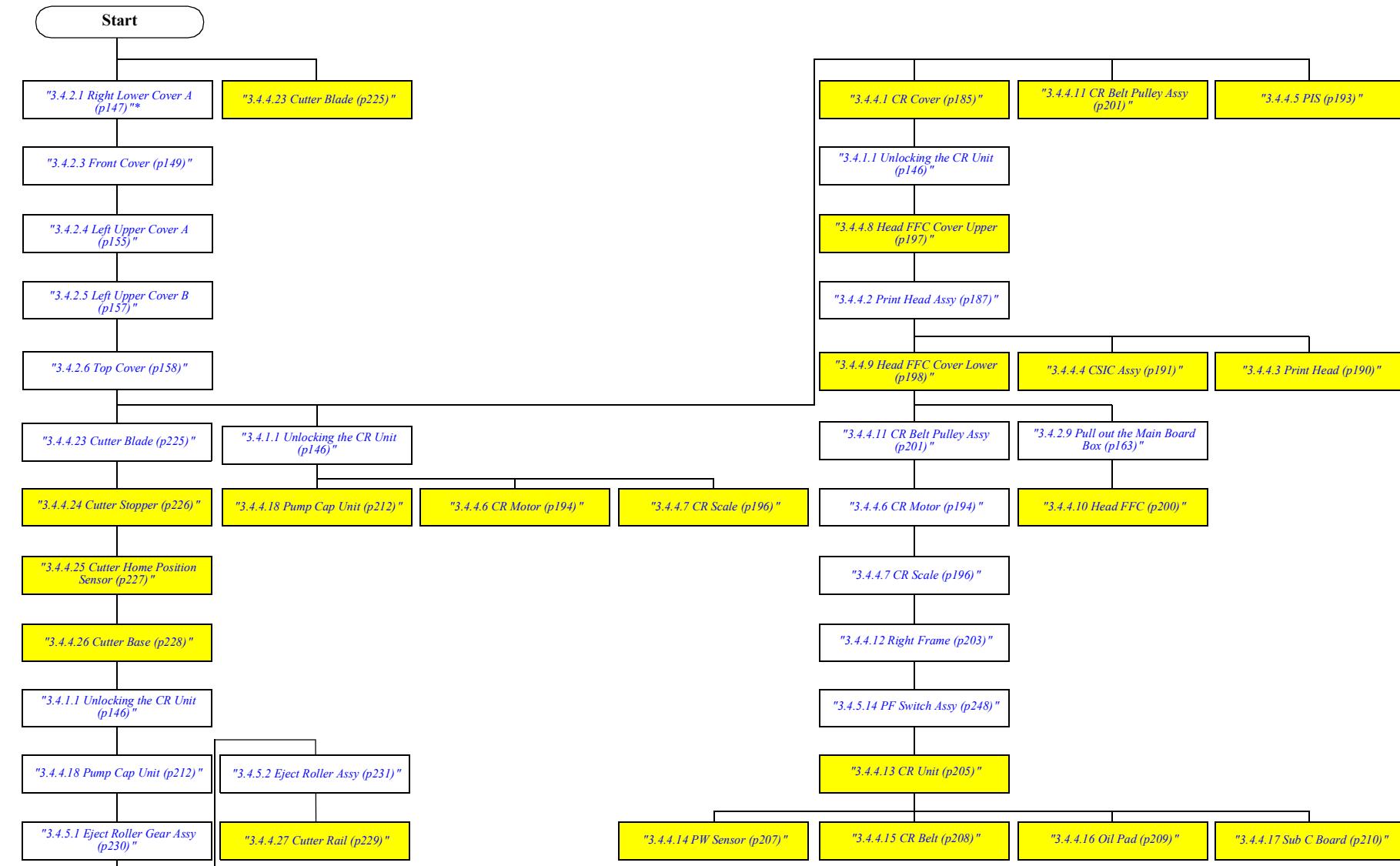
- CHECK POINT**
- Sections highlighted in yellow: Indicates sections that describe the shortest disassembly procedure for the related parts.
  - Sections highlighted in white: Indicates sections that describe parts that must be removed before proceeding to the next disassembly procedure. Note that this is not the shortest removal procedure for the related parts.

\*: Remove SC-T3100X Series/SC-T3100D Series/SC-F500 Series only when the Right Lower Cover B is removed.

**ELECTRIC CIRCUIT COMPONENTS / FANS**

\*: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only

## CARRIAGE MECHANISM / INK SYSTEM MECHANISM / CUTTER MECHANISM

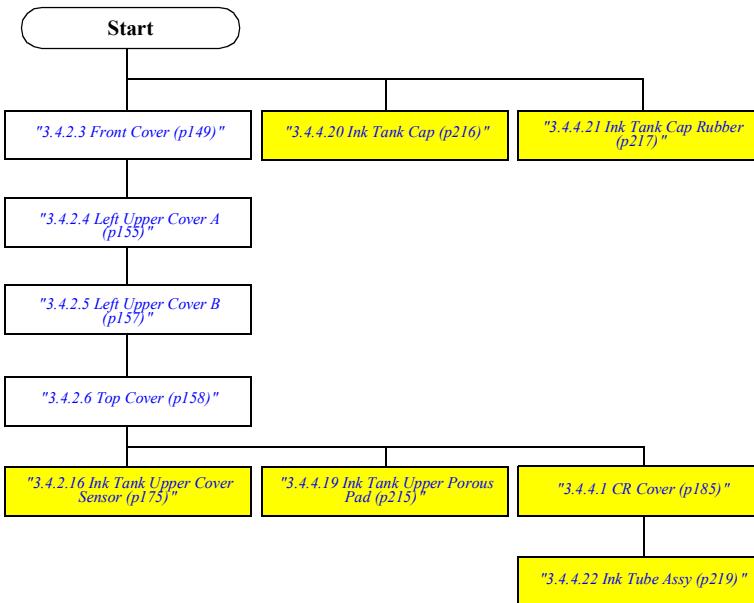


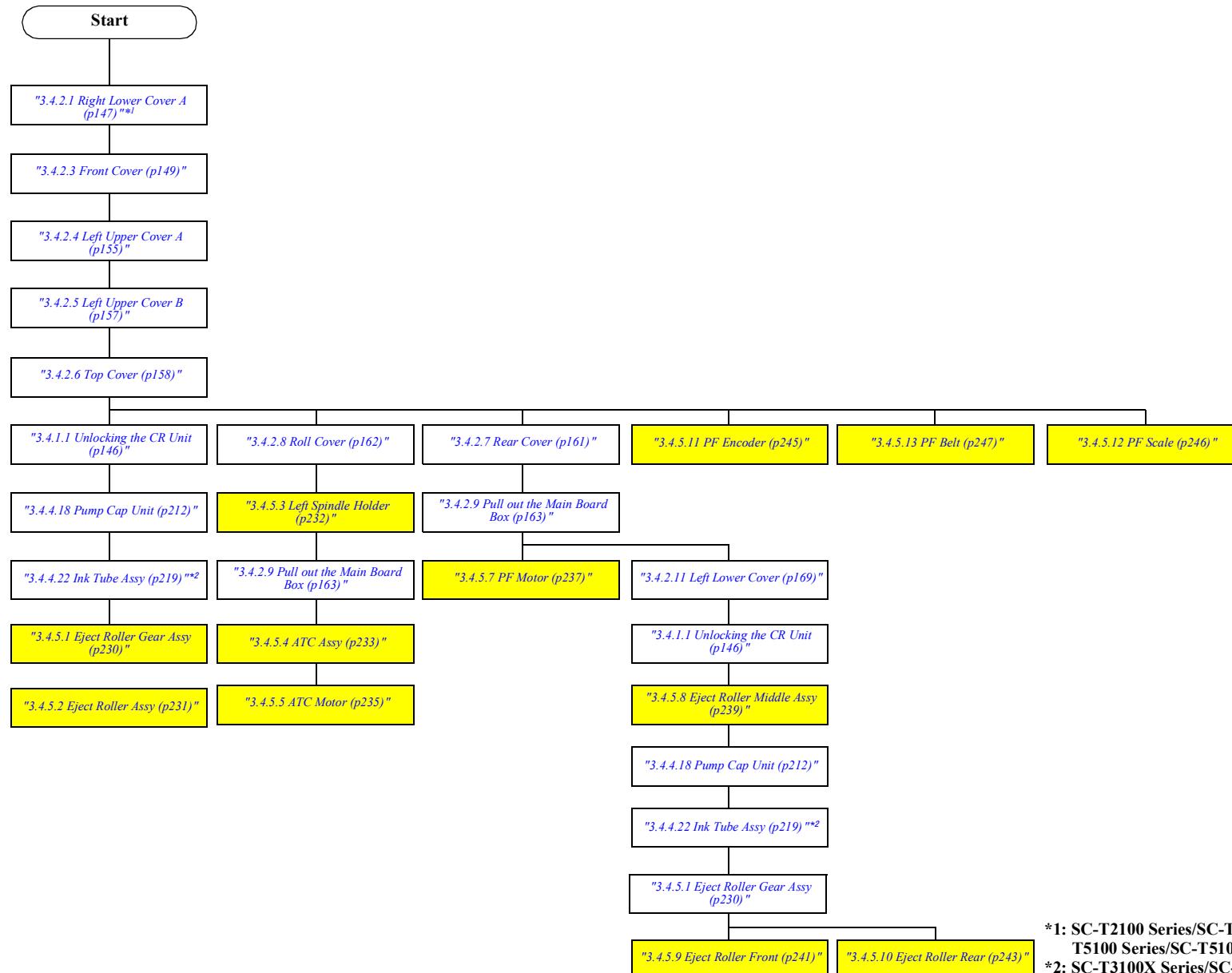
\*: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only

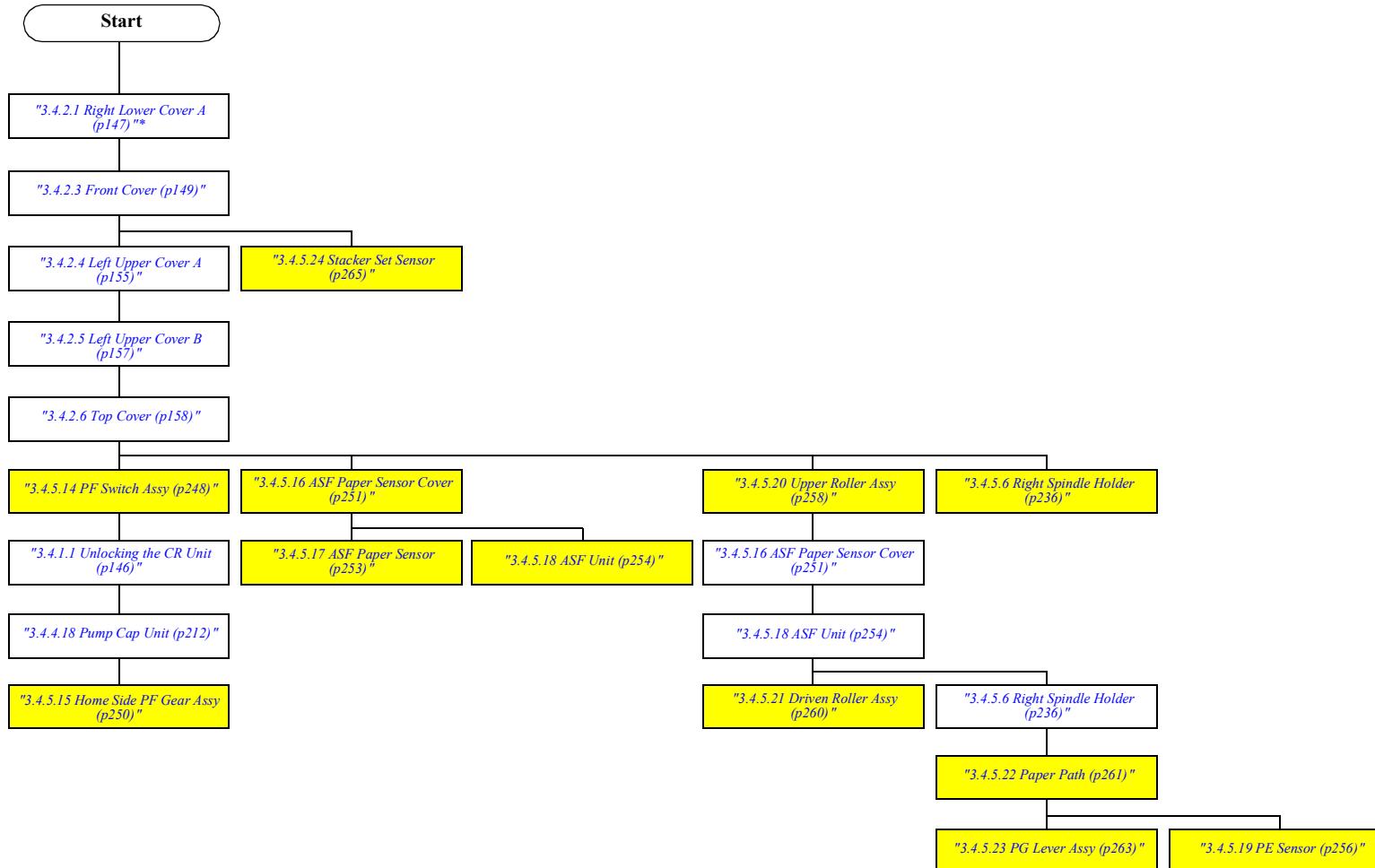
---

INK SUPPLY MECHANISM (SC-T3100X SERIES/SC-T3100D SERIES/SC-F500 SERIES ONLY)

---



**PAPER FEED MECHANISM**

**PAPER FEED MECHANISM**

\*: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only

## 3.4 Disassembly and Assembly Procedure

This section describes procedures for disassembling the components allowed to be disassembled. Unless otherwise specified, disassembled units or components can be reassembled by reversing the disassembly procedure.

### 3.4.1 Preparation for servicing

#### 3.4.1.1 Unlocking the CR Unit



**When you have unlocked the CR Unit and finished your reassembly work, move the CR Unit over the platen and turn the printer on to let it perform the initialization sequence. (By this sequence, the CR Unit is locked and Print Head is capped.) If the initialization is performed on or over the cap, it may touch the Print Head.**

Automatic

Start the Service Program and unlock/lock the CR Unit. Otherwise, press [F11] on the keyboard, unlock the CR Unit. To lock the CR Unit, press [F12] on the keyboard.

Manual

1. Remove the Top Cover. ([p158](#))
2. Insert a screwdriver into the cover through the hole as shown in [Figure 3-8](#).
3. To unlock the CR Unit, rotate the CR lock manual gear of Pump Cap Unit seven times clockwise with a screwdriver.

To lock the CR Unit, rotate a screwdriver counterclockwise.



**When unlocking the CR Unit, do not rotate the CR lock manual gear more than seven times. Otherwise, the wiper rises and it may touch the Print head.**



**When unlocking/locking the CR Unit, refer the mark on the Pump Cap Unit. ([Figure 3-8](#))**

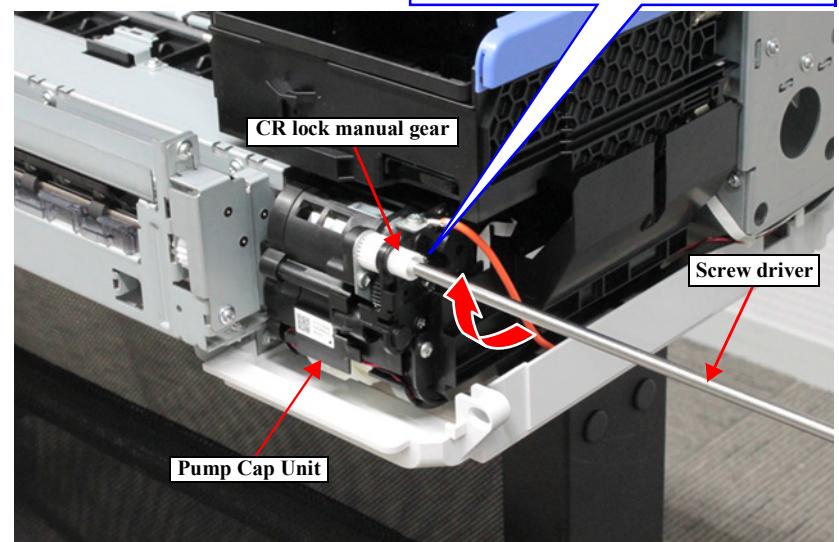
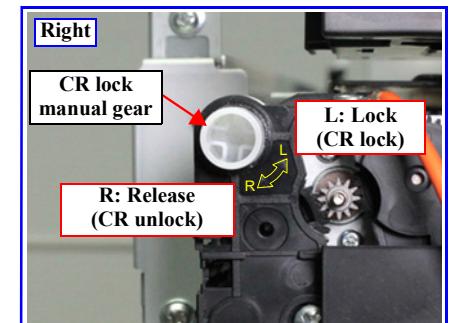


Figure 3-8. Unlocking the CR Unit

### 3.4.2 Housing

#### 3.4.2.1 Right Lower Cover A

1. Remove the two screws that secure the Right Lower Cover A.  
A) Silver M3x10 P-tite screw: 2 pcs
2. Insert a flathead screwdriver to disengage the five hooks as shown below, and remove the Right Lower Cover A.

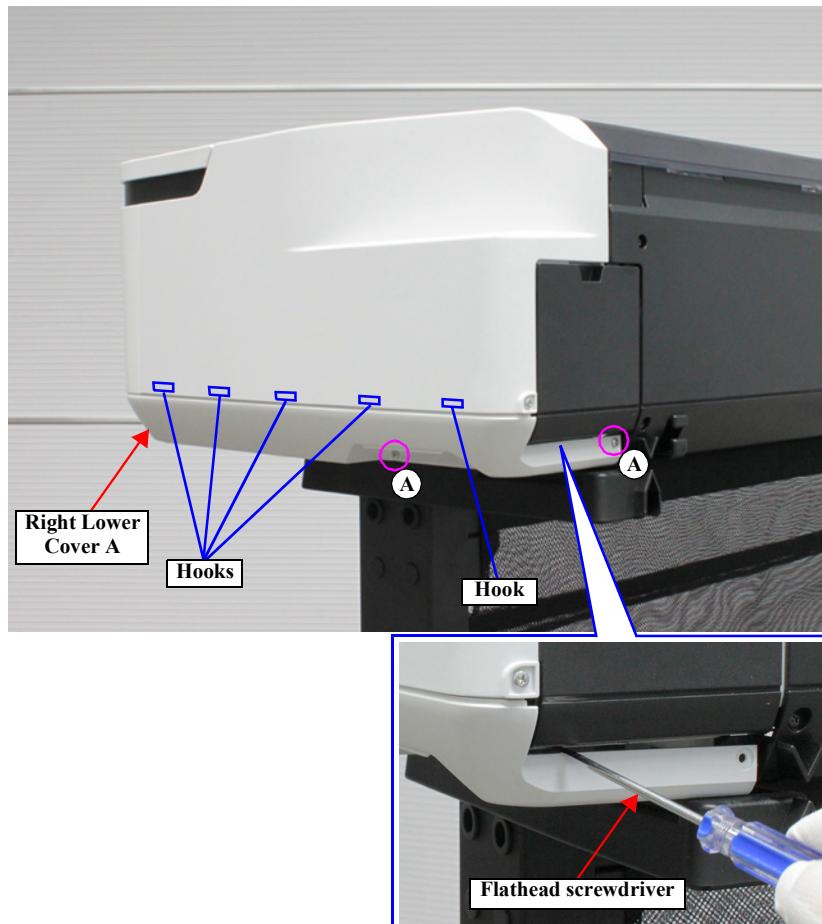


Figure 3-9. Removing the Right Lower Cover A

### 3.4.2.2 Cutter Cover

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Open the Cutter Cover.
4. Remove the two screws, and remove the Cutter Cover.  
A) Silver M3x10 P-tite screw: 2 pcs



**Hold the Cutter Cover when removing the screws since the Cutter Cover may fall.**



**When assembling the Cutter Cover, be careful not to catch the cable.**

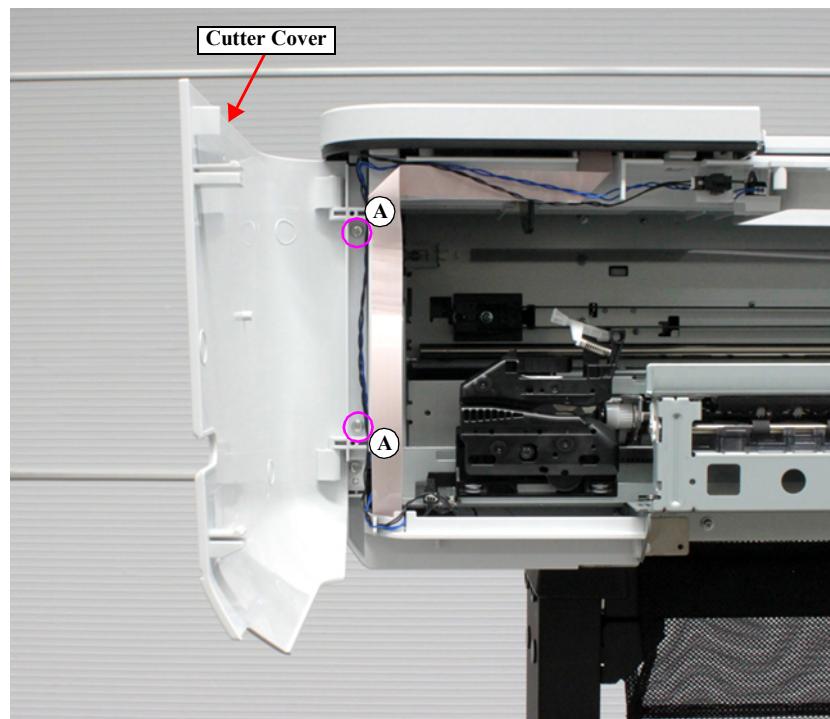


Figure 3-10. Removing the Cutter Cover

### 3.4.2.3 Front Cover



The disassembly procedures of SC-T3100X Series/SC-T3100D Series/SC-F500 Series differ from SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series.

- SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series: [P. 149](#)
- SC-T3100X Series/SC-T3100D Series/SC-F500 Series: [P. 150](#)

SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series

1. Remove the Right Lower Cover A. ([p147](#))
  2. Open the Top Cover.
  3. Open the Cutter Cover.
  4. Remove the seven screws that secure the Front Cover.
- A) Black M3x10 P-tite screw: 2 pcs  
 B) Silver M3x10 P-tite screw: 3 pcs  
 C) Silver M3x10 S-tite screw: 2 pcs

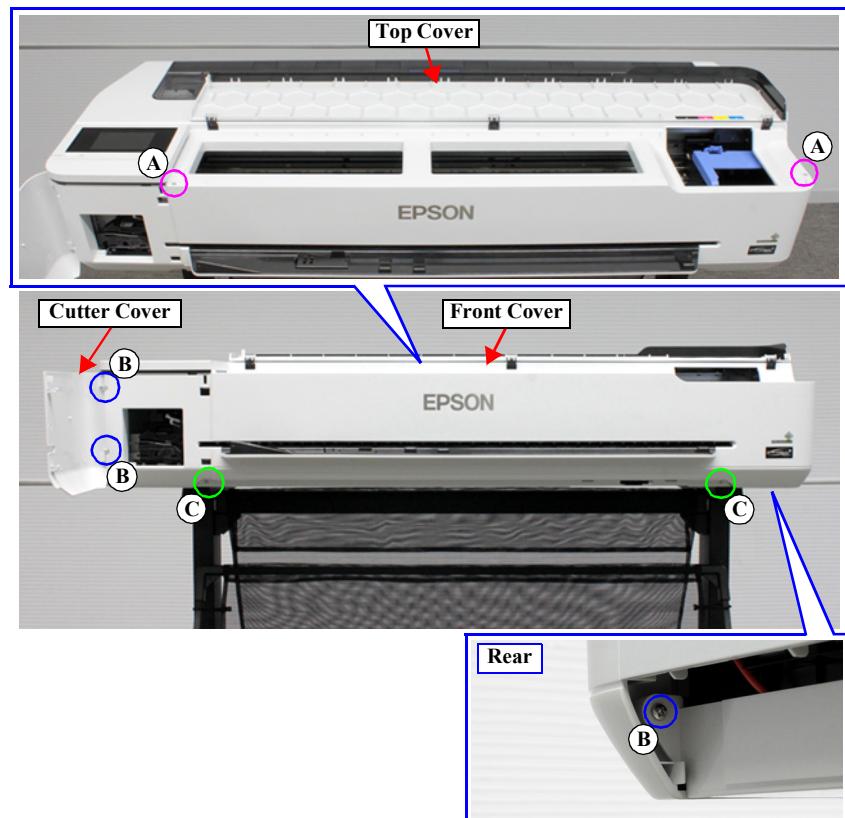


Figure 3-11. Removing the screws

*Continue to the next page.*

5. Insert a flathead screwdriver as shown below to disengage the seven hooks from the left side, and then remove the Front Cover.

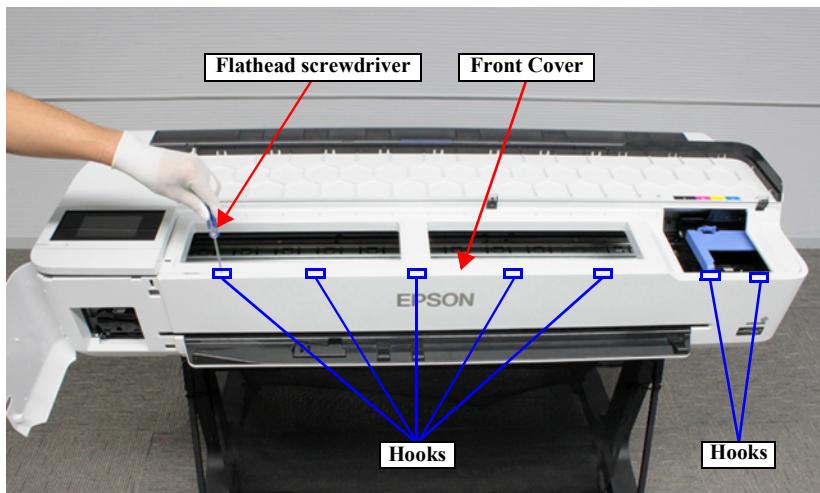


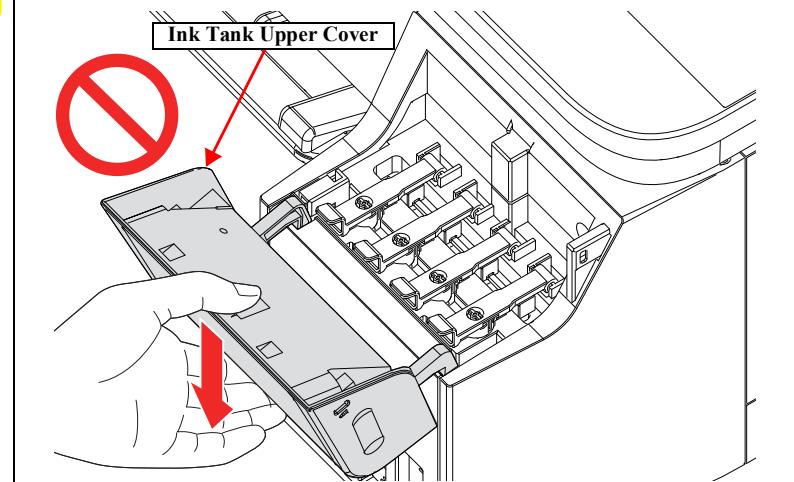
Figure 3-12. Removing the Front Cover

SC-T3100X Series/SC-T3100D Series/SC-F500 Series

1. Open the Ink Tank Upper Cover.



**Do not press strongly on the Ink Tank Upper Cover during this step. The Ink Tank Upper Cover could be damaged if pressed strongly.**



*Continue to the next page.*

2. With the Ink Tank Upper Cover lever at a horizontal position, push the Ink Tank Upper Cover in the direction of the illustrated arrow to remove it.

Right

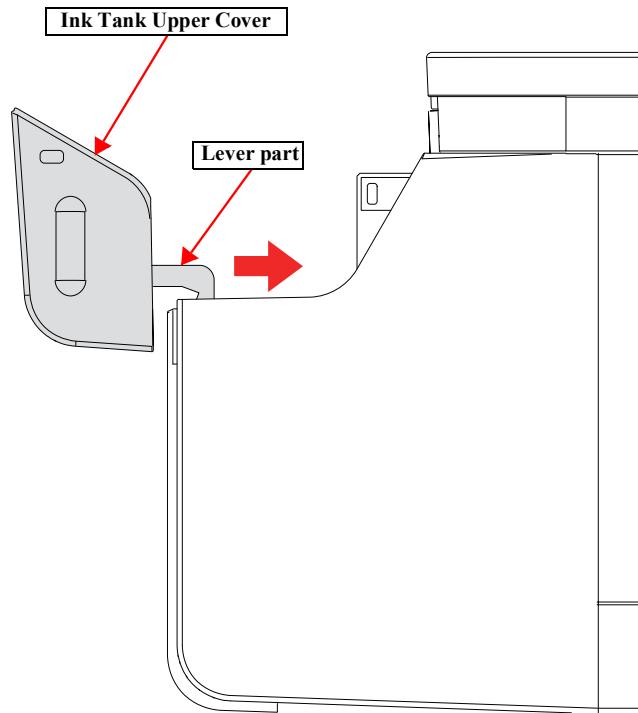
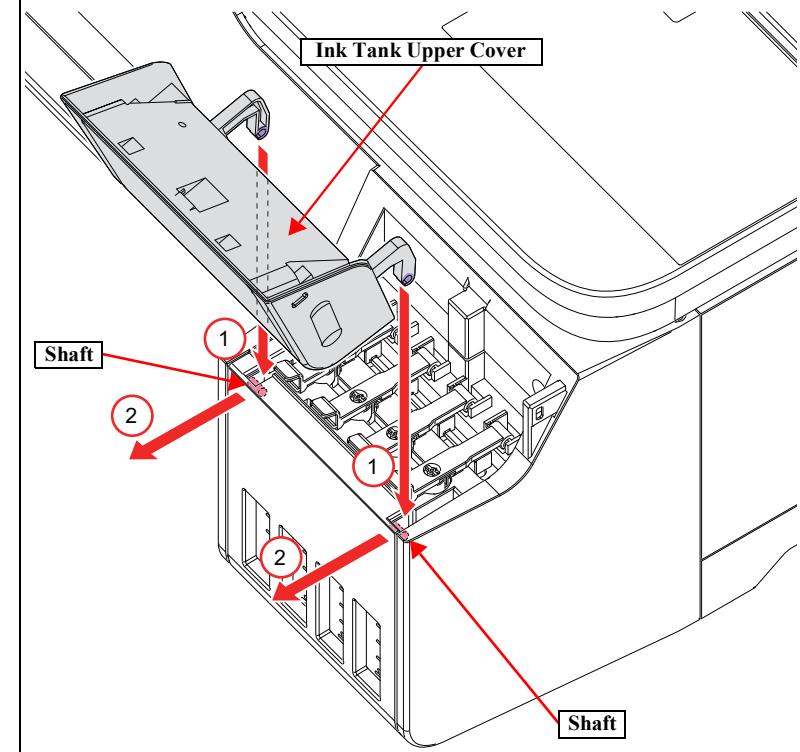


Figure 3-13. Removing the Ink Tank Upper Cover



Use the following procedure to install the Ink Tank Upper Cover.

1. Set the hooks of the Ink Tank Upper Cover behind the shafts.
2. With the Ink Tank Upper Cover in the fully open position, move the Ink Tank Upper Cover in the direction of the illustrated arrows until the hooks fit into the shafts.



**CHECK POINT**

If the stand is not attached, perform this step by taking out the ink tank in front of the desk.

3. Slightly lift the Ink Tank Front Cover and remove the Ink Tank Front Cover from the two tabs.

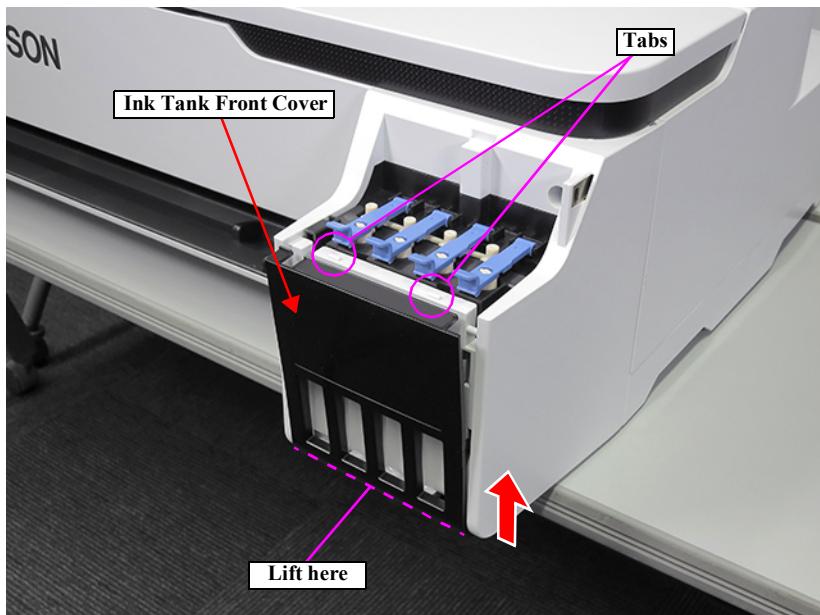


Figure 3-14. Removing the Ink Tank Front Cover (1)

4. Insert a flathead screwdriver and release the two hooks on the Ink Tank Front Cover.
5. Remove the Ink Tank Front Cover.

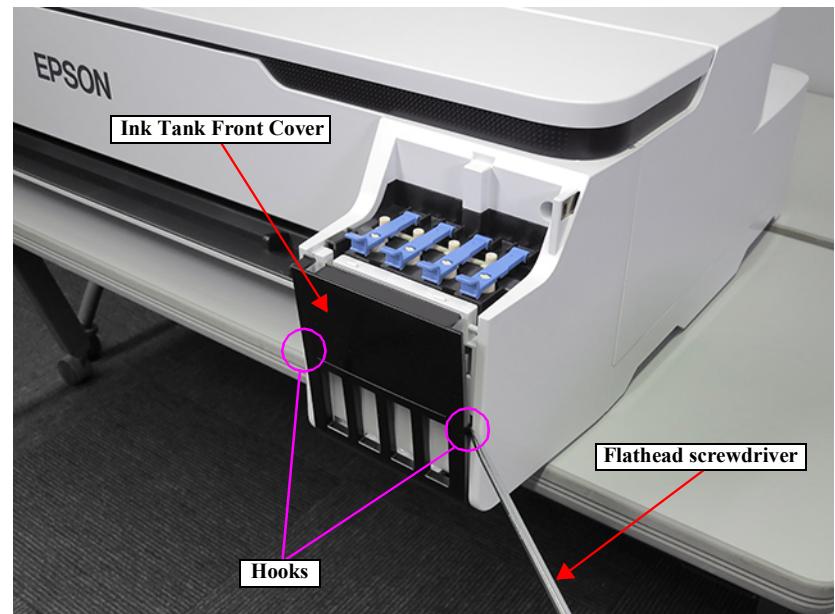
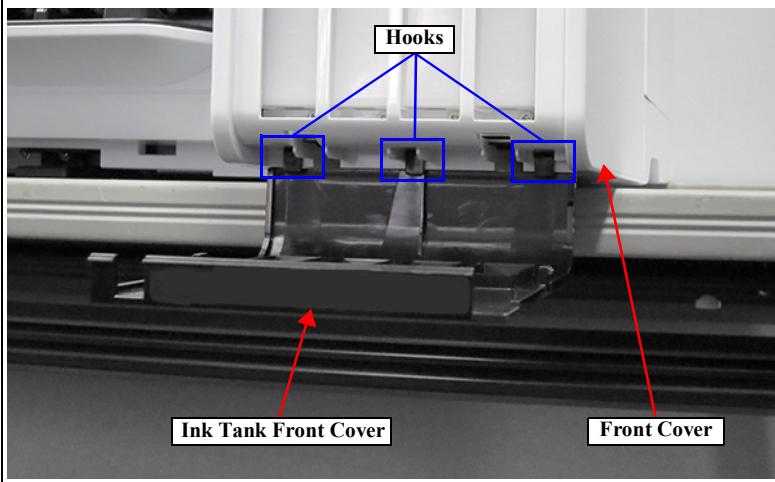


Figure 3-15. Removing the Ink Tank Front Cover (2)

Continue to the next page.



Insert the three hooks on the Ink Tank Front Cover into the front cover holes.



6. Open the Top Cover.
7. Open the Cutter Cover.
8. Remove the nine screws that secure the Front Cover.
  - A)Black M3x10 P-tite screw: 2 pcs
  - B)Silver M3x10 P-tite screw: 3 pcs
  - C)Silver M3x10 S-tite screw: 2 pcs
  - D)Silver M3x6 S-tite screw: 2 pcs

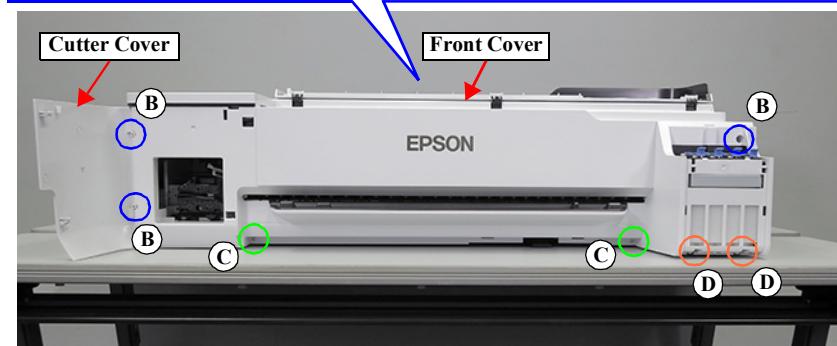


Figure 3-16. Removing the screws

9. As illustrated in the figure, insert a flathead screwdriver to release the four hooks starting from the left side and then remove the Front Cover.

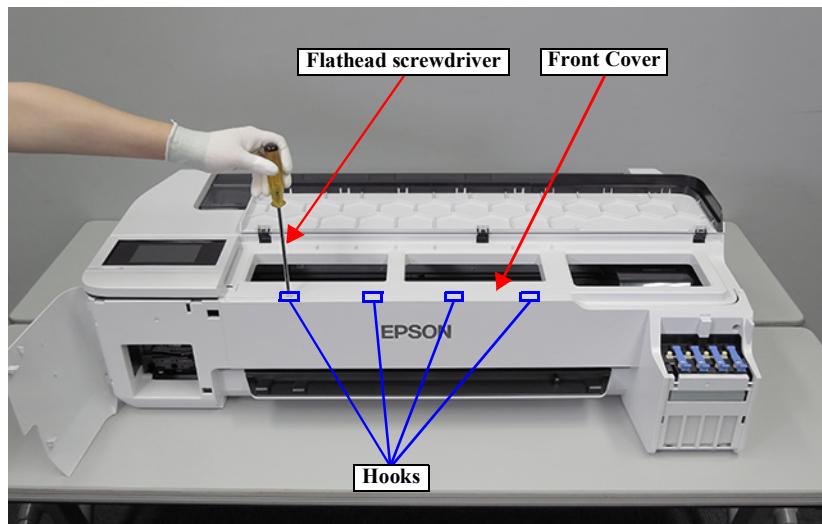


Figure 3-17. Removing the Front Cover

### 3.4.2.4 Left Upper Cover A

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Disengage the two hooks on the front side of the Left Upper Cover A.
4. Release the two hooks on the rear side of the Left Upper Cover A by pushing them to the back side with the flathead screwdriver, and remove the Left Upper Cover A.  
To release Hook B for the SC-T3100X Series/SC-T3100D Series/SC-F500 Series, insert a flathead screwdriver into the two holes of the ink tube guide as illustrated in [Figure 3-19](#) to release.

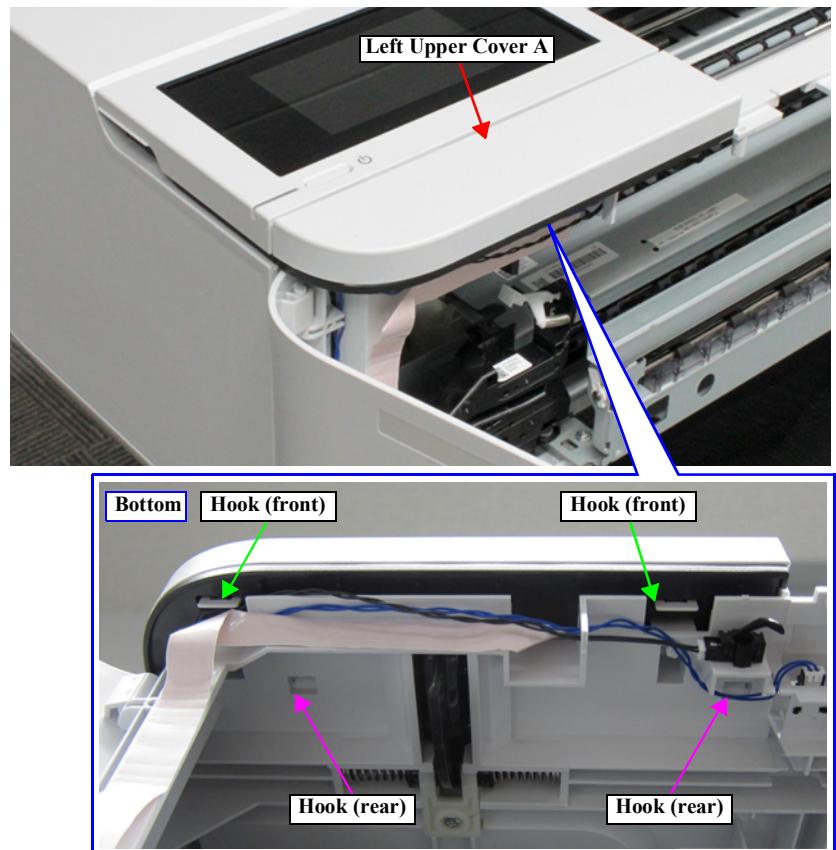


Figure 3-18. Removing the Left Upper Cover A

Continue to the next page.

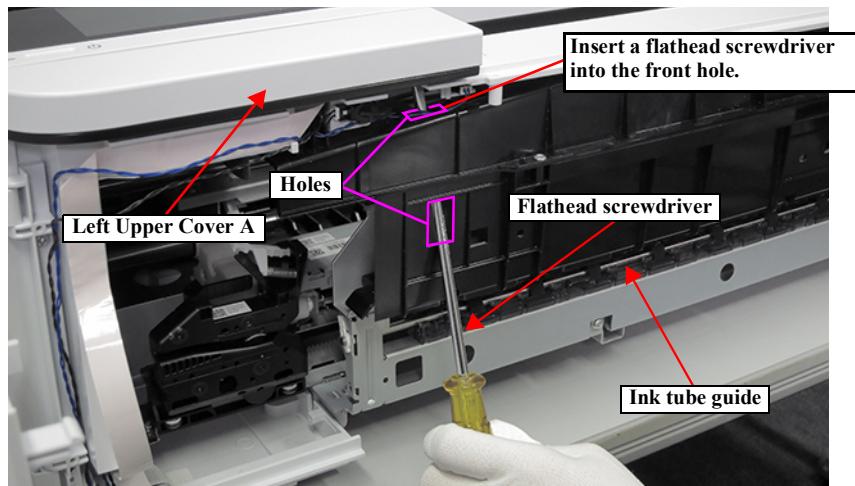


Figure 3-19. Releasing the hook B (SC-T3100X Series/SC-T3100D Series/SC-F500 Series)

### 3.4.2.5 Left Upper Cover B

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the two screws, remove the Left Upper Cover B.  
A) Silver M3x10 P-tite screw: 2 pcs

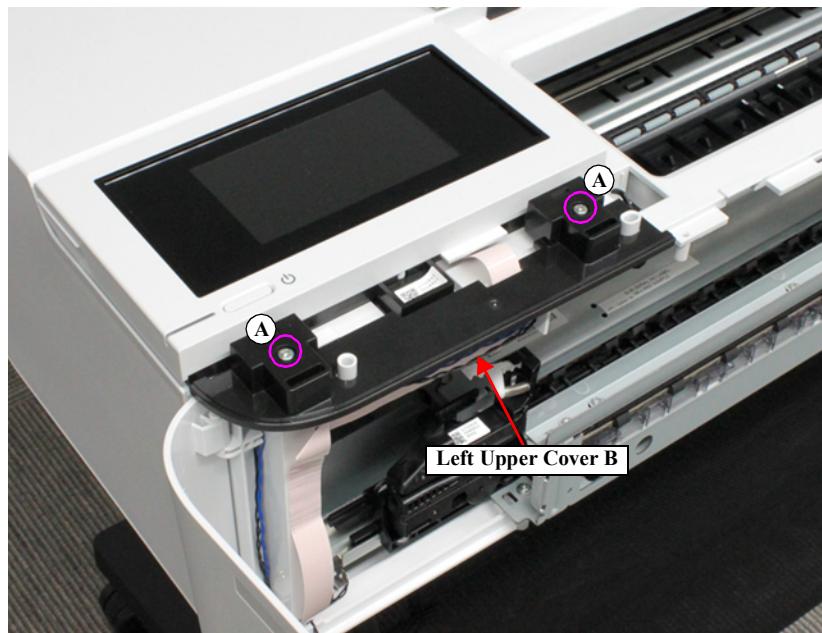


Figure 3-20. Removing the Left Upper Cover B



When replaced with a new part, make sure to lubricate the new one referring to "[5.4 Lubrication](#)" ([p398](#)).

### 3.4.2.6 Top Cover

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Disconnect the cable from the Top Cover Open Sensor and the Cutter Cover Open Sensor.
6. Release the Top Cover Open Sensor cable (blue) and Cutter Cover Open Sensor cable (black) from the two grooves on the Top Cover.
7. Peel off the Panel FFC.
8. Stand the Panel.
9. Remove the Panel from the damper and temporarily place the Panel.

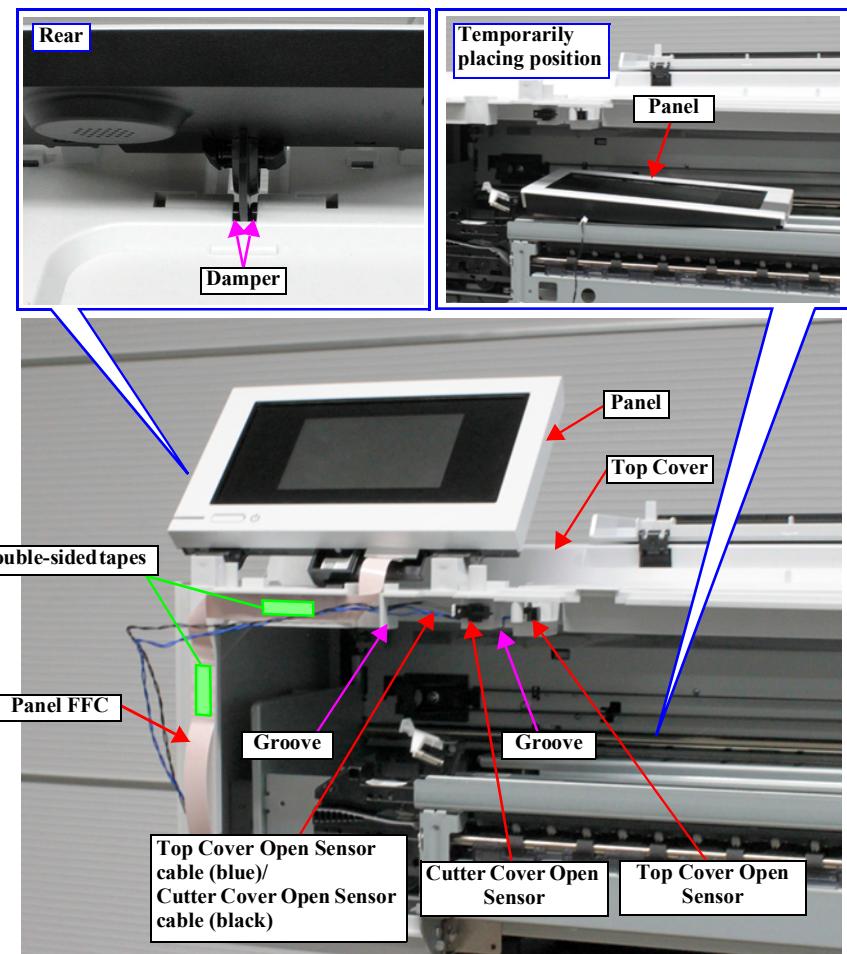


Figure 3-21. Releasing the cable

*Continue to the next page.*

10. Push the lever and open the roll cover.

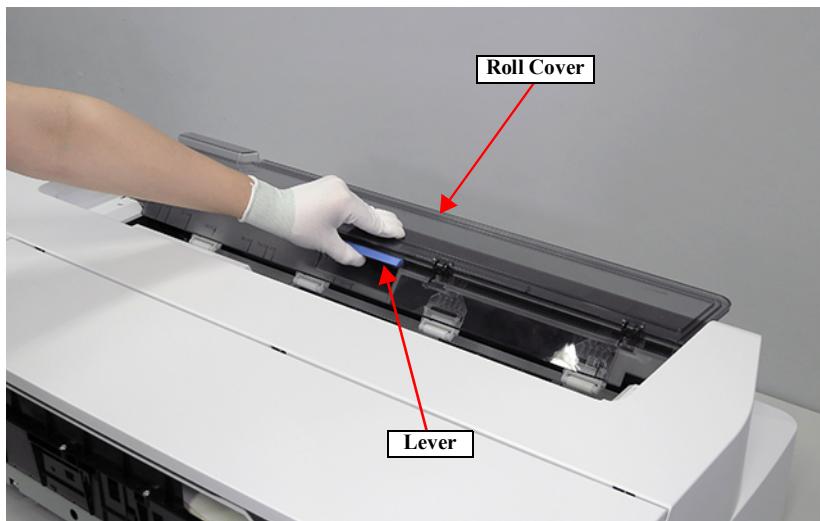


Figure 3-22. Removing the Top Cover

11. Remove the screws that secure the Top Cover.

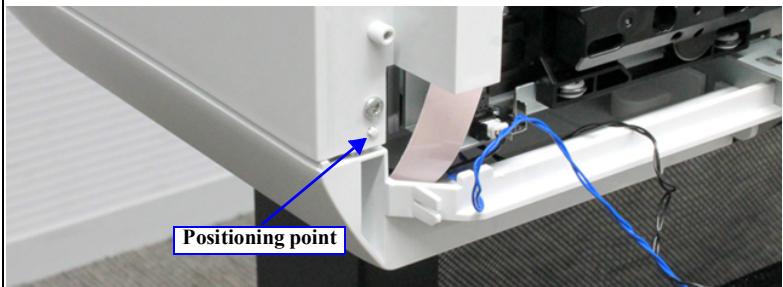
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series: 8 pcs, SC-T3100X Series/SC-T3100D Series/SC-F500 Series: 9 pcs)

- A) Silver M3x8 S-tite screw: 2 pcs
- B) Silver M3x8 P-tite screw: 3 pcs
- C) Silver M3x10 P-tite screw: 1 pc
- D) Silver M3x10 P-tite screw with built-in washer: 1 pc
- E) Silver M3x10 S-tite screw: 1 pc
- F) Silver M3x10 P-tite screw: 1 pc (SC-T3100X Series/SC-T3100D Series/SC-F500 Series only)

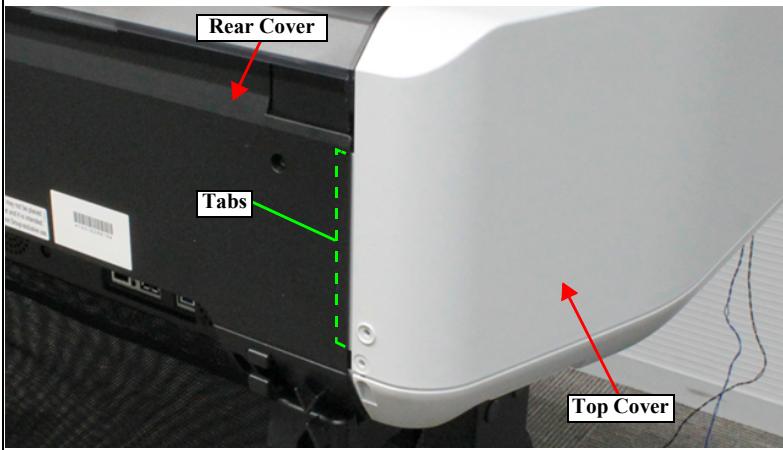
12. Disengage the dowel, and remove the Top Cover.



- Pay attention to the positioning point.



- Insert the tabs of the Top Cover into the inside the Rear Cover.



Continue to the next page.

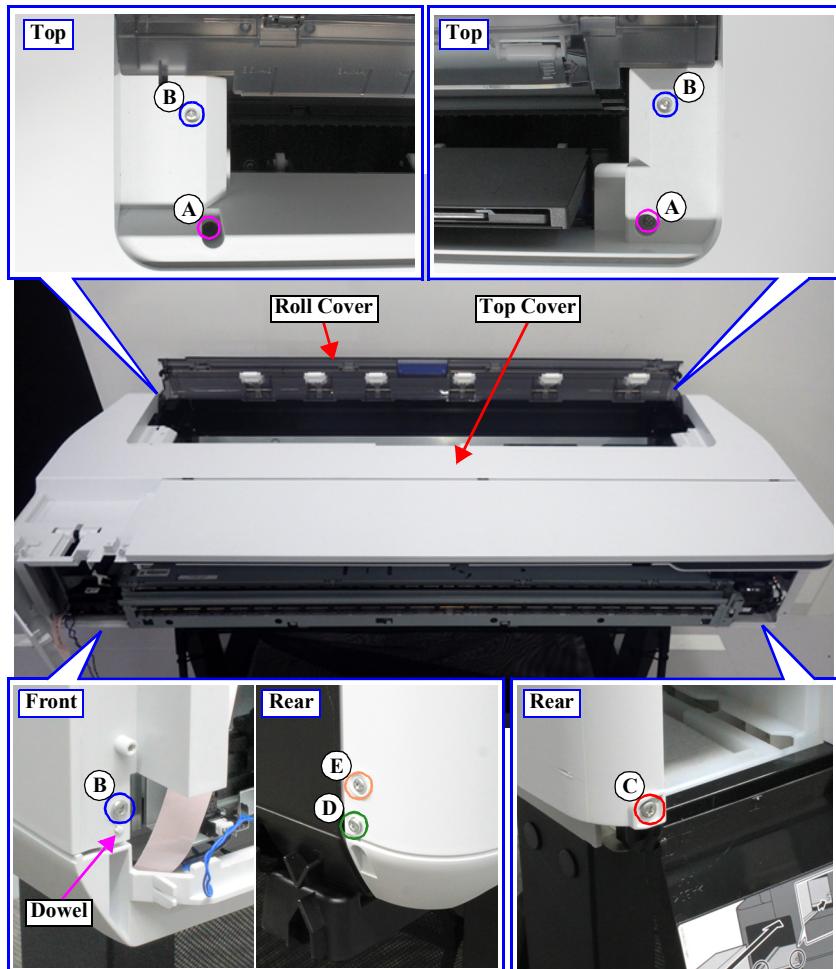


Figure 3-23. Removing the Top Cover

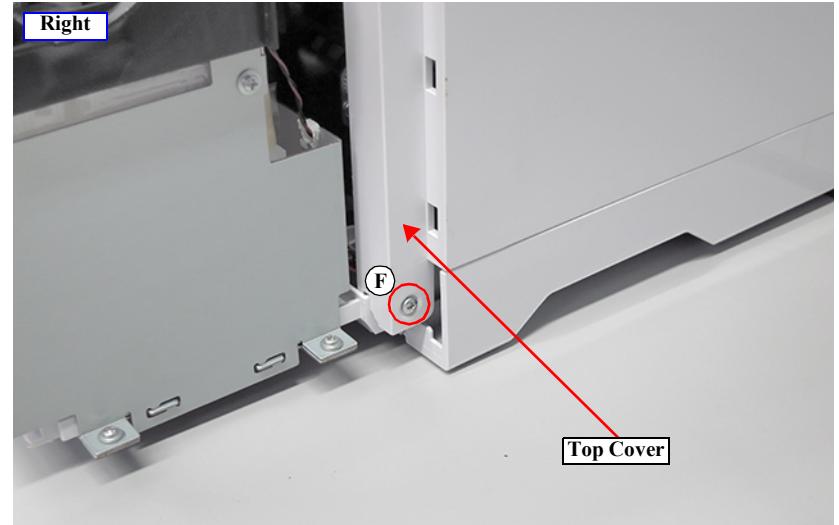


Figure 3-24. Screw F (SC-T3100X Series/SC-T3100D Series/SC-F500 Series)



When replaced with a new part, make sure to lubricate the new one referring to "5.4 Lubrication" (p398).

### 3.4.2.7 Rear Cover

1. Open the Maintenance Box Cover.
2. Remove the six screws, and remove the Rear Cover.

A) Black M3x6 S-tite screw: 2 pcs

B) Black M3x8 S-tite screw: 2 pcs

C) Black M3x10 P-tite screw: 1 pc

D) Silver M3x10 P-tite screw: 1 pc

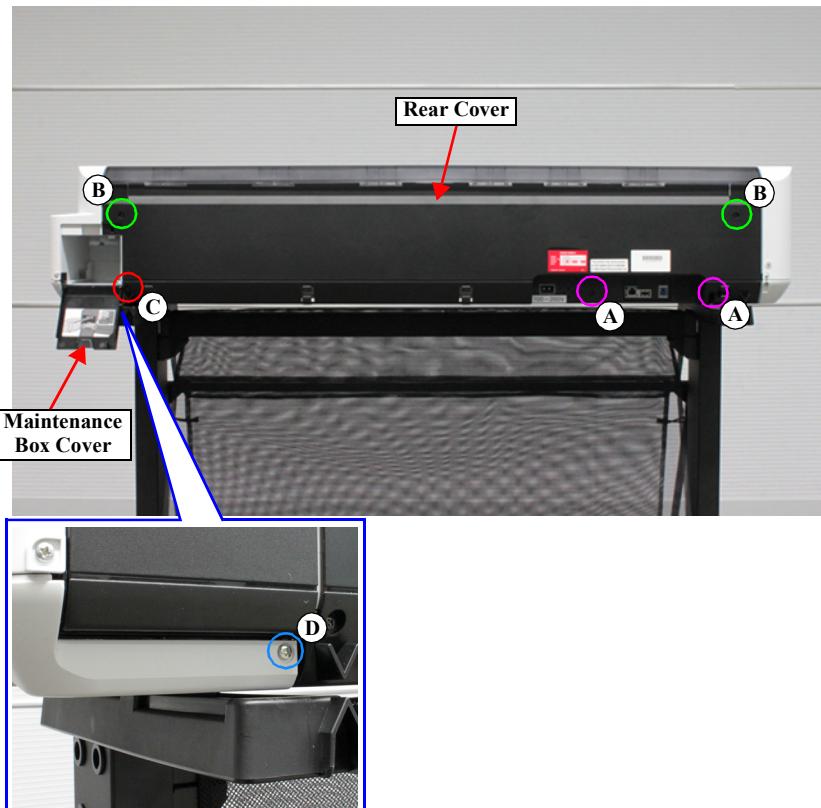


Figure 3-25. Removing the Rear Cover

### 3.4.2.8 Roll Cover



**When removing the Roll Cover, make sure to close it. Otherwise, the Roll Cover will fall and may damage the stopper.**

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the two screws and the two holders, remove the Roll Cover.

A) Silver M3x8 P-tite screw: 2 pcs



- When assembling the Roll Cover, align the phase of the gear referring to the figure shown below.
  - Make sure the semicircle part of the Roll Cover Gear and the circle mark on the gear of the ATC Assy is placed in the straight line.

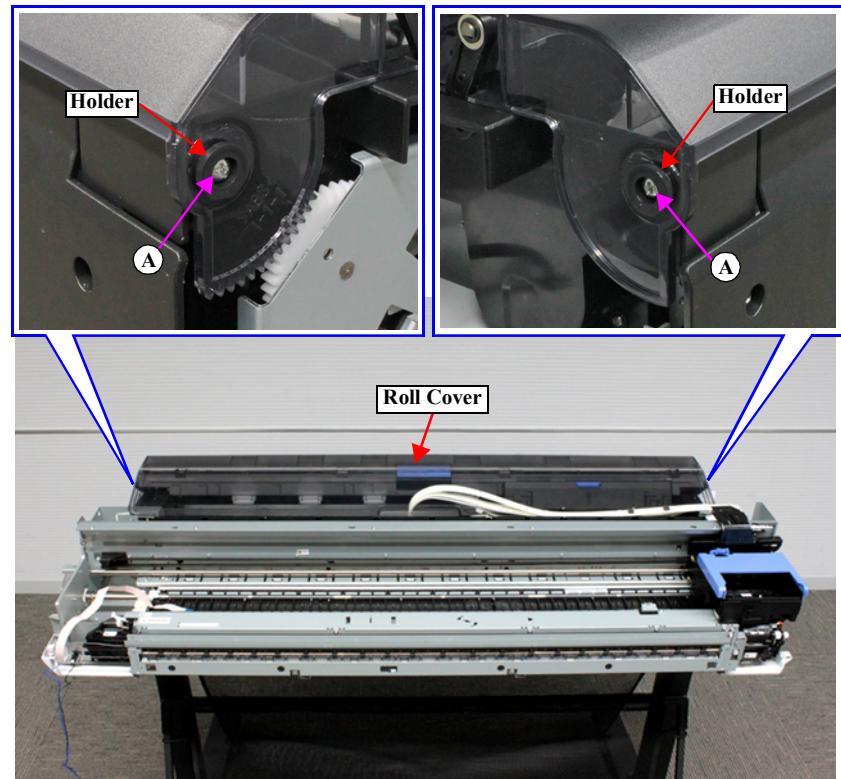
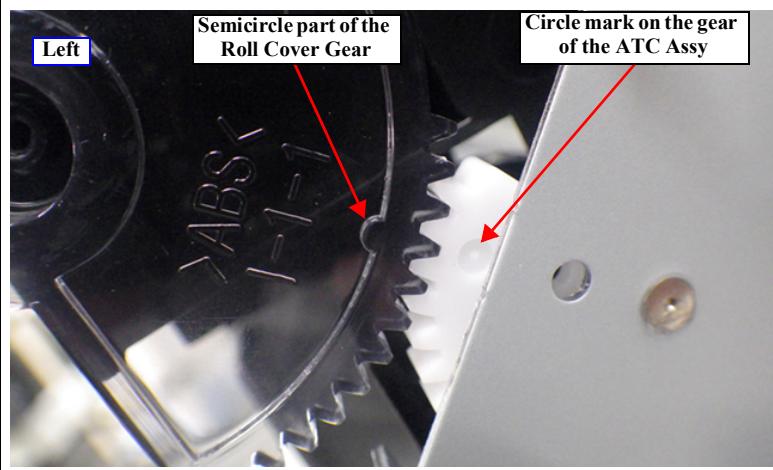


Figure 3-26. Removing the Roll Cover

### 3.4.2.9 Pull out the Main Board Box

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the Rear Cover. ([p161](#))
7. Remove the two screws that secure the Board Cover.  
A) Silver M3x6 S-tite screw: 1 pc  
B) Black M3x8 step cup screw: 1 pc
8. Insert a flathead screwdriver into the groove on the Board Cover to slightly lift the Board Cover
9. Release the two hooks to remove the Board Cover. Since the double-sided tape is pasted on the Board Cover, peel off the Board Cover to remove it.

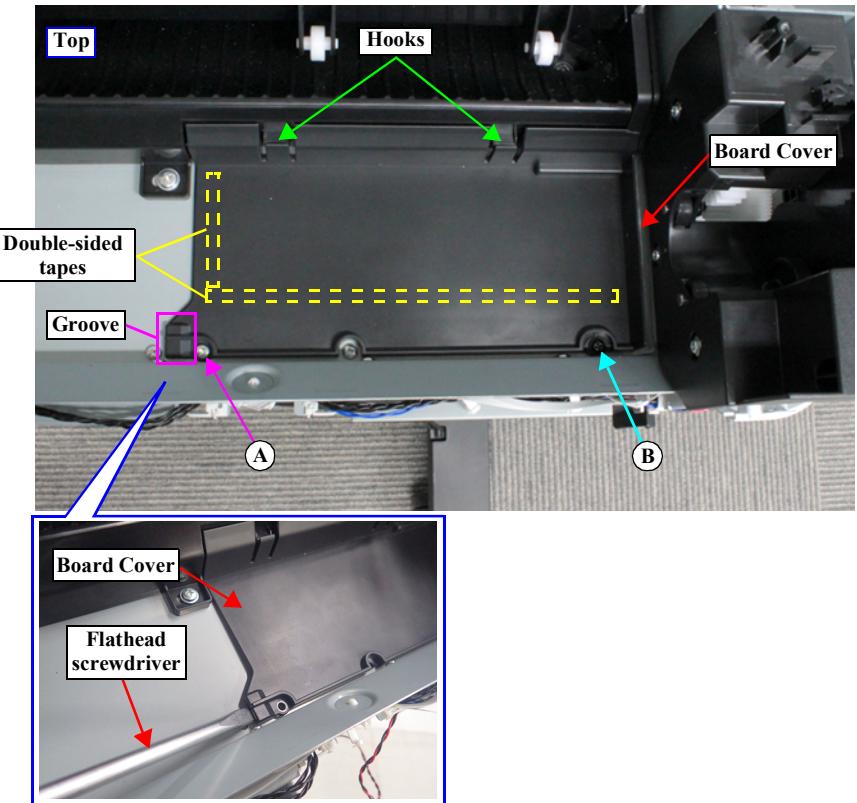


Figure 3-27. Removing the Board Cover

Continue to the next page.

10. Remove the four screws that secure the Main Board Box.

C) Silver M3x6 S-tite screw: 4 pcs

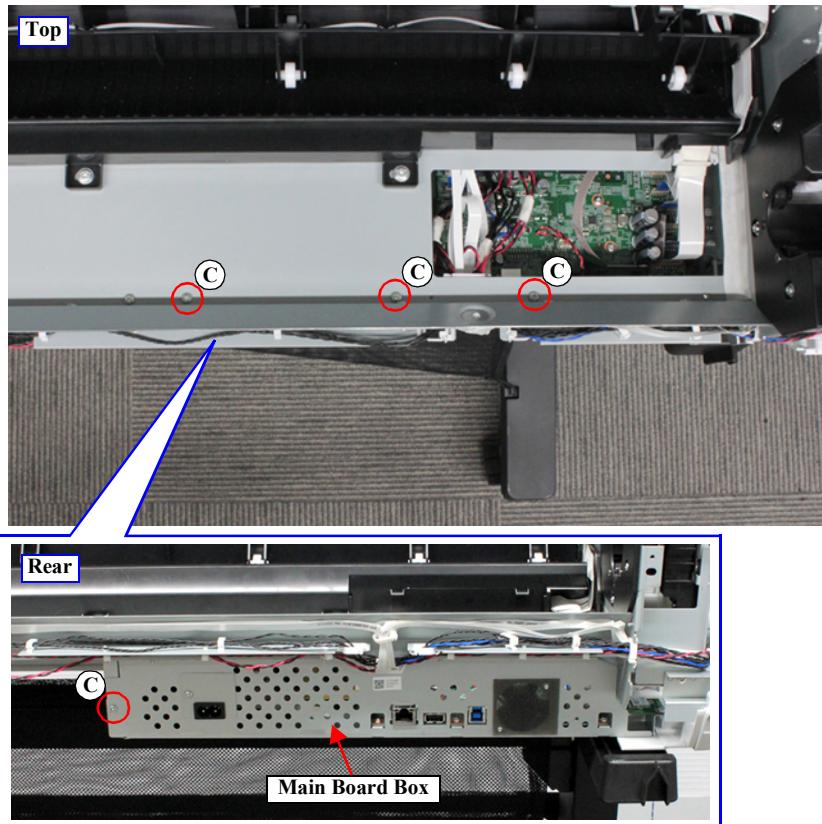


Figure 3-28. Removing the screws

11. Release the Head FFC from the clamp.

12. Remove the Head FFC and its ferrite core from the Upper Roller Assy together.

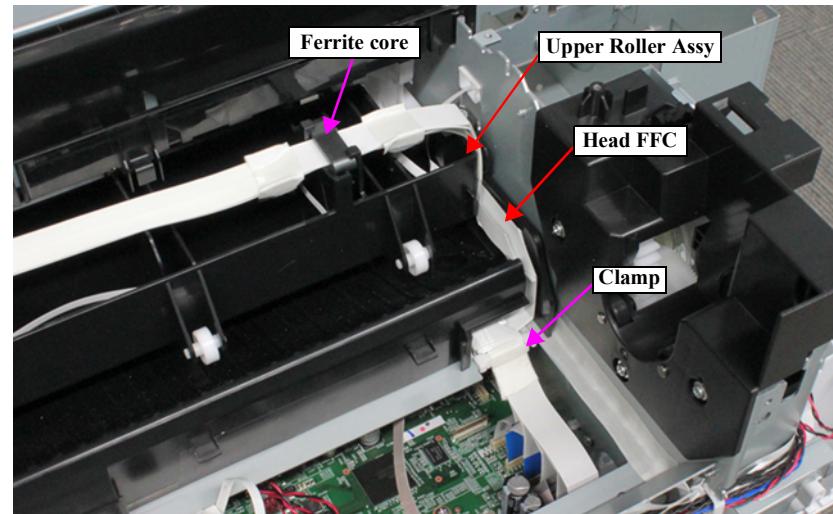


Figure 3-29. Releasing the Head FFC (1)

13. Release the Head FFC from the groove on the Upper Roller Assy.

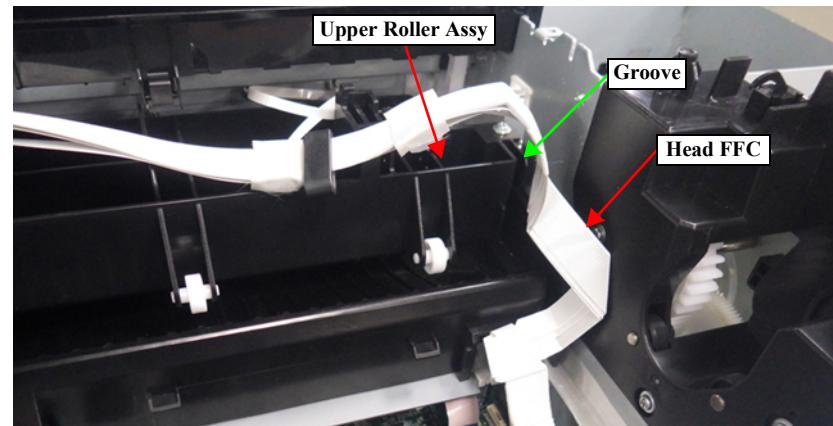


Figure 3-30. Releasing the Head FFC (2)

*Continue to the next page.*

14. Slightly pull out the Main Board Box, then release the FFC and the cable from the two clamps.

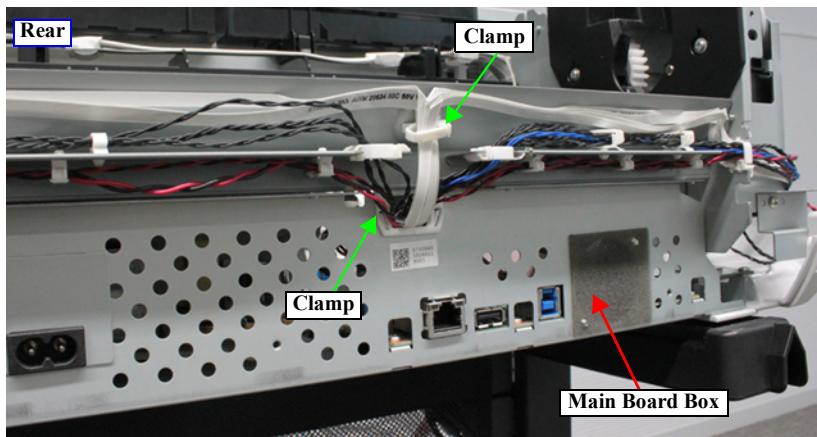


Figure 3-31. Releasing the FFC and the cable

15. Pull out the Main Board Box toward you.



**For the model with stand:**

When disconnecting/connecting the cable, temporarily secure the Main Board Box and Main Frame using the screw removed in Step 10.

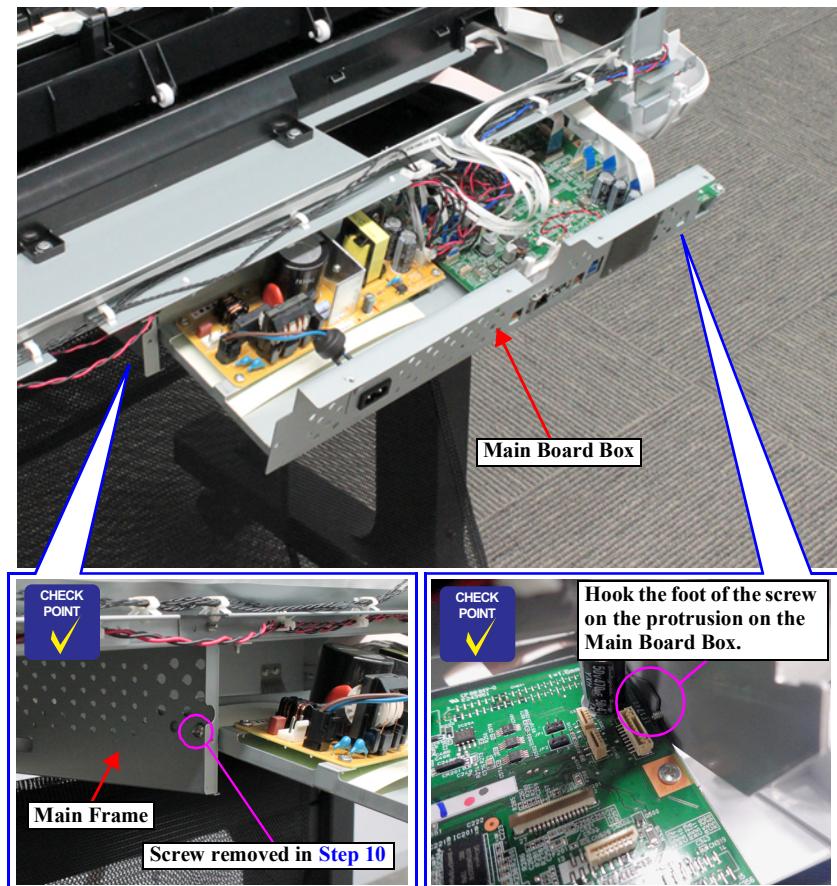


Figure 3-32. Pull out the Main Board Box

### 3.4.2.10 Right Lower Cover B

CAUTION



When the ink leakage occurred, make sure to escalate the information to the person in charge.

ADJUSTMENT REQUIRED



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Remove the Rear Cover. (p161)
7. Pull out the Main Board Box. (p163)
8. Disconnect the CSIC FFC from the connector (CN315) on the Main Board.
9. Peel off the CSIC FFC from the other FFCs, and release the CSIC FFC from the clamp.
10. Disconnect the Ink Leak Sensor cable from the connector (CN313) on the Main Board.
11. Release the cable from the ten clamps.

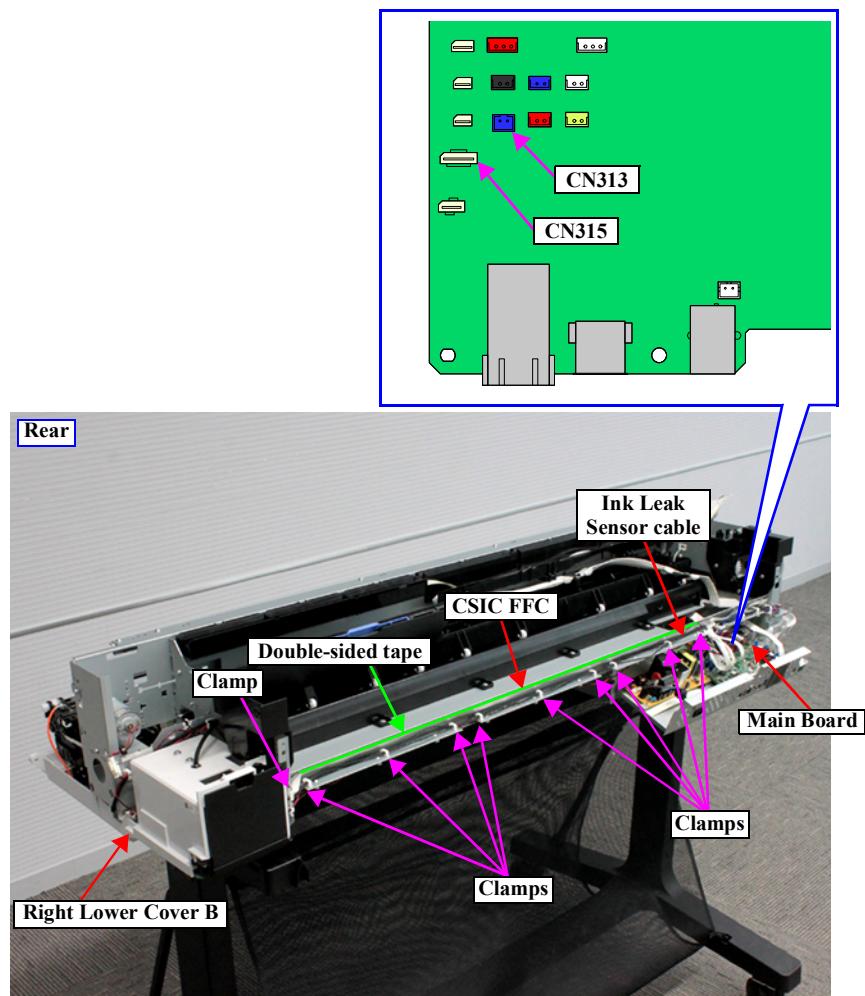


Figure 3-33. Releasing the CSIC FFC

*Continue to the next page.*

12. Remove the three screws that secure the Right Lower Cover B.

A) Silver M3x8 P-tite screw: 3 pcs

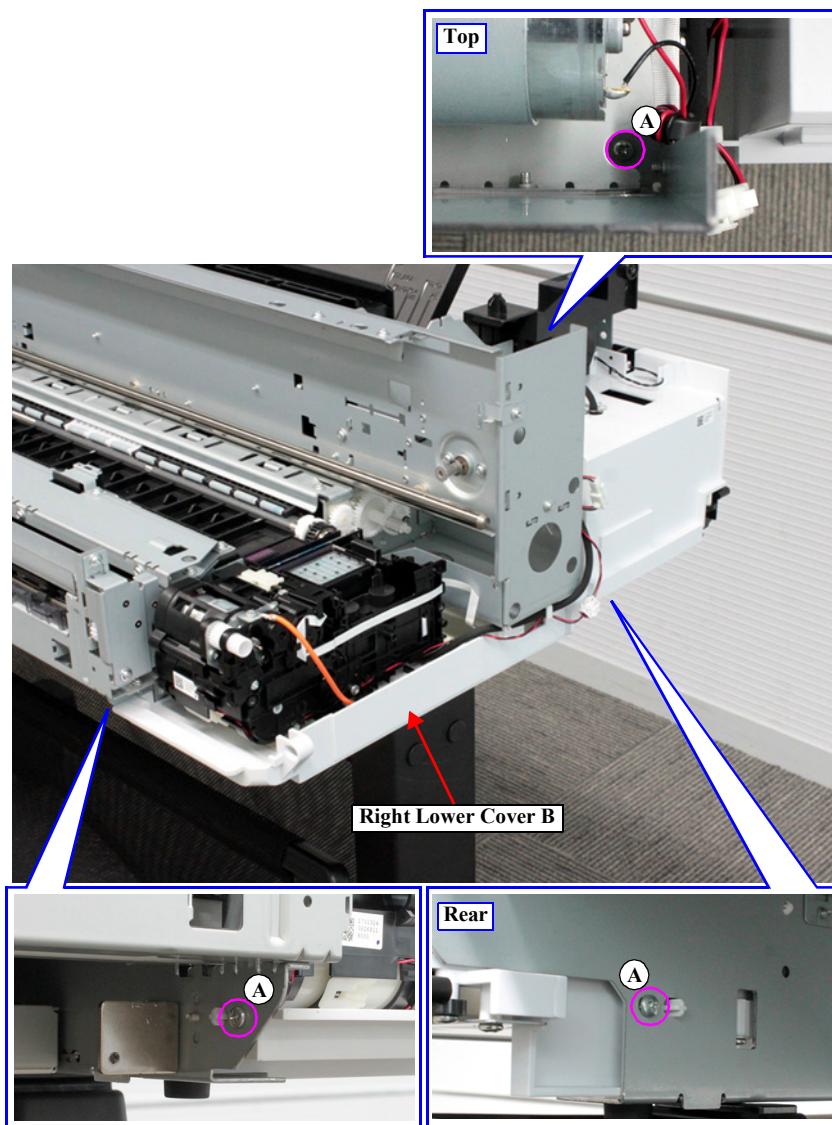


Figure 3-34. Removing the screws



In the next step, prepare a waste cloth or the like in advance since the waste ink may drip from the waste ink tube.

13. Slide the tube clip, remove the waste ink tube from the joint section on the Maintenance Box Unit.
14. Release Maintenance Box Cover Open Sensor cable from the two grooves on the Right Lower Cover B.
15. Disconnect the cable from the connector on the Maintenance Box Cover Open Sensor.
16. Release the Maintenance Box Cover Open Sensor cable from the clamp on the Right Lower Cover B.



In the next step, do not slide the Right Lower Cover B too far since the Waste Ink Tube, Ink Leak Sensor cable, and CSIC FFC are connected to the Right Lower Cover B.

*Continue to the next page.*

17. Slide the Right Lower Cover B to the outer side to remove it.

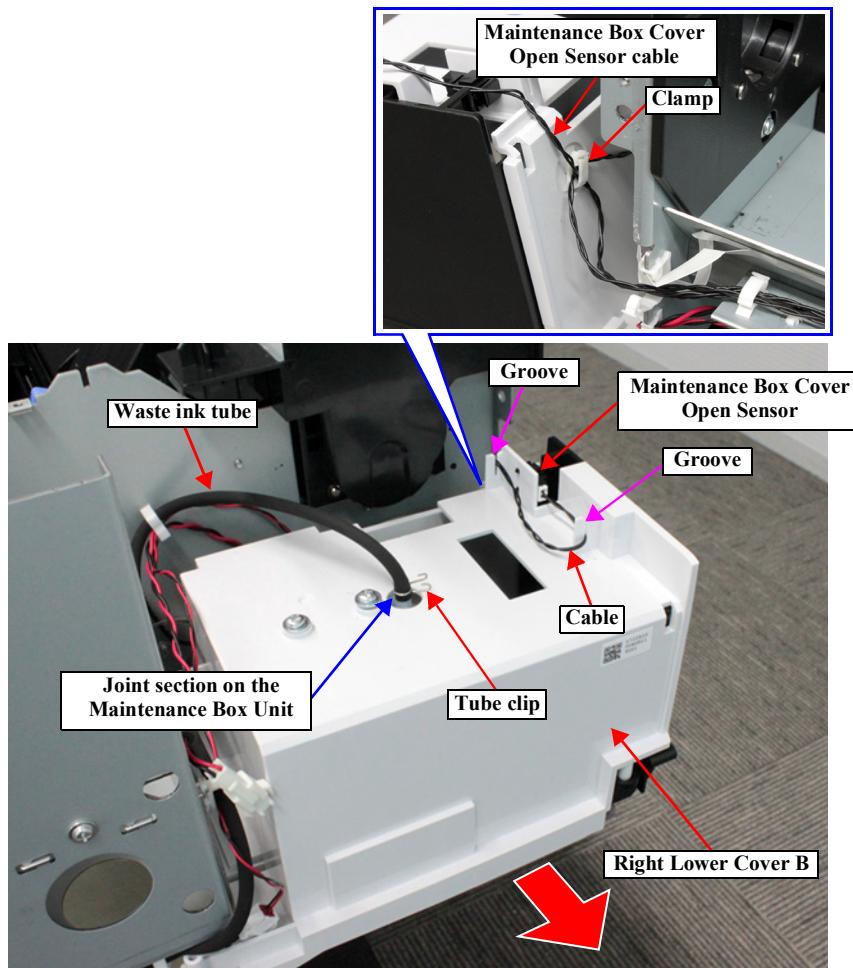


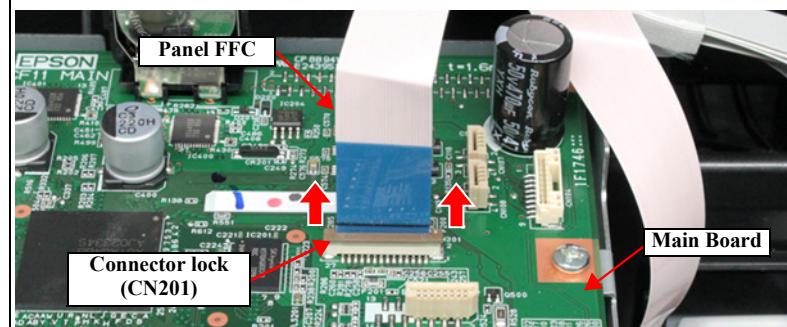
Figure 3-35. Releasing the waste ink tube and the cable

### 3.4.2.11 Left Lower Cover

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Panel. ([p181](#))
6. Remove the Top Cover. ([p158](#))
7. Remove the Rear Cover. ([p161](#))
8. Pull out the Main Board Box. ([p163](#))
9. Release the Top Cover Open Sensor cable and the Cutter Cover Open Sensor cable from the groove on the Left Lower Cover.
10. Release the ATC Motor cable from the groove on the Left Lower Cover.
11. Remove the three screws that secure the Left Lower Cover.
  - A) Silver M3x8 P-tite screw: 2 pcs
  - B) Silver M3x10 S-tite screw: 1 pc
12. Disconnect the Panel FFC from the connector (CN201) on the Main Board.

CHECK POINT

**Before removing the Panel FFC, make sure to release the connector lock as shown below.**



13. Pull out the Panel FFC from the hole on the frame, remove the Left Lower Cover.

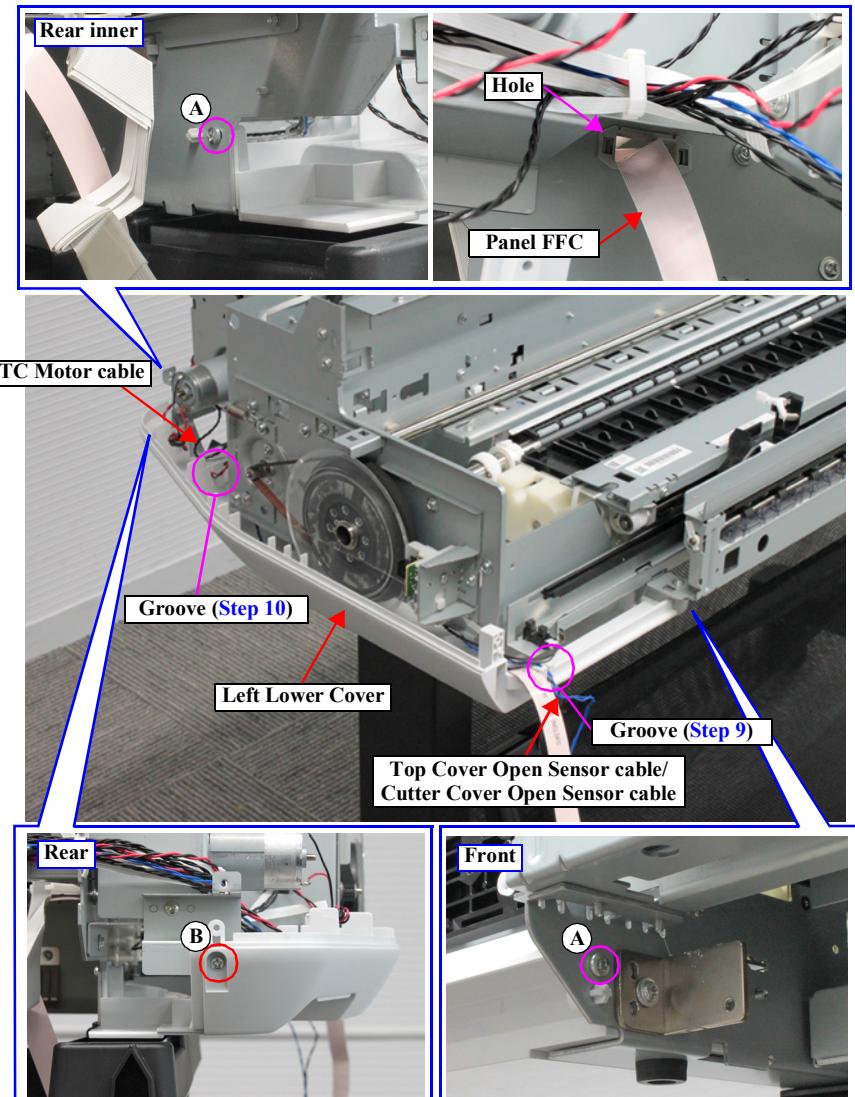


Figure 3-36. Removing the Left Lower Cover

Continue to the next page.

14. Peel off the Panel FFC and ferrite cores from the Left Lower Cover.

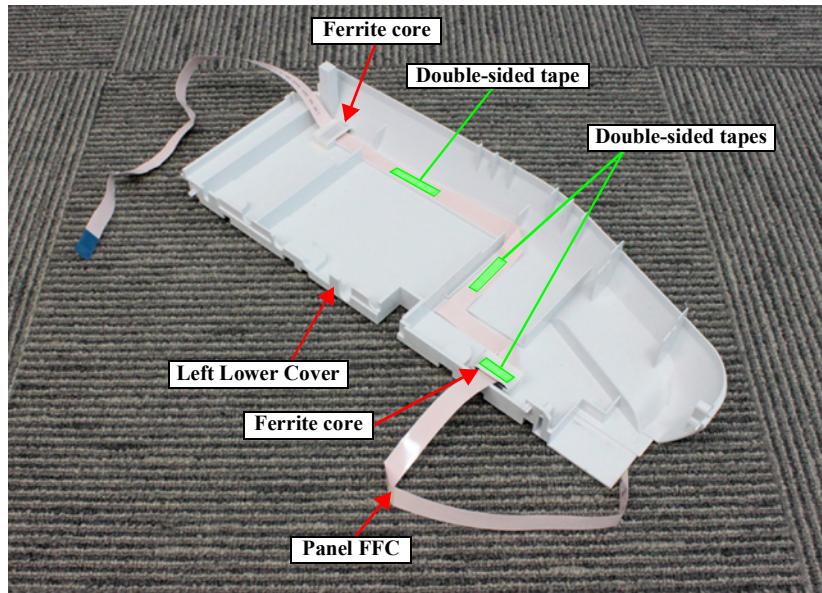


Figure 3-37. Removing the Panel FFC

### 3.4.2.12 Top Cover Open Sensor

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Disengage the hook, and remove the Top Cover Open Sensor.
4. Disconnect the cable (blue) from the connector on the Top Cover Open Sensor.



Route the cable (blue) through the two grooves on the Top Cover.  
(Figure 3-38)

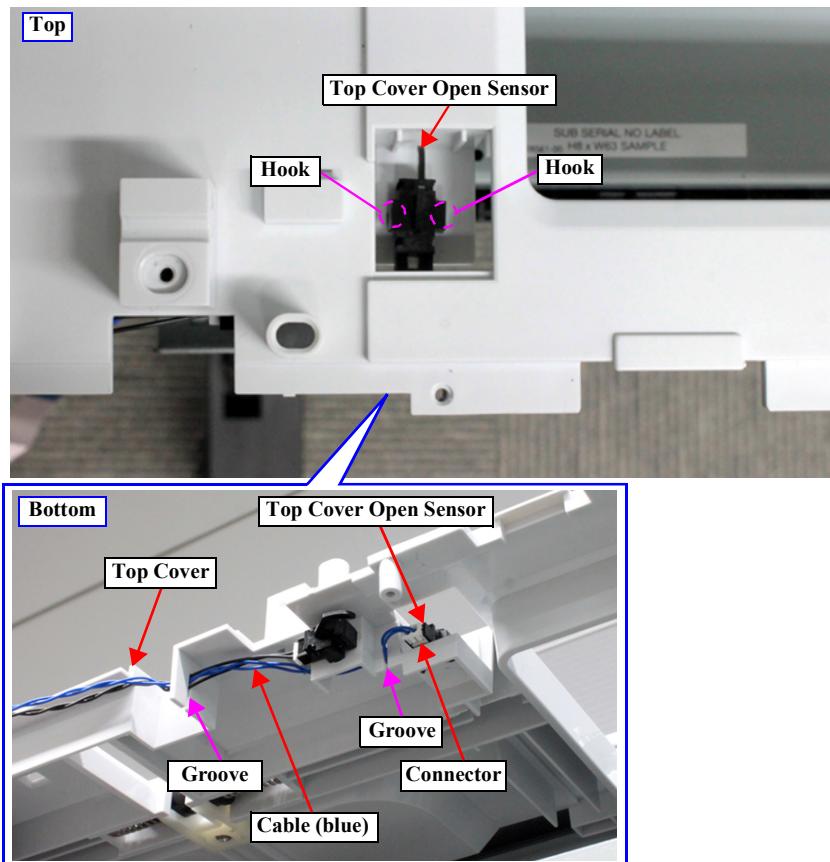


Figure 3-38. Removing the Top Cover Open Sensor

### 3.4.2.13 Cutter Cover Open Sensor

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Disengage the hook, and remove the Cutter Cover Open Sensor.
4. Disconnect the cable (black) from the connector on the Cutter Cover Open Sensor.



Route the cable (black) through the groove of the Top Cover.  
([Figure3-39](#))

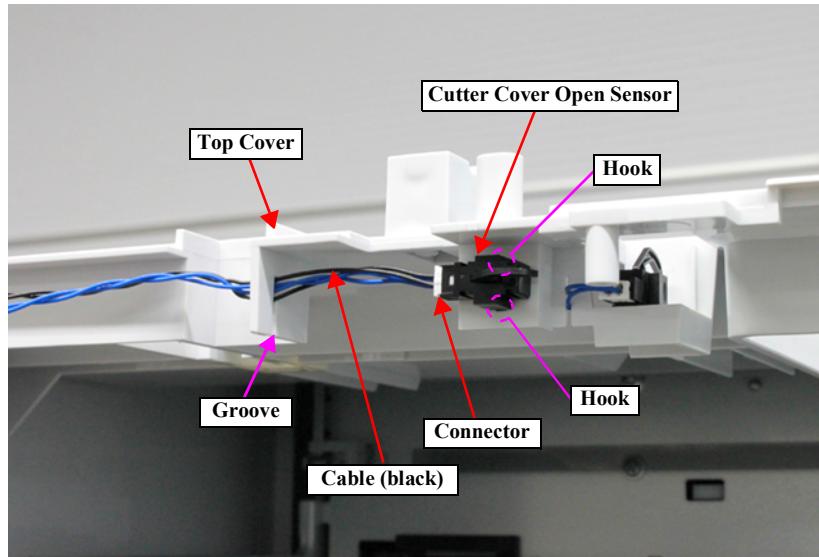


Figure 3-39. Removing the Cutter Cover Open Sensor

### 3.4.2.14 Maintenance Box Cover Open Sensor

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Open the Maintenance Box Cover.
7. Disengage the hook, and remove the Maintenance Box Cover Open Sensor.
8. Disconnect the cable from the connector on the Maintenance Box Cover Open Sensor.



**Route the cable through the two grooves on the Right Lower Cover B. ([Figure3-40](#))**

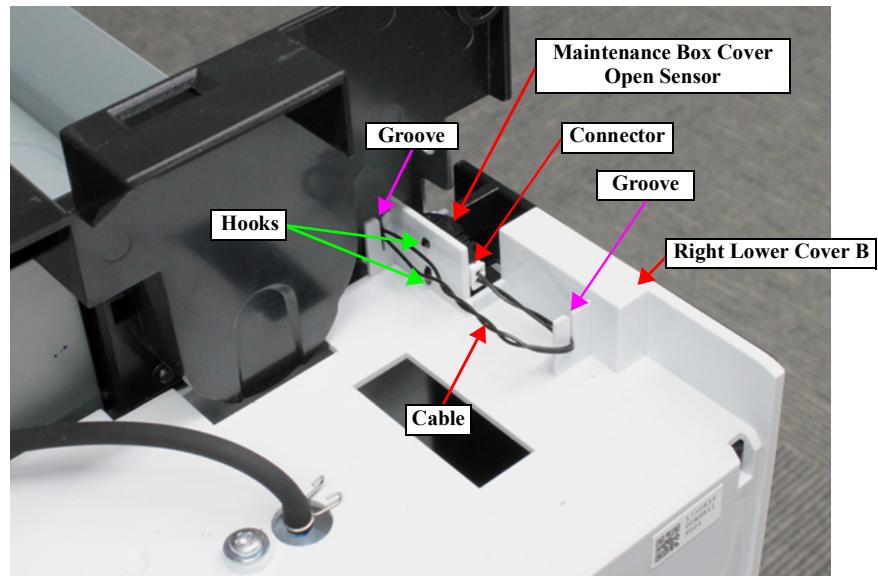


Figure 3-40. Removing the Maintenance Box Cover Open Sensor

### 3.4.2.15 Roll Cover Open Sensor

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Open the Roll Cover.
7. Disengage the hook by pushing the Roll Cover Open Sensor in the direction of the arrow to remove it.
8. Disconnect the cable from the connector on the Roll Cover Open Sensor.

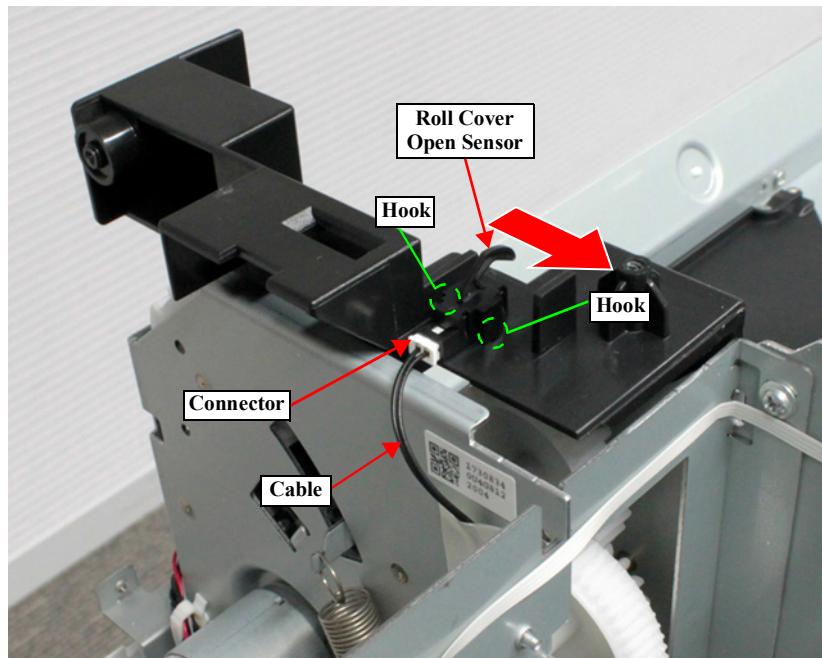


Figure 3-41. Removing the Roll Cover Open Sensor

### 3.4.2.16 Ink Tank Upper Cover Sensor



**Top Ink Tank Upper Cover Sensor is not installed on SC-T2100 Series/SC-T3150/SC-T3150N/SC-T5150/SC-T5150N.**

1. Remove the Front Cover. ([p149](#))
2. Remove the Left Upper Cover A. ([p155](#))
3. Remove the Left Upper Cover B. ([p157](#))
4. Remove the Top Cover. ([p158](#))
5. Remove the Ink Tank Upper Cover Sensor Cable from the relay connector.
6. Release the Ink Tank Upper Cover Sensor Cable from the two clamps.
7. Release the Ink Tank Upper Cover Sensor Cable from the two hooks.

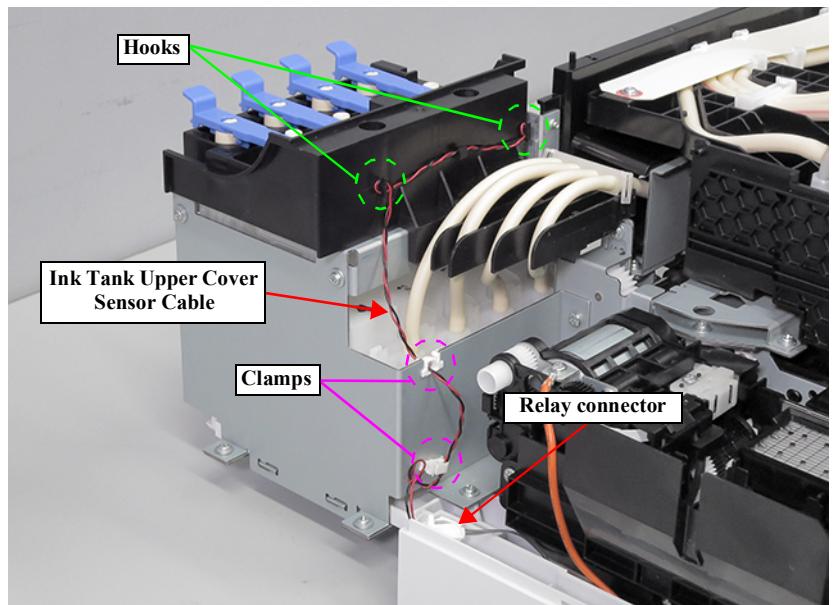


Figure 3-42. Releasing the Ink Tank Upper Cover Sensor Cable

*Continue to the next page.*

8. Release the Ink Tank Upper Cover Sensor Cable from the two locations of the Key Slot Assy guide.
9. Remove a screw and remove the Ink Tank Upper Cover Sensor.  
A)Silver M2x8 P-tite screw: 1 pc

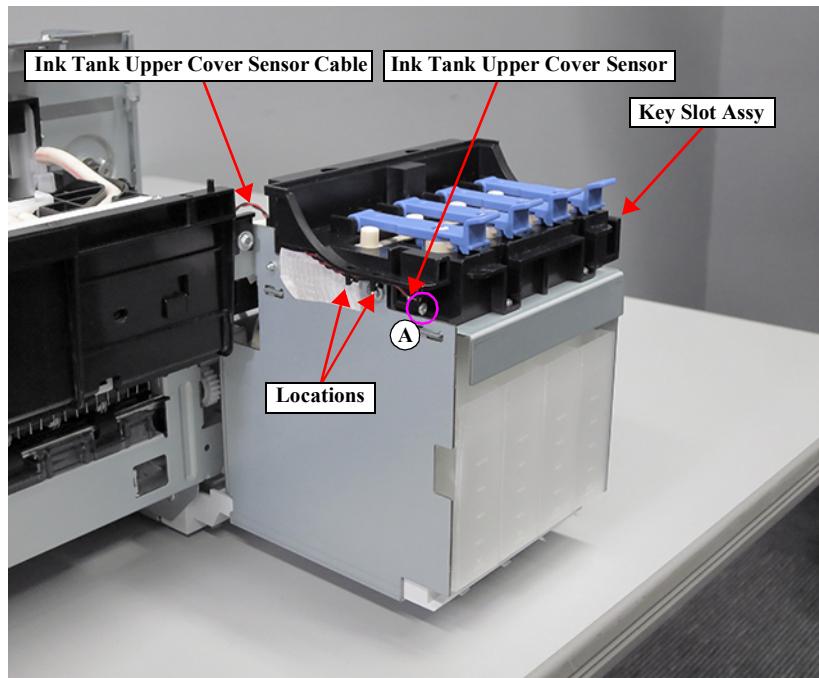


Figure 3-43. Removing the Ink Tank Upper Cover Sensor

### 3.4.3 Electric Circuit Components

#### 3.4.3.1 Main Board Box



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Rear Cover. (p161)
2. Pull out the Main Board Box. (p163)
3. Unlock the connector lock (CN201) in the direction of the arrow, disconnect the Panel FFC.

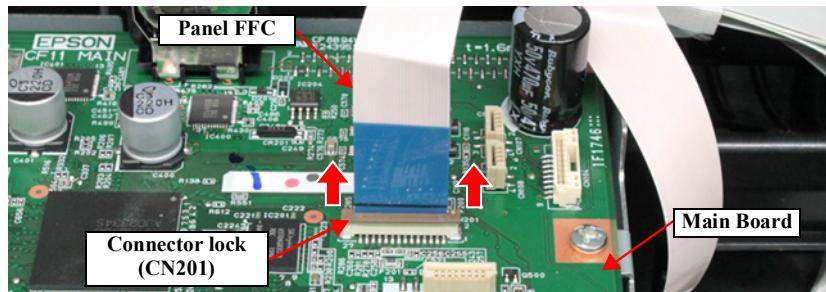
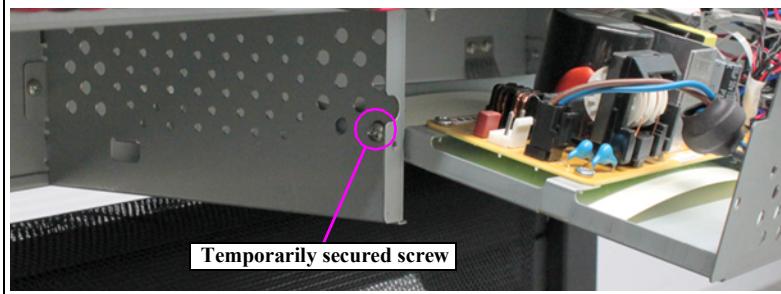


Figure 3-44. Removing the Panel FFC

4. Disconnect all the cables and FFCs connected to the Main Board except for CN101, CN106, and CN600.



For model with stand, remove the screw used to temporarily secure the Main Board Box.



5. Remove the Main Board Box.

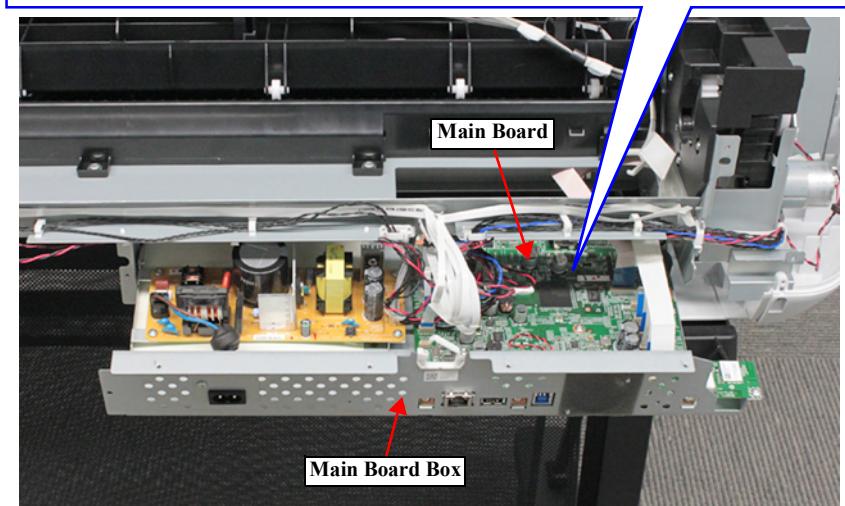
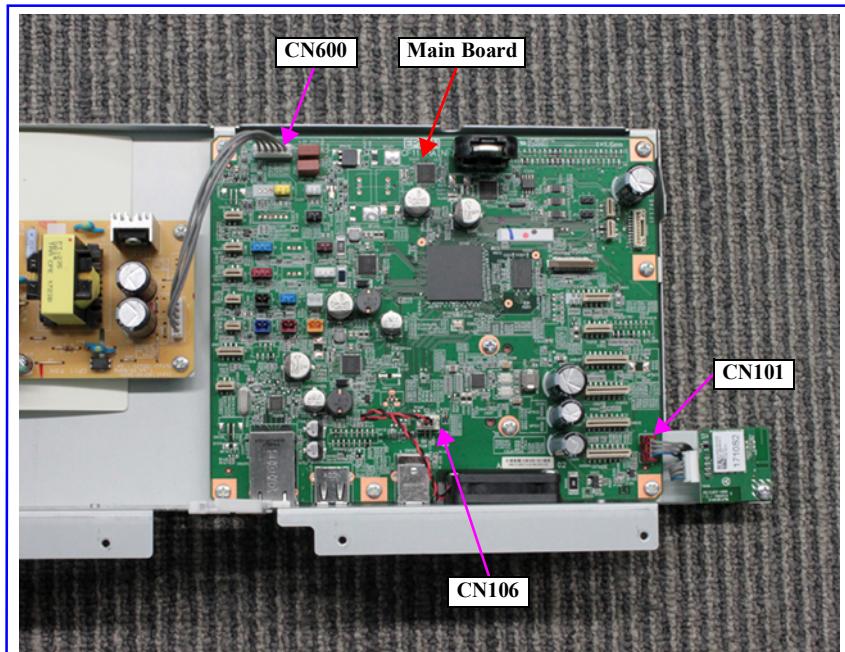


Figure 3-45. Removing the Main Board Box

### 3.4.3.2 Main Board



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Rear Cover. (p161)
2. Pull out the Main Board Box. (p163)
3. Remove the Main Board Box. (p177)
4. Disconnect the cable from the connector (CN101, CN106, CN600) on the Main Board.
5. Remove the eight screws, and remove the Main Board.

A) Silver M3x6 Bind machine screw: 8 pcs



Because main boards of applicable models are difficult to distinguish in appearance, make sure to confirm the ASP parts code of the Main Boards.

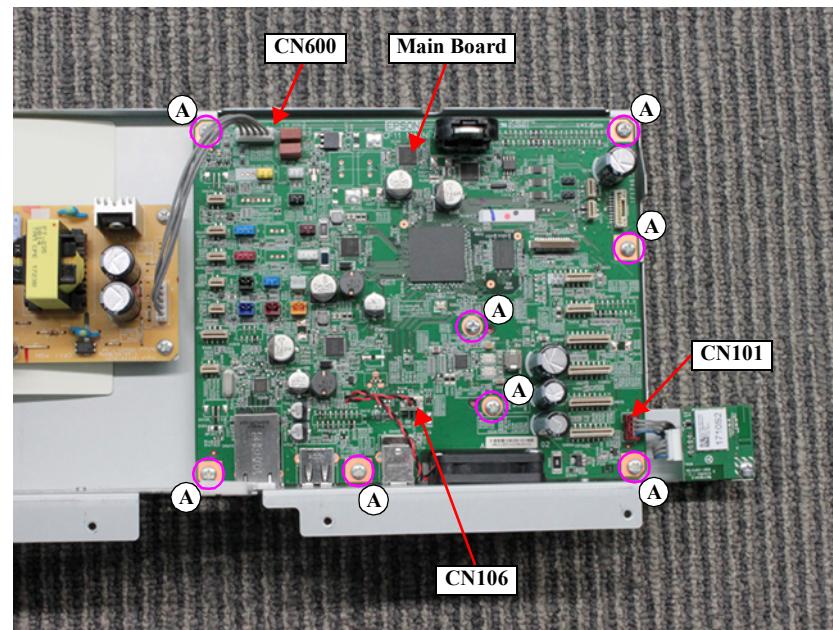


Figure 3-46. Removing the Main Board

### 3.4.3.3 WIFI Board

1. Remove the Rear Cover. ([p161](#))
2. Pull out the Main Board Box. ([p163](#))
3. Disconnect the cable from the connector (CN101) on the Main Board.
4. Remove the screw, and remove the WIFI Board.  
A) Silver M3x6 Bind machine screw: 2 pcs

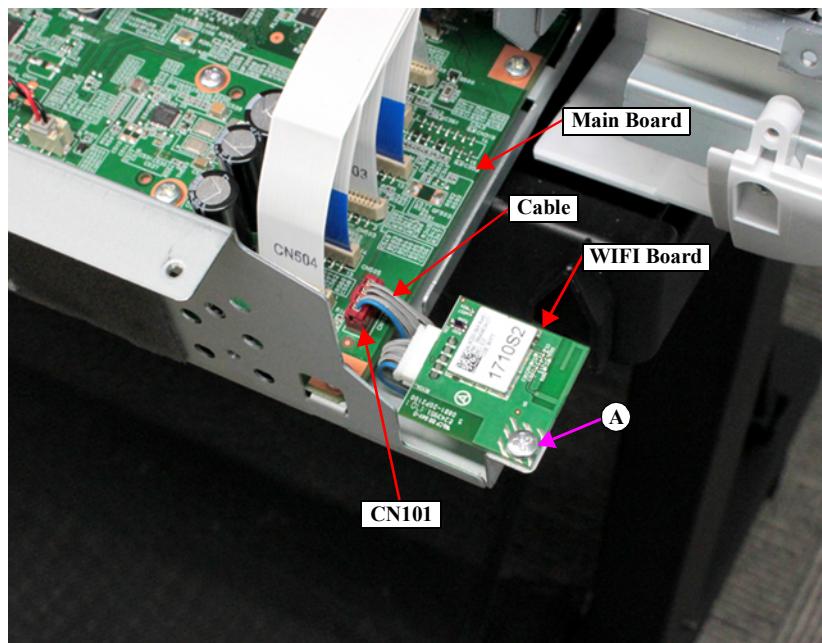


Figure 3-47. Removing the WIFI Board

### 3.4.3.4 Power Supply Board



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Rear Cover. ([p161](#))
2. Pull out the Main Board Box. ([p163](#))
3. Remove the Main Board Box. ([p177](#))
4. Disconnect the cable from the connector (CN2, CN51) on the Power Supply Board.
5. Remove the five screws, and remove the Power Supply Board.

A) Silver M3x6 Bind machine screw: 5 pcs

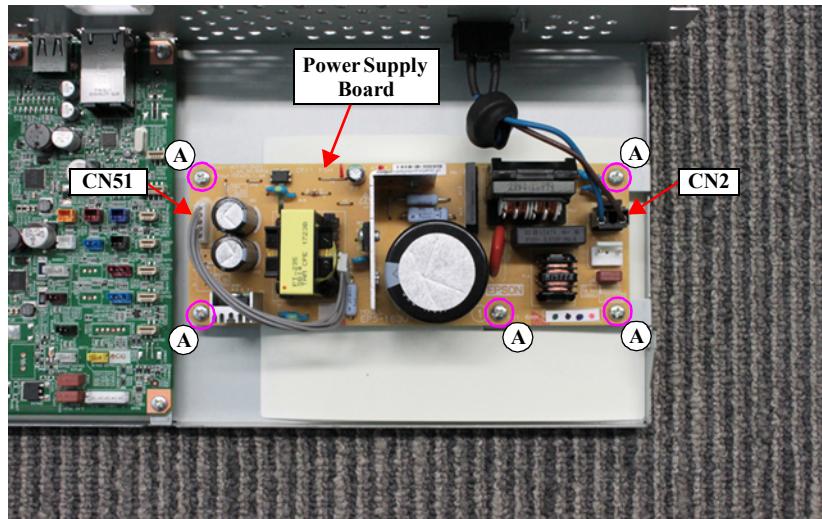


Figure 3-48. Removing the Power Supply Board

### 3.4.3.5 Panel



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Peel off the Panel FFC.
6. Stand the panel.
7. Remove the Panel from the damper, and remove the Panel.

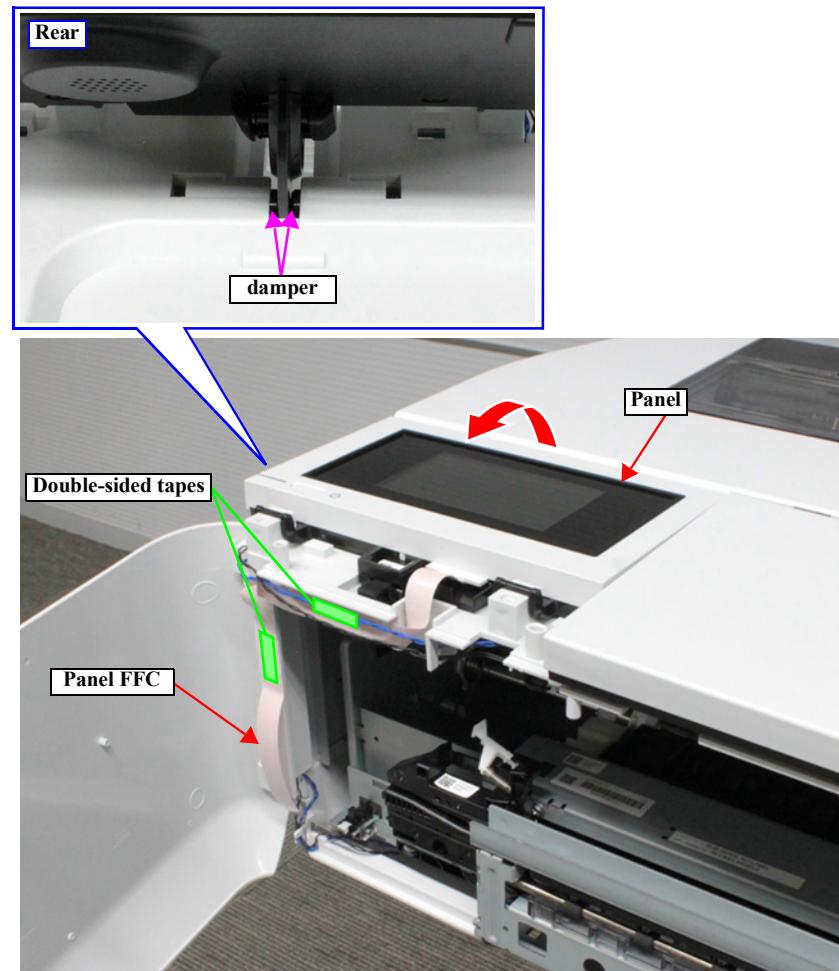


Figure 3-49. Removing the Panel

Continue to the next page.

8. Remove the FFC cover while sliding it.



**FFC Cover can be removed easily by using a flathead screwdriver or the like.**

9. Release the connector lock to disconnect the Panel FFC from the connector on the Panel.

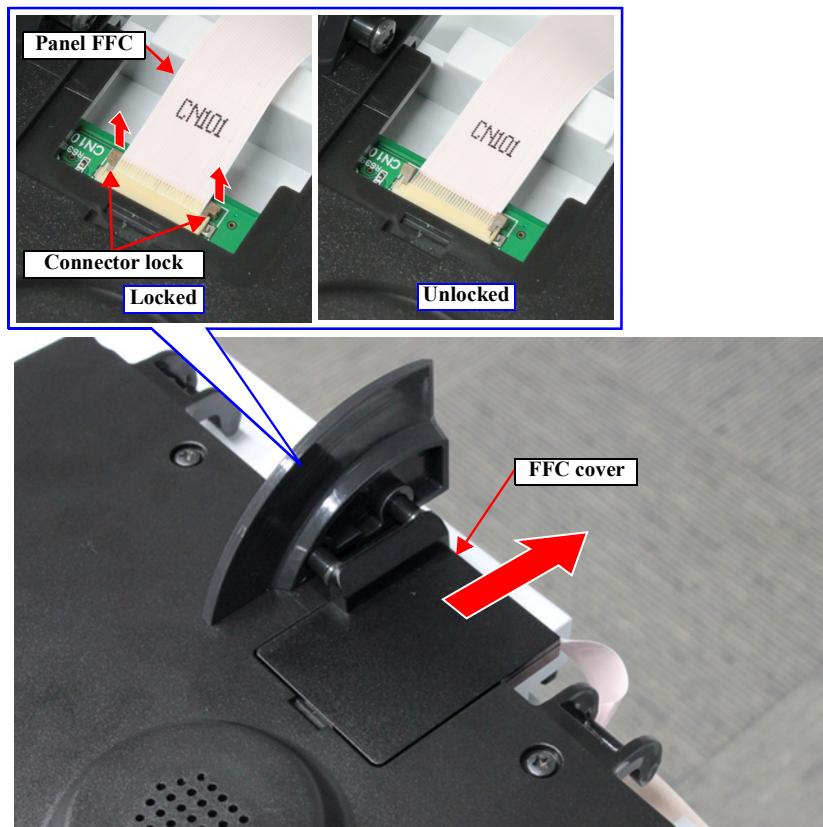


Figure 3-50. Removing the FFC cover

### 3.4.3.6 AC Inlet

1. Remove the Rear Cover. ([p161](#))
2. Pull out the Main Board Box. ([p163](#))
3. Remove the Main Board Box. ([p177](#))
4. Disconnect the cable from the connector (CN2) on the Power Supply Board.
5. Remove the screw, and remove the AC Inlet.

A) Silver M3x6 Bind machine screw: 1 pc

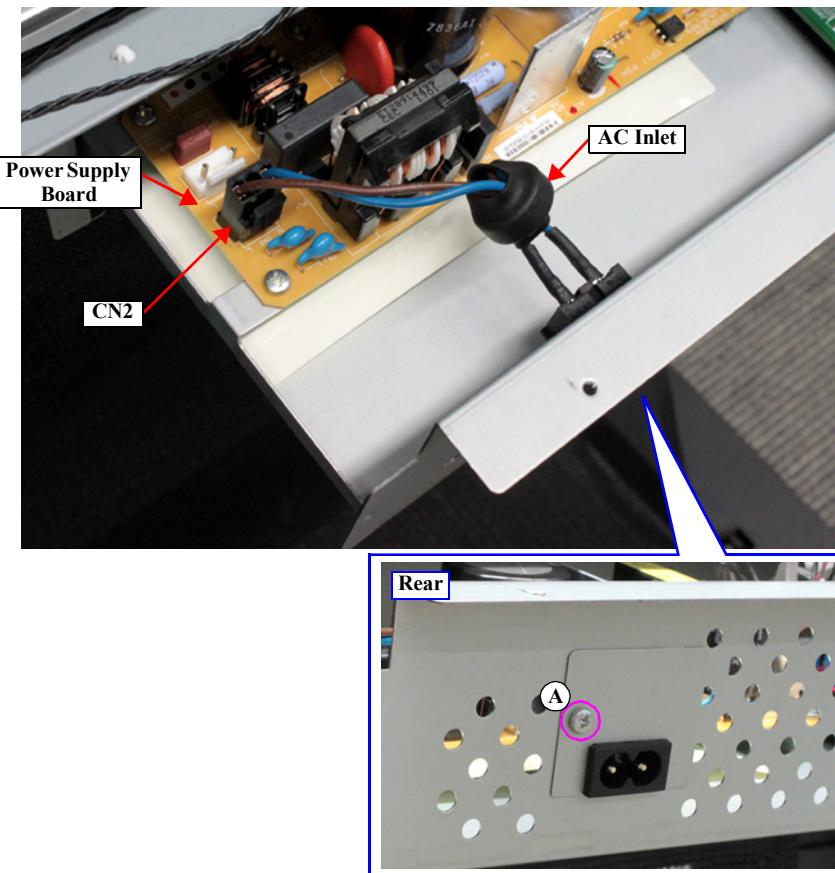


Figure 3-51. Removing the AC Inlet

### 3.4.3.7 Main Board Fan



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Rear Cover. ([p161](#))
2. Pull out the Main Board Box. ([p163](#))
3. Remove the Main Board Box. ([p177](#))
4. Remove the Main Board. ([p178](#))
5. Remove the two screws, and remove the Main Board Fan.

A) Silver M3x14 Bind machine screw: 2 pcs

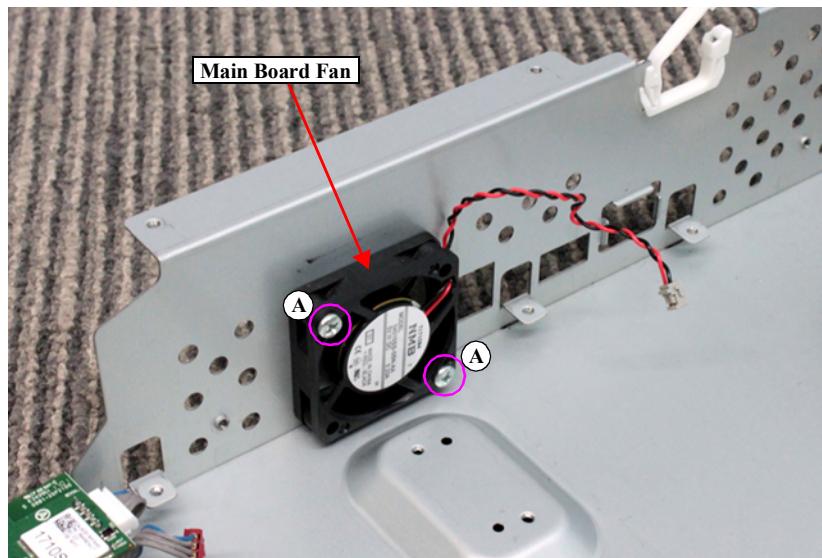


Figure 3-52. Removing the Main Board Fan

### 3.4.4 Carriage Mechanism/Ink System Mechanism

#### 3.4.4.1 CR Cover



The disassembly procedures of SC-T3100X Series/SC-T3100D Series/SC-F500 Series differ from SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series.

- SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series: [P. 185](#)
- SC-T3100X Series/SC-T3100D Series/SC-F500 Series: [P. 186](#)

#### SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series

1. Remove the Right Lower Cover A. ([p147](#))
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Pull the lever toward yourself to open the CR Cover.
7. Disengage the two dowel, and remove the CR Cover.

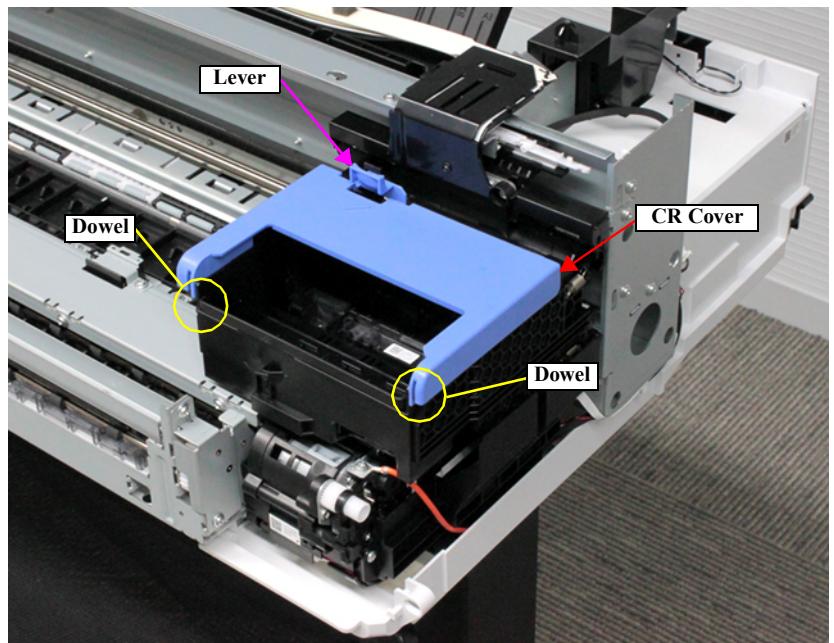


Figure 3-53. Removing the CR Cover

*Continue to the next page.*

SC-T3100X Series/SC-T3100D Series/SC-F500 Series

1. Remove the Front Cover. ([p149](#))
2. Remove the Left Upper Cover A. ([p155](#))
3. Remove the Left Upper Cover B. ([p157](#))
4. Remove the Top Cover. ([p158](#))
5. Disengage the two hooks, and open the CR Cover.

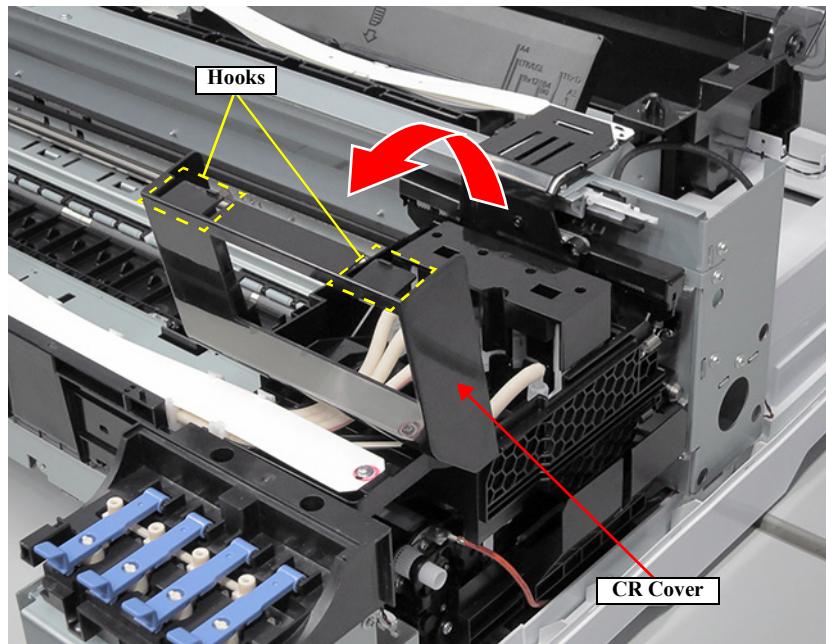


Figure 3-54. Removing the CR Cover (1)

6. Align the shaft of the CR Unit with the shaft hole of the CR Cover and remove the CR Cover.

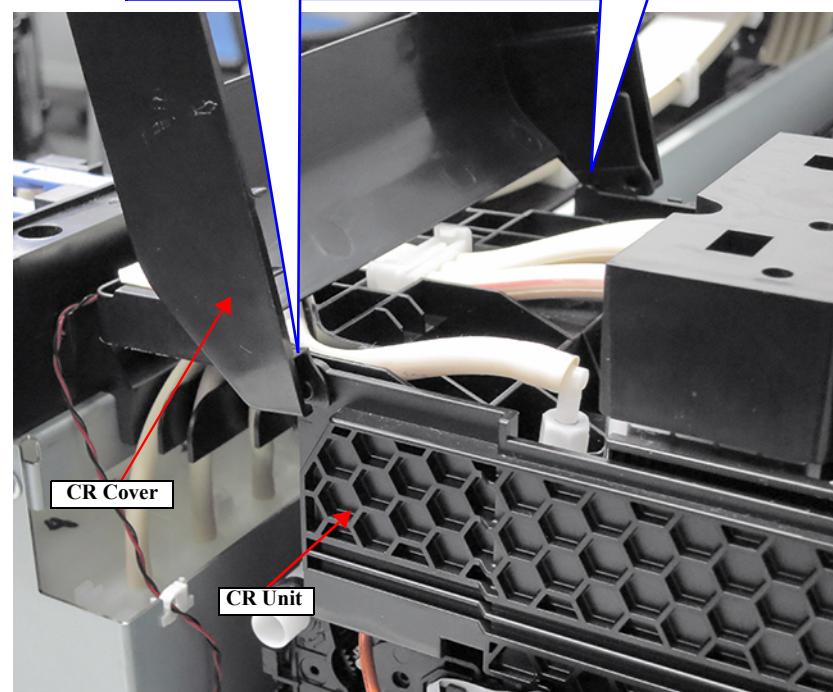
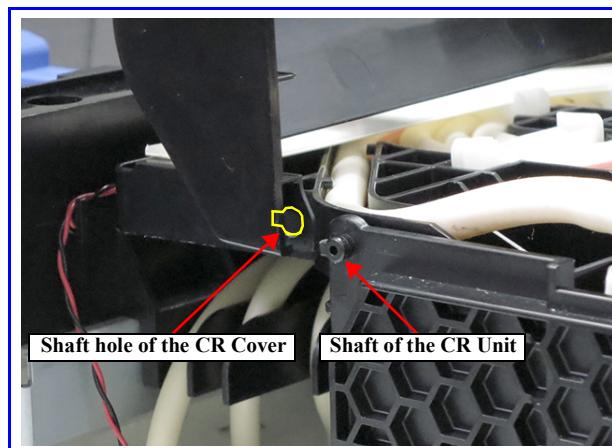


Figure 3-55. Removing the CR Cover (2)

### 3.4.4.2 Print Head Assy



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.



Remove the ink cartridges if installed.



For SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series, be careful of the items given below.

- By attaching and detaching the ink cartridge repeatedly, ink may drip from the nozzle surface of the Print Head. So, do not attach and detach the ink cartridge more than necessary.
- When attaching the ink cartridge, turn the printer ON and perform ink cartridge attachment from panel operation.
- If ink dripped, wipe it off with a waste cloth or the like.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))



When the Ink Tube Assy is removed at the following step, ink may drip off from the tube. Prepare a waste cloth or the like in advance and be careful not to contaminate the surroundings.

6. Remove the three screws, and remove the duct part of the Ink Tube Assy. (SC-T3100X Series/SC-T3100D Series/SC-F500 Series only)
  - A)Silver M3x8 Cup P-tite screw: 3 pcs

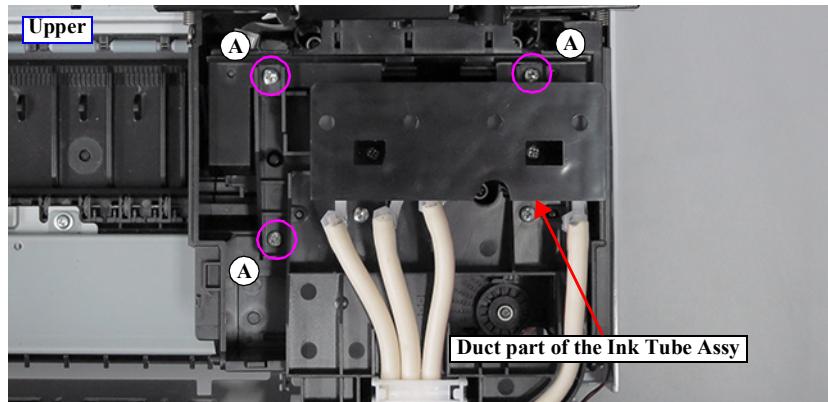
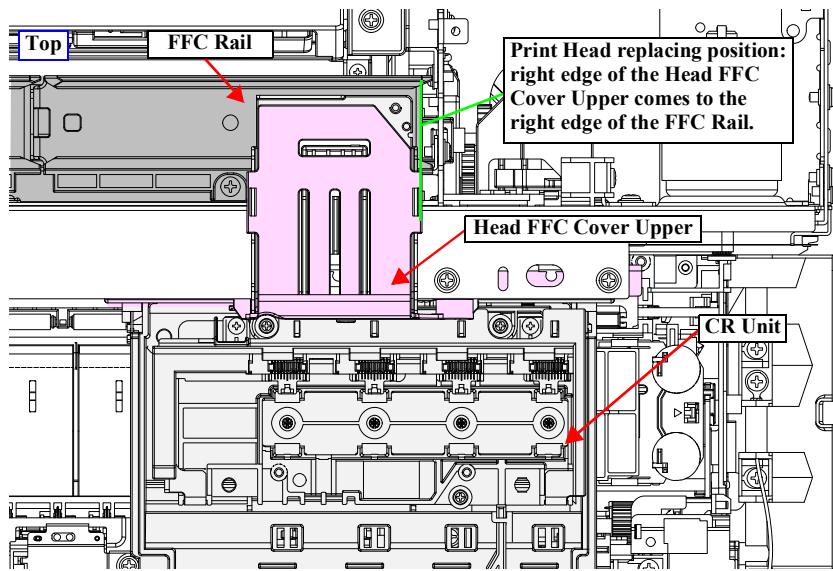


Figure 3-56. Removing the duct part of the Ink Tube Assy

*Continue to the next page.*

7. Remove the CR Cover. ([p185](#))
8. Unlock the CR Unit. ([p146](#))
9. Move the CR Unit until the right edge of the Head FFC Cover Upper comes to the right edge of the FFC Rail.
10. Remove the Head FFC Cover Upper. ([p197](#))



11. Remove the three screws, and remove the Print Head Assy.
- A) Silver M2.6x20 S-tite screw with built-in spring washer: 3 pcs



**Tighten the screw on the Print Head Assy in the order given in Figure 3-58.**

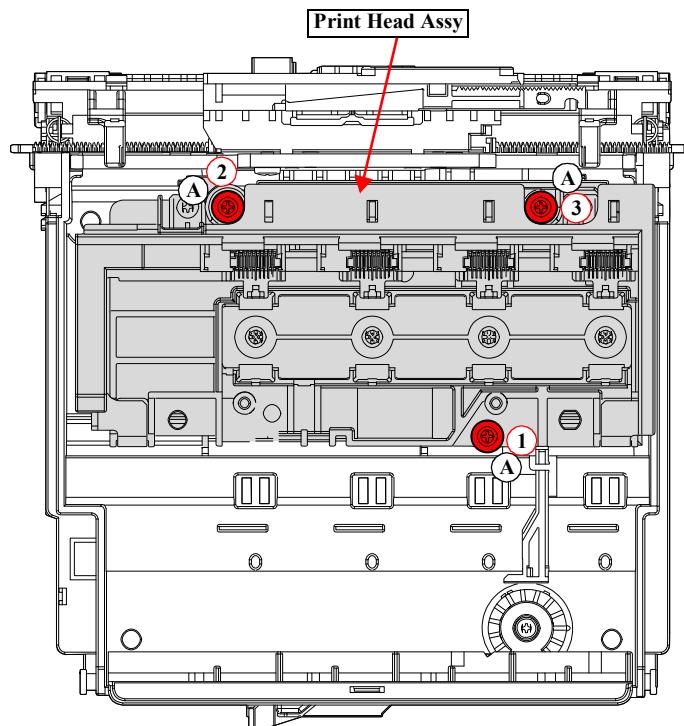


Figure 3-58. Removing the screws

*Continue to the next page.*

12. Disconnect the Head FFC from the four connectors on the Print Head and the connector on the CSIC Assy.



- Make sure not to touch the nozzle surface of the Print Head.
- Make sure not to touch the nozzle surface of the Print Head with the CR Unit.
- To prevent the Head Pressing Lever from coming off when removing the Print Head Assy. If it comes off, attach the Head Pressing Lever as shown below. (It can be easily removed with tweezers, etc.)

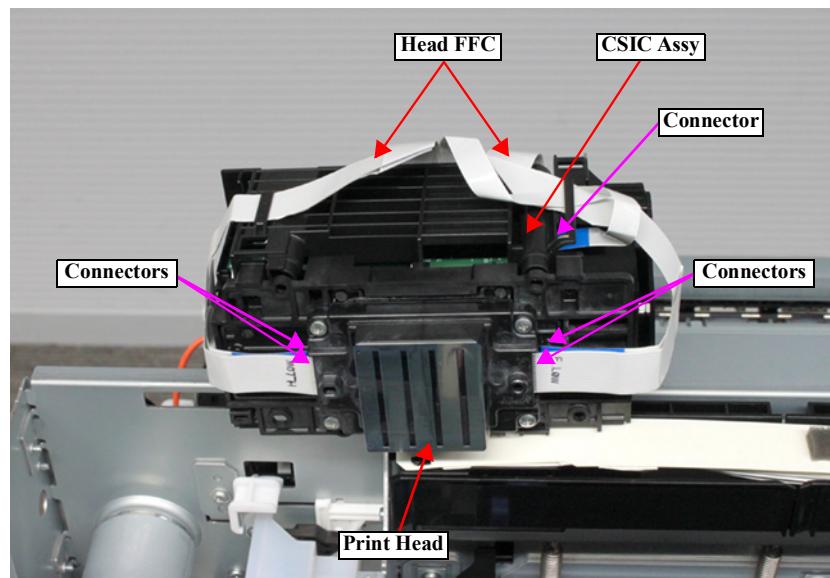
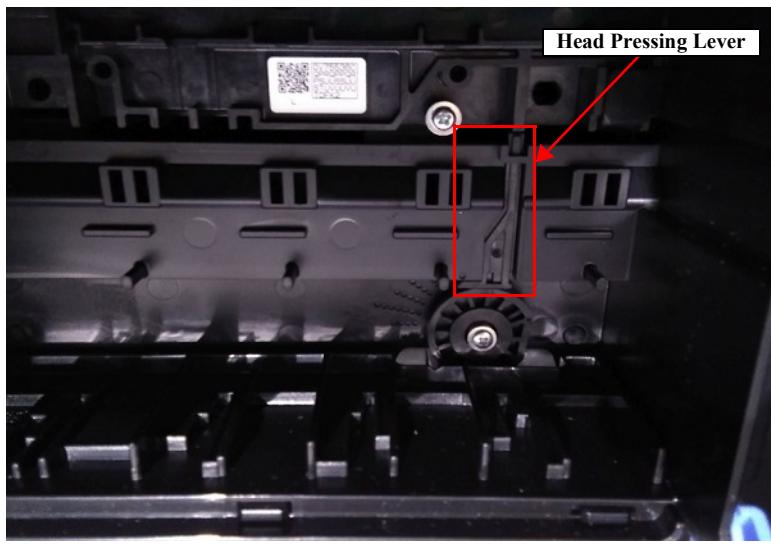
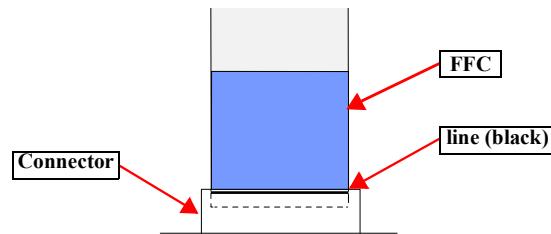


Figure 3-59. Removing the Print Head Assy

**REASSEMBLY**

If there is a line on FFC, insert until the line (black) is aligned with the connector.



### 3.4.4.3 Print Head



- Make sure not to touch the nozzle surface of the Print Head.
- Make sure to unlock the CR unit from the service program, and perform parts replacement at the head replacement position.  
Performing replacement at other than head replacement position may damage the Print Head. (SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the CR Cover. ([p185](#))
7. Unlock the CR Unit. ([p146](#))
8. Remove the Head FFC Cover Upper. ([p197](#))
9. Remove the Print Head Assy. ([p187](#))
10. Remove the two screws that secure the Print Head.  
A) Silver M2.6x8 P-tite screw: 2 pcs
11. Disengage the two hooks, and remove the Print Head.

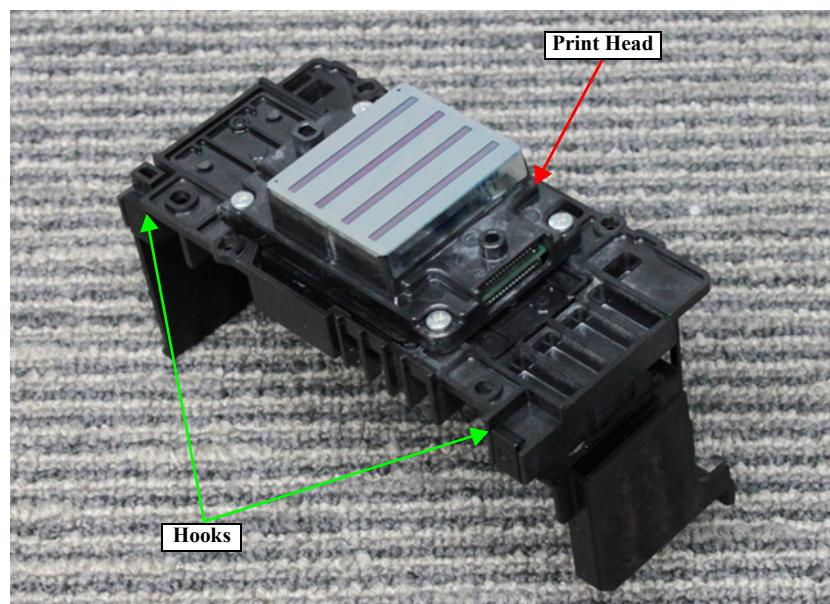
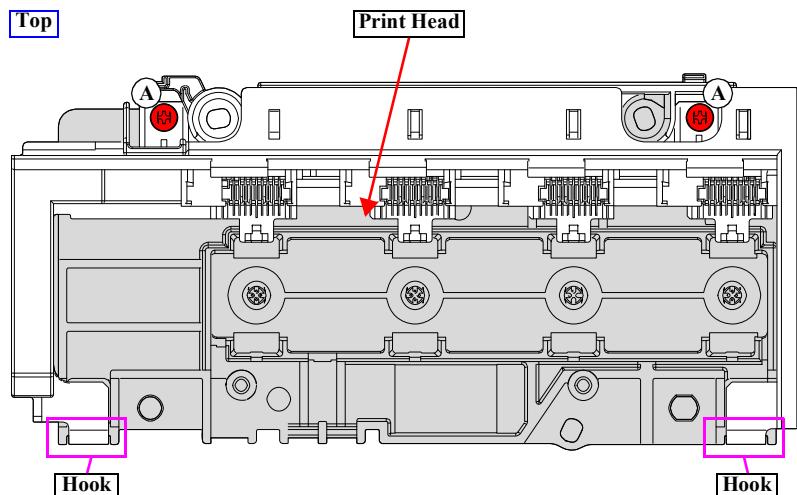


Figure 3-60. Removing the Print Head

### 3.4.4.4 CSIC Assy



**Make sure not to touch the nozzle surface of the Print Head.**



When replacing/removing this part, refer to "[4.1.2 Adjustment Items and the Order by Repaired Part](#)" ([p269](#)) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the CR Cover. ([p185](#))
7. Unlock the CR Unit. ([p146](#))
8. Remove the Head FFC Cover Upper. ([p197](#))
9. Remove the Print Head Assy. ([p187](#))
10. Remove the two screws that secure the CSIC Assy.  
A) Silver M2.6x8 P-tite screw: 2 pcs
11. Disengage the two hooks, and remove the CSIC Assy.

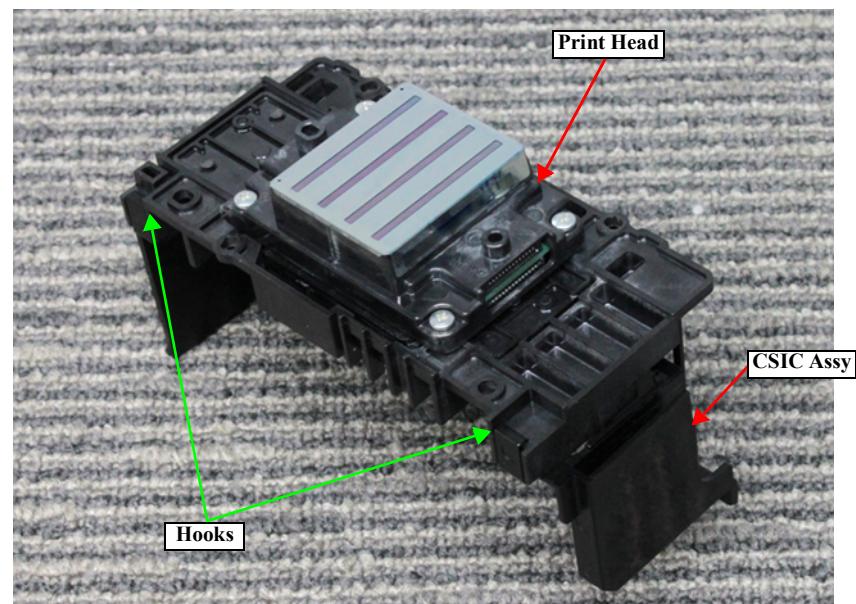
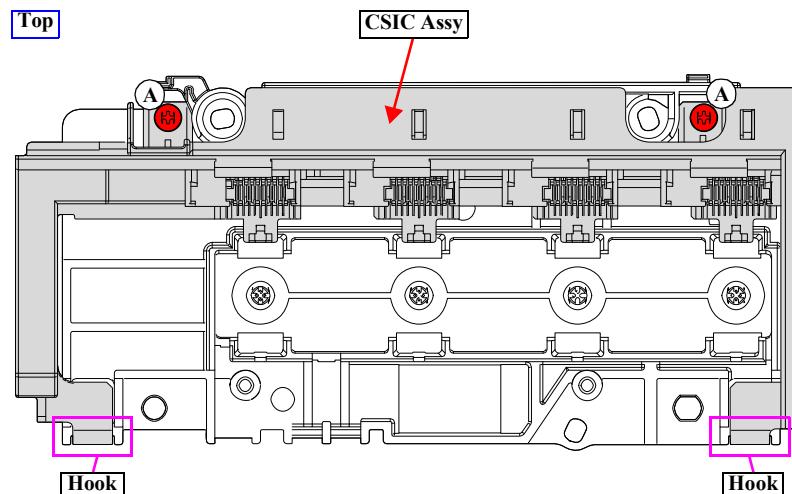


Figure 3-61. Removing the CSIC Assy

*Continue to the next page.*

12. Sliding the CSIC Holder in the direction of the arrow to disengage the CSIC Holder from CSIC Assy.

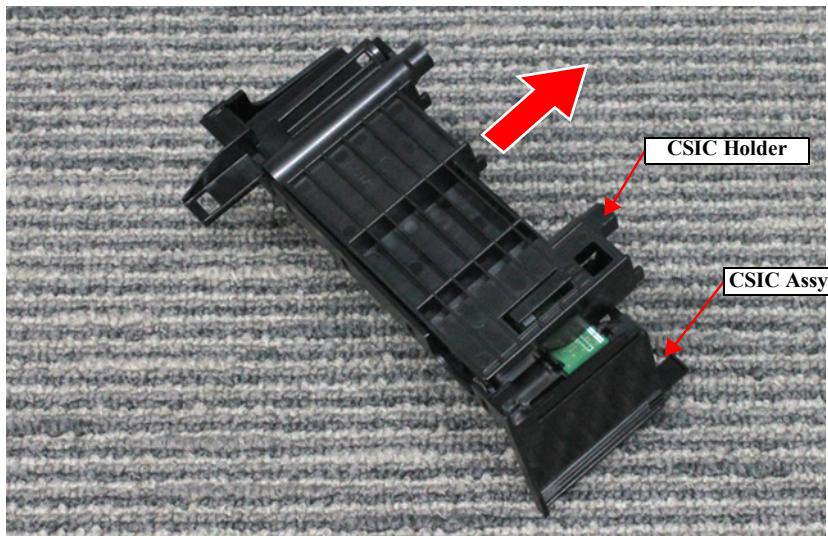


Figure 3-62. Removing the CSIC Assy



Align the four tabs on the CSIC Holder with the CSIC Assy positioning holes.

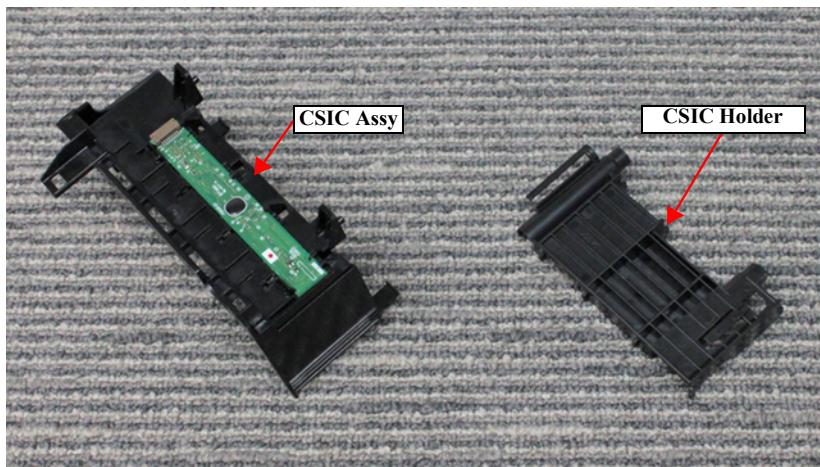
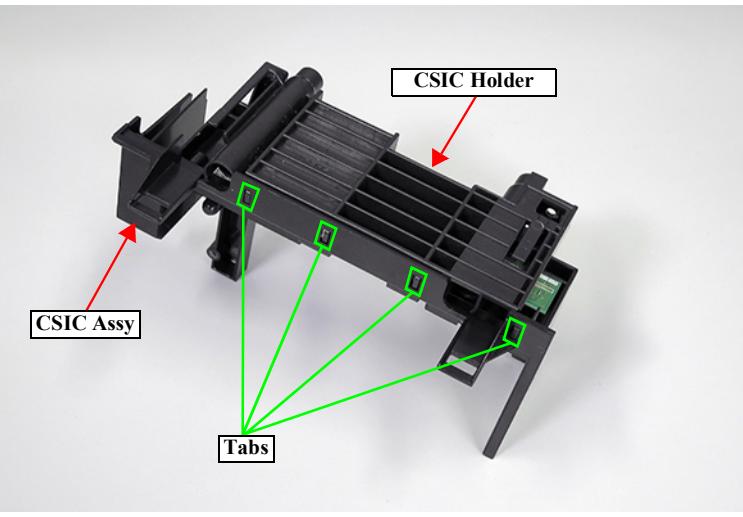


Figure 3-63. CSIC Assy

### 3.4.4.5 PIS

CHECK POINT



The PIS is not installed on SC-T3100X Series/SC-T3100D Series/  
SC-F500 Series.

ADJUSTMENT REQUIRED



When replacing/removing this part, refer to "[4.1.2 Adjustment Items and the Order by Repaired Part](#)" ([p269](#)) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the screw, and remove the sensor frame.

A) Silver M3x6 Cup S-tite screw: 1 pc

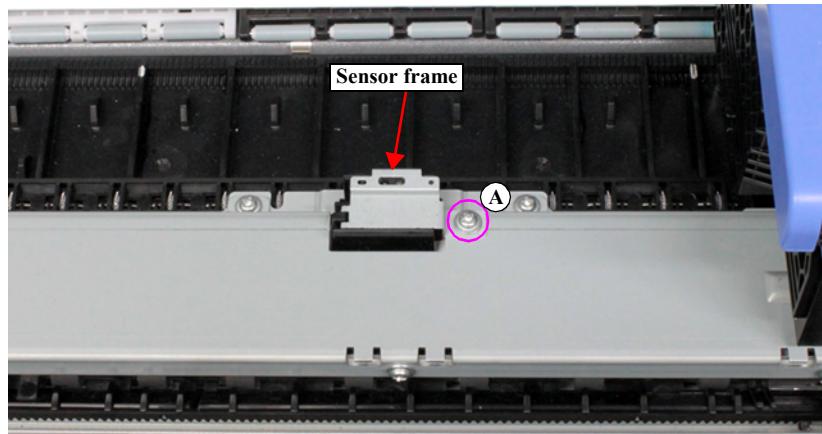


Figure 3-64. Removing the sensor frame

7. Remove the screw, and remove the PIS.
- B) Silver M2x6 P-tite screw: 1 pc
8. Remove the FFC from the PIS.

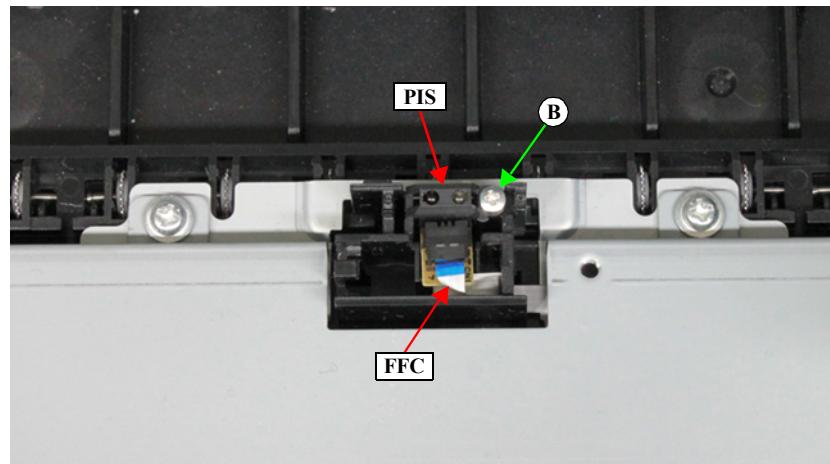


Figure 3-65. Removing the PIS

### 3.4.4.6 CR Motor



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Unlock the CR Unit. (p146)
7. Move the CR Unit to the center.
8. Remove the screw that secure the CR Belt Pulley Assy.  
A) Silver M3x6 Cup S-tite screw: 1 pc
9. Remove the Extension Spring.

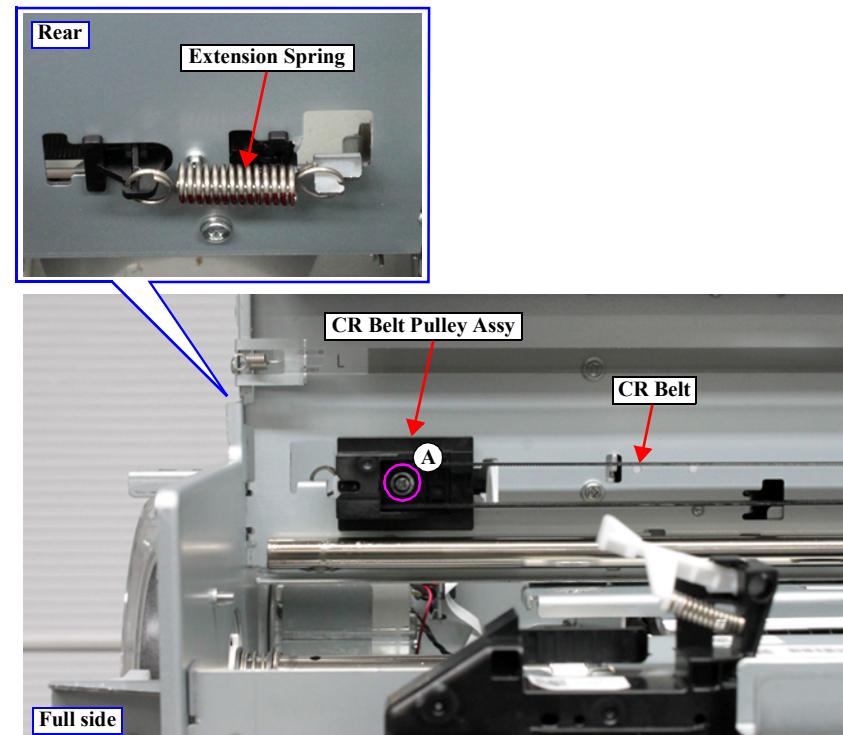


Figure 3-66. Releasing the CR Belt

*Continue to the next page.*

10. Remove the CR Motor cable from the relay connector.
11. Remove the CR Belt from the pinion gear of the CR Motor.
12. Remove the two screws, and remove the CR Motor.

B) Silver M3x4 Cup S-tite screw: 2 pcs

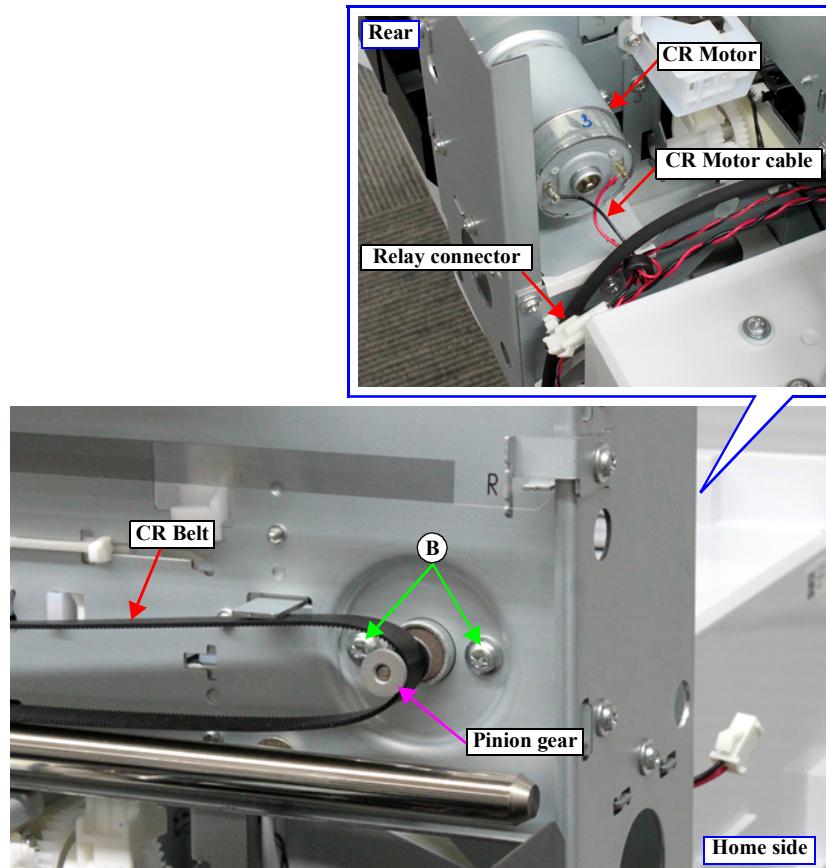


Figure 3-67. Removing the CR Motor

### 3.4.4.7 CR Scale



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Unlock the CR Unit. (p146)
7. Move the CR Unit to the center.
8. Pull the CR Scale to the right side to remove it from the hook on the right scale holder.
9. Remove the Extension Spring.
10. Pull out the CR Scale from the detection part of the Sub C Board on the rear of the CR Unit.



- Since the CR Scale has a specific orientation, install it in the direction shown in Figure3-68.
- Route the CR Scale through the detection point on the Sub C Board on the rear of the CR Unit when installing it. (Figure3-68)
- The surface of the new CR Scale is protected by a film. Make sure to peel off the film before attaching it on the printer. When peeling it off, use adhesive tape. If the film is left applied, an error may occur.

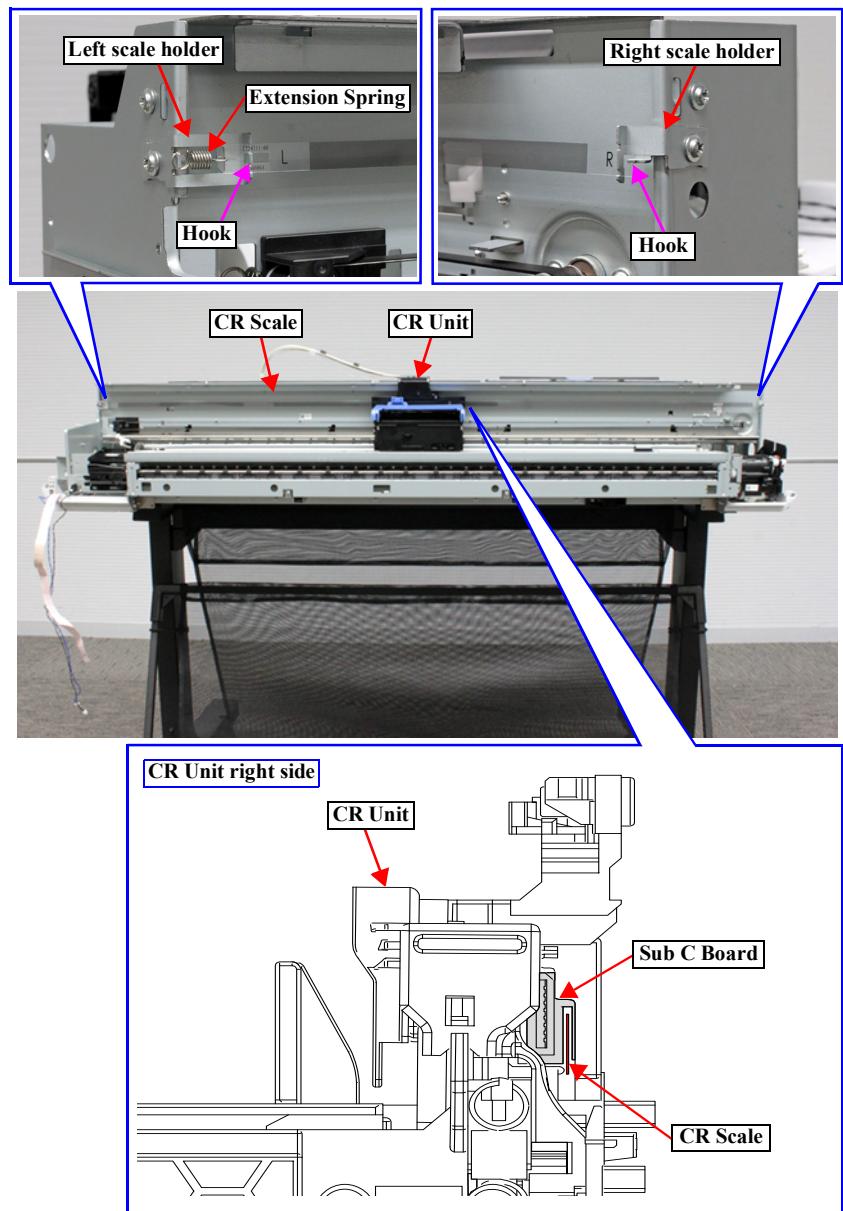


Figure 3-68. Removing the CR Scale

### 3.4.4.8 Head FFC Cover Upper

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the CR Cover. ([p185](#))
7. Unlock the CR Unit. ([p146](#))
8. Move the CR Unit until the right edge of the Head FFC Cover Upper comes to the right edge of the FFC Rail.



Route the Head FFC without excess slack before attaching the Head FFC Cover Upper.

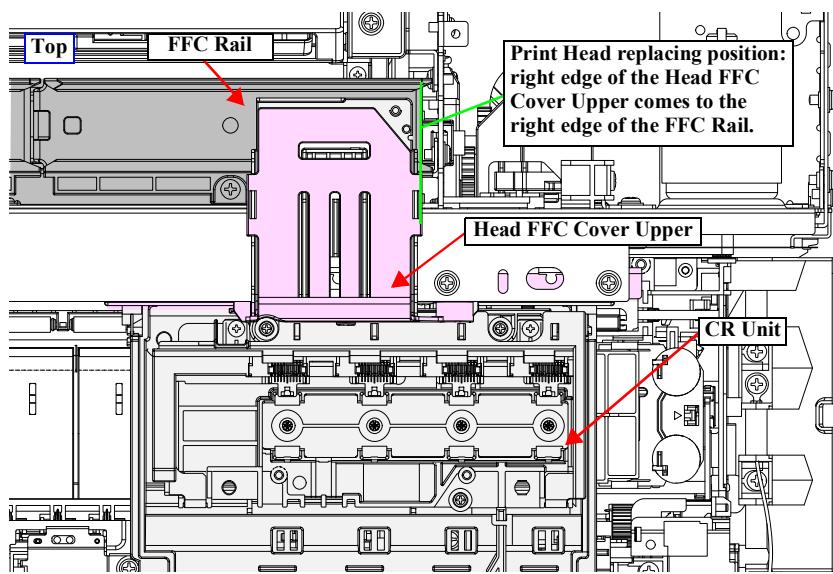
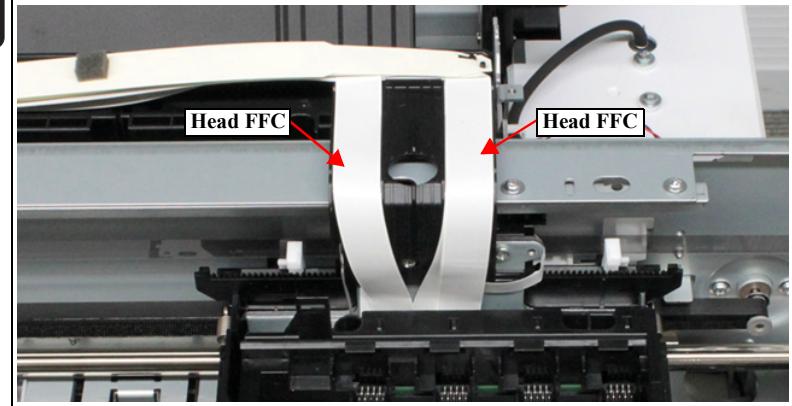


Figure 3-69. Print Head replacing position

9. Remove the screw that secure the Head FFC Cover Upper.  
A) Silver M3x6 S-tite screw: 1 pc
10. Disengage the two hooks, and remove the Head FFC Cover Upper.

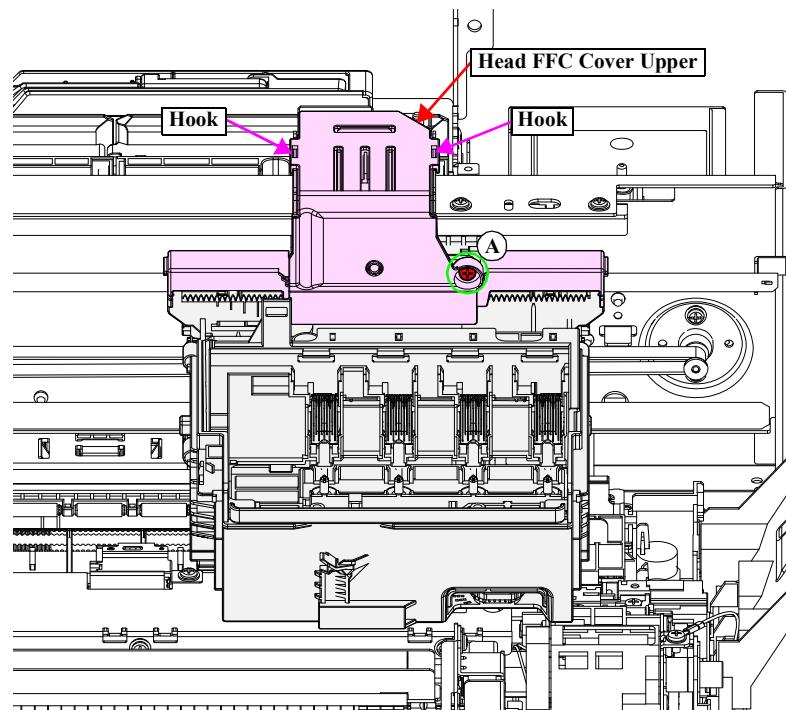


Figure 3-70. Removing the Head FFC Cover Upper

### 3.4.4.9 Head FFC Cover Lower

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the CR Cover. ([p185](#))
7. Unlock the CR Unit. ([p146](#))
8. Remove the Head FFC Cover Upper. ([p197](#))
9. Remove the Print Head Assy. ([p187](#))
10. Peel off the Head FFC from the Head FFC Cover Lower.
11. Release the reinforce sheet from the hook and the tab on the Head FFC Cover Lower by sliding the reinforce sheet.

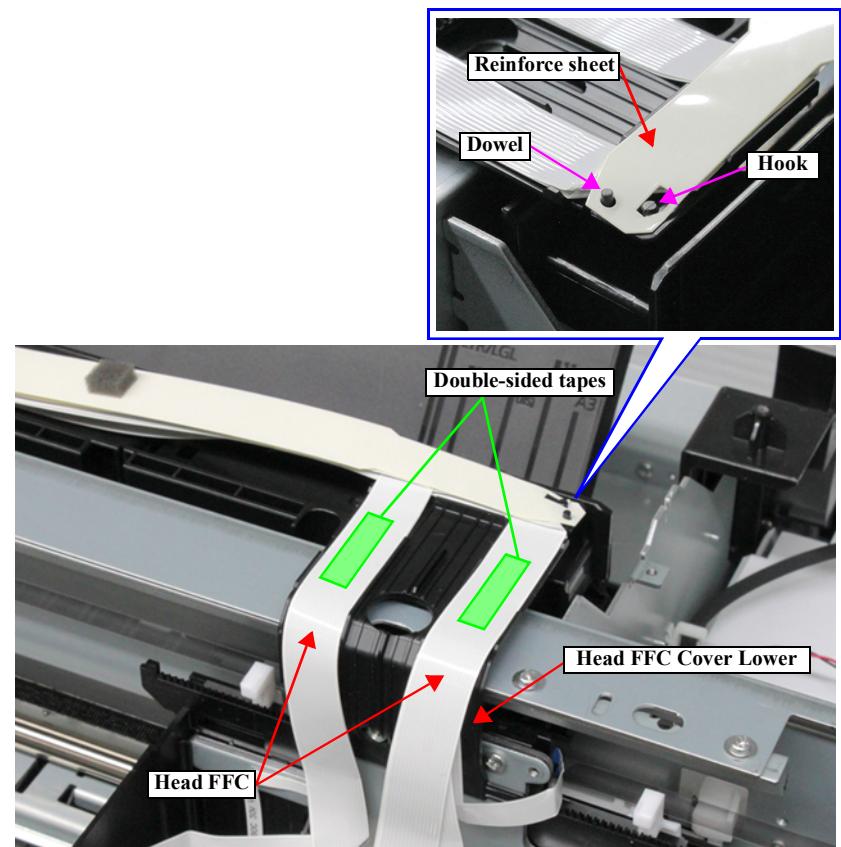


Figure 3-71. Peeling off the Head FFC

Continue to the next page.

12. Remove the screw, remove the Head FFC Cover Lower.

A) Silver M3x6 S-tite screw: 1 pc



Pay attention to the positioning point (See [Figure3-72](#)).

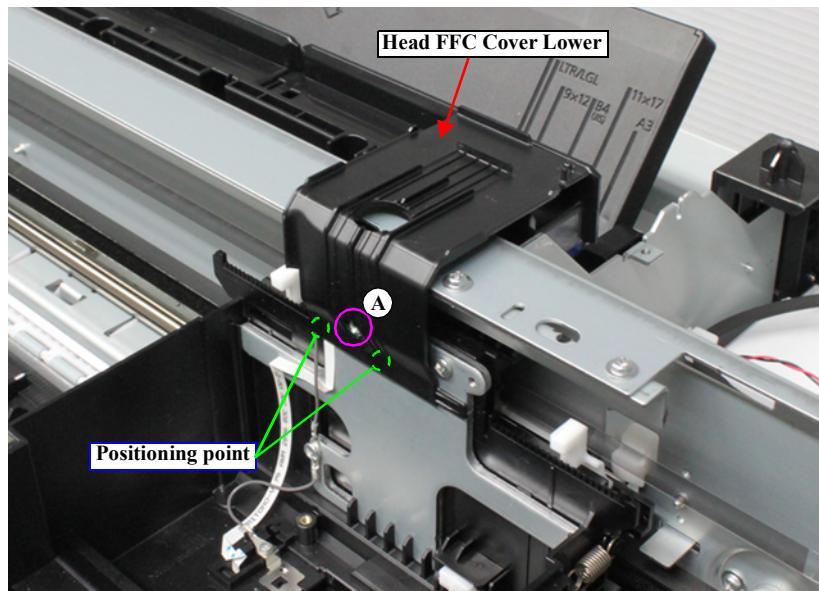


Figure 3-72. Removing the Head FFC Cover Lower

### 3.4.4.10 Head FFC



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Remove the CR Cover. (p185)
7. Unlock the CR Unit. (p146)
8. Remove the Head FFC Cover Upper. (p197)
9. Remove the Print Head Assy. (p187)
10. Remove the Head FFC Cover Lower. (p198)
11. Pull out the Main Board Box. (p163)
12. Remove the Head FFC from the connector on the Main Board (CN318, CN500, CN502, CN503, CN504, CN505).
13. Remove the two ferrite cores.
14. Disengage the two tabs, and remove the FFC sheet (upper).
15. Remove the FFC sheet (lower) from the tab on the FFC Rail.
16. Disconnect the FFC from the connector of the Sub C Board.
17. Remove the Head FFC.

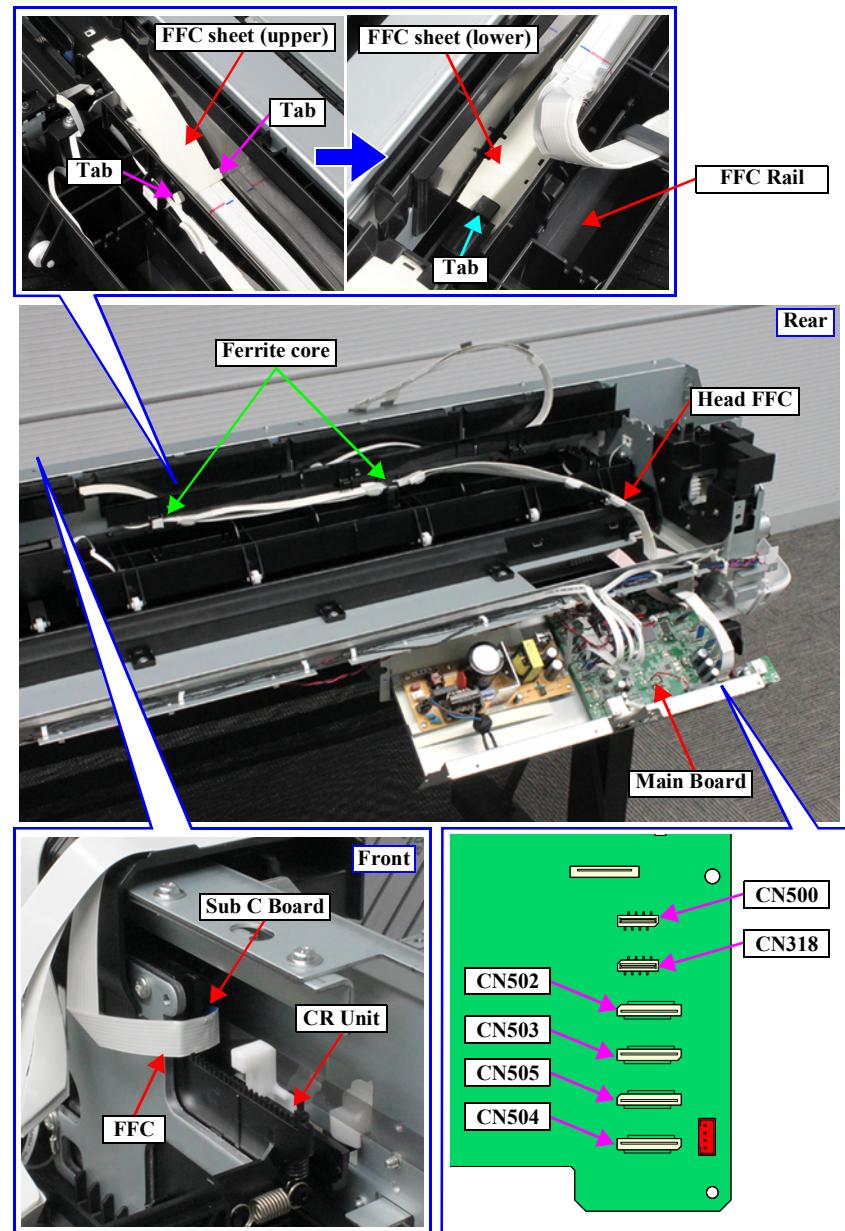


Figure 3-73. Removing the Head FFC

### 3.4.4.11 CR Belt Pulley Assy



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the screw that secures the CR Belt Pulley Assy.  
A) Silver M3x6 Cup S-tite screw: 1 pc
7. Remove the Extension Spring.

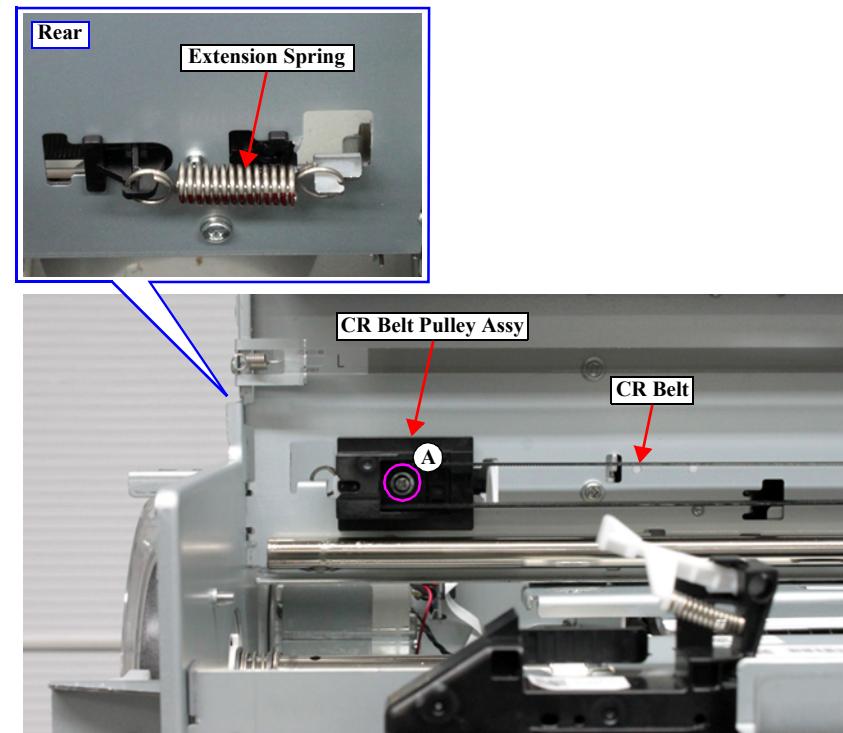


Figure 3-74. Releasing the CR Belt

Continue to the next page.

8. Remove the CR Belt Pulley Assy from the CR Frame.
9. Remove the CR Belt from the pulley while sliding the pulley in the direction of the arrow.

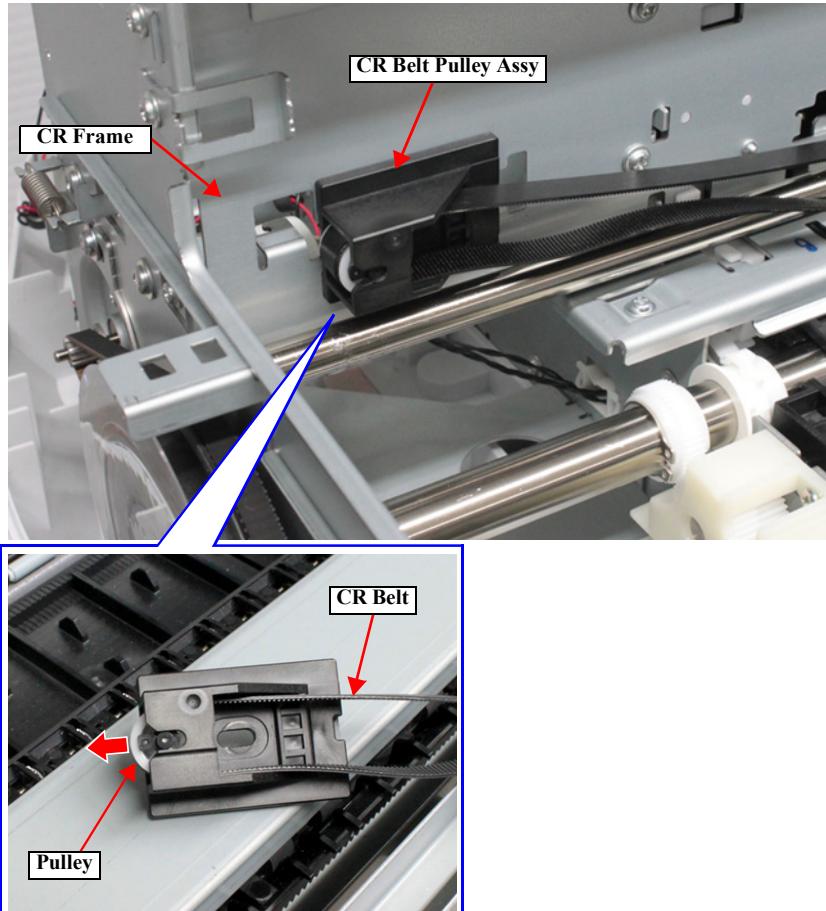
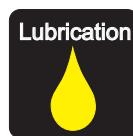
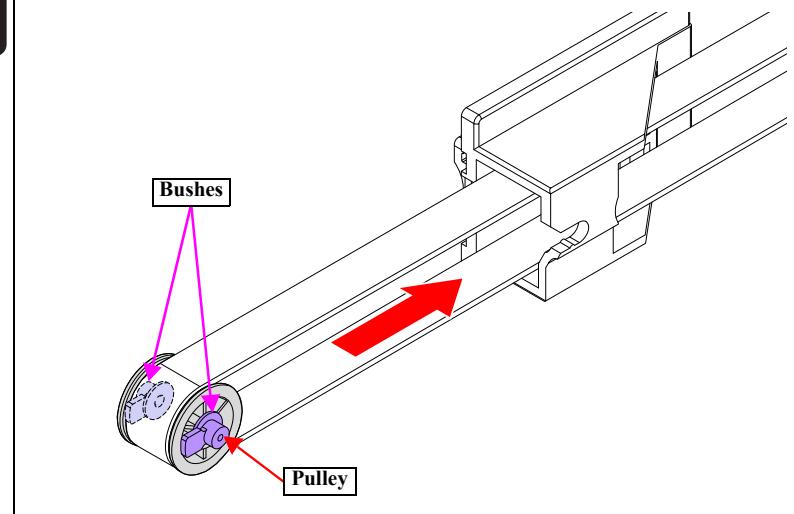


Figure 3-75. Removing the CR Belt Pulley Assy



When attaching the Pulley, refer to the figure shown below to match the orientation of the bushes.



When replaced with a new part, make sure to lubricate the new one referring to "5.4 Lubrication" (p398).

### 3.4.4.12 Right Frame

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the CR Cover. ([p185](#))
7. Unlock the CR Unit. ([p146](#))
8. Remove the Head FFC Cover Upper. ([p197](#))
9. Remove the Print Head Assy. ([p187](#))
10. Remove the Head FFC Cover Lower. ([p198](#))
11. Remove the CR Belt Pulley Assy. ([p201](#))
12. Remove the CR Motor. ([p194](#))
13. Remove the CR Scale. ([p196](#))
14. Release the ASF Encoder Sensor cable from the clamp (1).
15. Release the waste ink tube, CR Motor cable, and Pump Motor cable from the clamp (2).
16. Release the CR Motor cable, and Pump Motor cable from the clamp (3).
17. Release the waste ink tube and Pump Motor cable from the clamp (4).
18. Release the Pump Motor cable from the clamp (5).
19. Peel off the Pump Encoder FFC from the Right Frame.

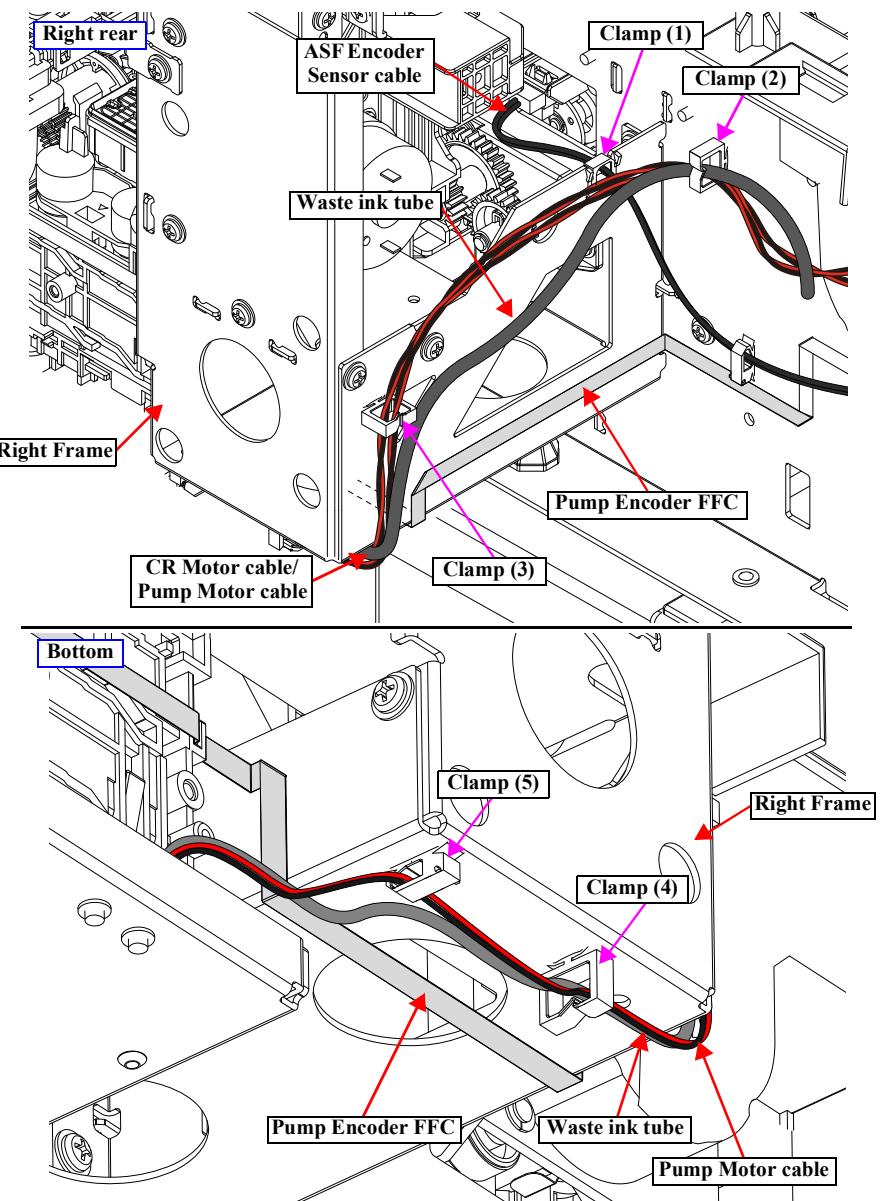


Figure 3-76. Releasing the Waste ink tube and the cable

*Continue to the next page.*

20. Remove the seven screws, and remove the Right Frame.

- B) Silver M3x6 Cup S-tite screw: 6 pcs
- C) Silver M3x8 P-tite screw: 1 pc



**Route the Pump Encoder FFC to the Right Frame as shown below.**

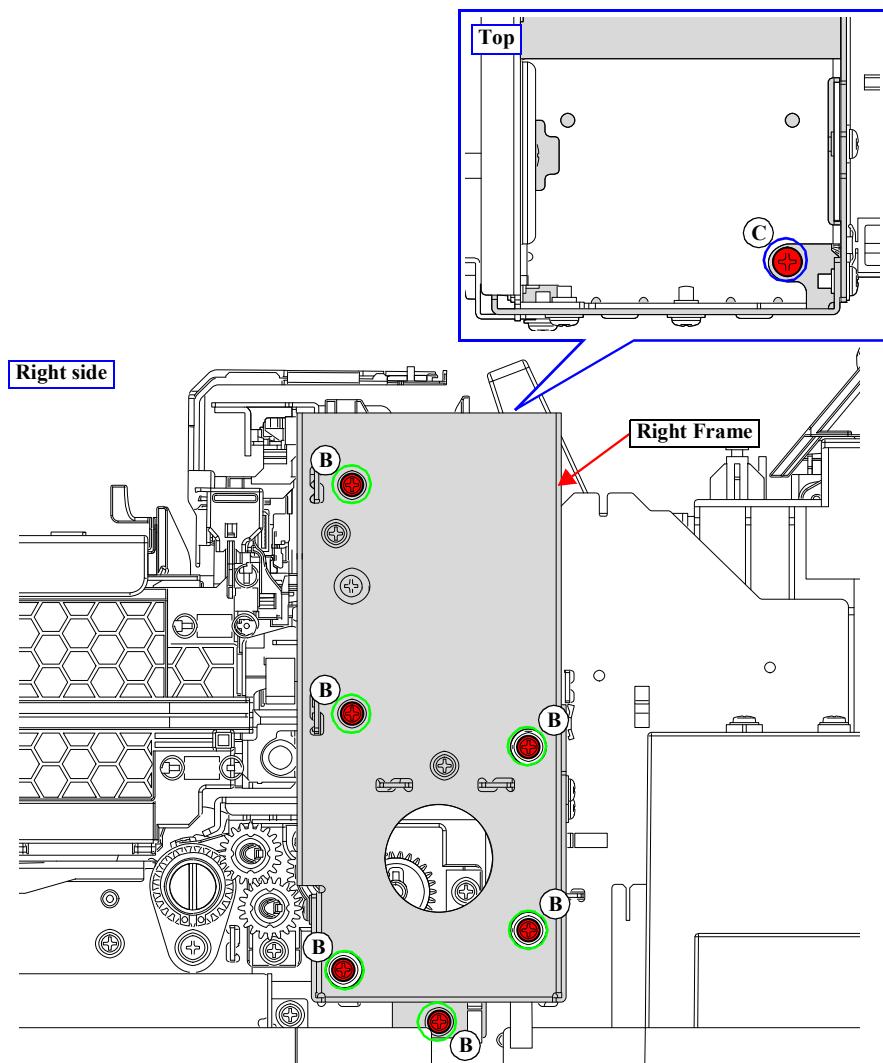
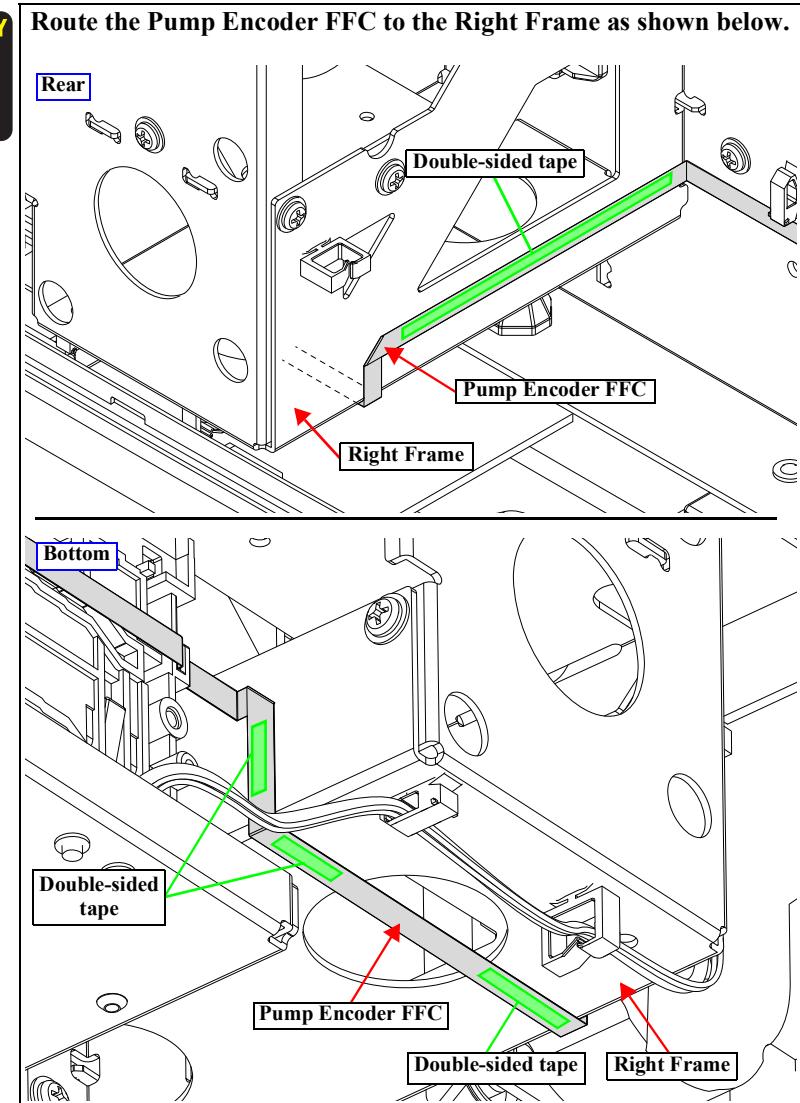


Figure 3-77. Removing the Right Frame



### 3.4.4.13 CR Unit



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Remove the CR Cover. (p185)
7. Unlock the CR Unit. (p146)
8. Remove the Head FFC Cover Upper. (p197)
9. Remove the Print Head Assy. (p187)
10. Remove the Head FFC Cover Lower. (p198)
11. Remove the CR Belt Pulley Assy. (p201)
12. Remove the CR Motor. (p194)
13. Remove the CR Scale. (p196)
14. Remove the Right Frame. (p203)
15. Remove the PF Switch Assy. (p248)
16. Remove the screw, and remove the CR Stopper.  
A) Silver M3x6 Cup S-tite screw: 1 pc

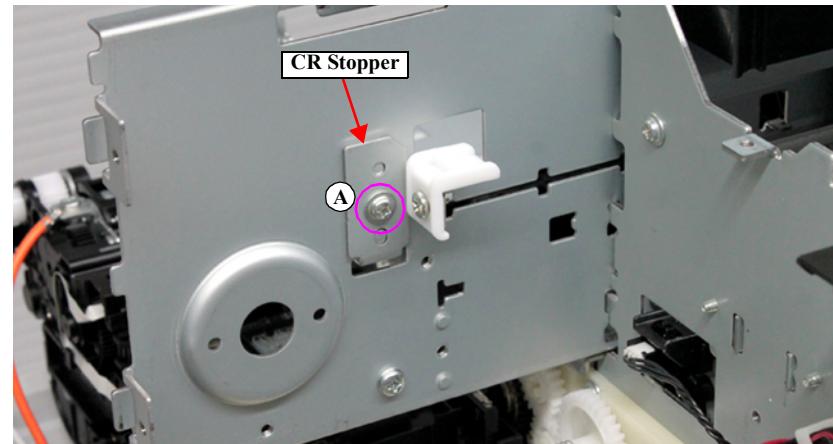


Figure 3-78. Removing the CR Stopper

17. Remove the two screws, and remove the Pump Cap Unit Cover.  
B) Silver M3x10 P-tite screw: 2 pcs

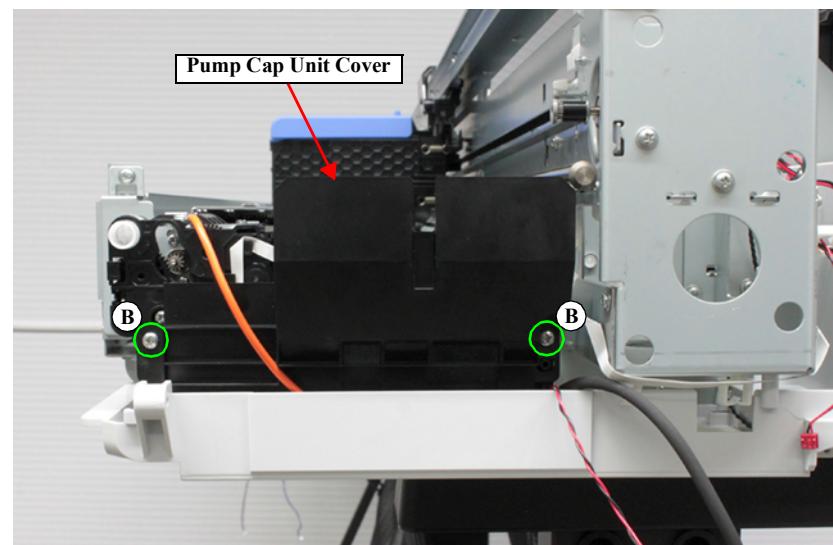


Figure 3-79. Removing the Pump Cap Unit Cover

*Continue to the next page.*

18. Disconnect the FFC from the connector on the Sub C Board.
19. Remove the CR Unit while sliding it in the direction of the arrow.



- Before installing the CR Unit, make sure to connect the FFC to the connector of the Sub C Board.  
It is difficult to insert after installed the CR Unit.
- When replacing the CR Unit, replace the Head Pressing Lever from the original CR Unit. Attach the Head Pressing Lever as shown below. (It can be easily removed with tweezers, etc.)

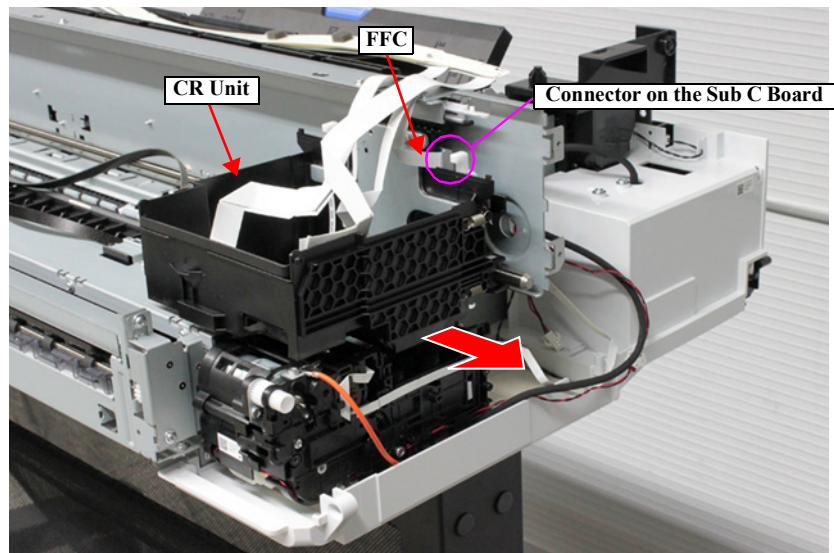
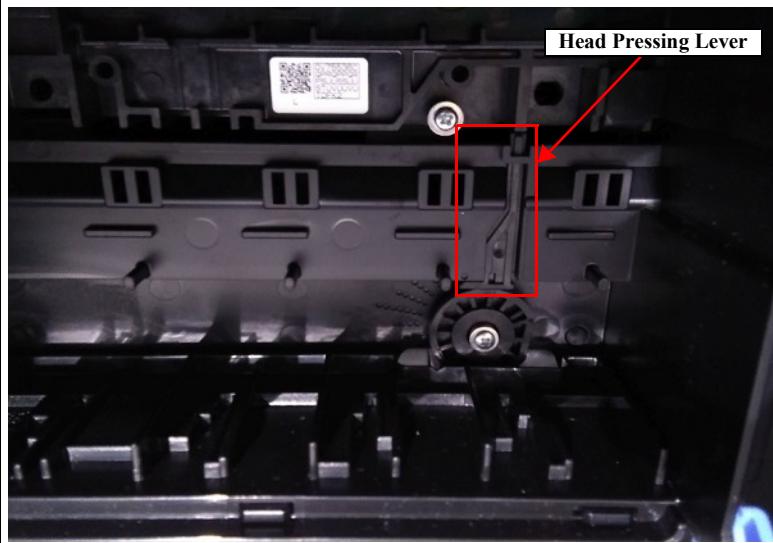


Figure 3-80. Removing the CR Unit



When replaced with a new part, make sure to lubricate the new one referring to "["5.4 Lubrication" \(p398\)](#)".

### 3.4.4.14 PW Sensor



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the CR Cover. ([p185](#))
7. Unlock the CR Unit. ([p146](#))
8. Remove the Head FFC Cover Upper. ([p197](#))
9. Remove the Print Head Assy. ([p187](#))
10. Remove the Head FFC Cover Lower. ([p198](#))
11. Remove the CR Belt Pulley Assy. ([p201](#))
12. Remove the CR Motor. ([p194](#))
13. Remove the CR Scale. ([p196](#))
14. Remove the Right Frame. ([p203](#))
15. Remove the PF Switch Assy. ([p248](#))
16. Remove the CR Unit. ([p205](#))
17. Disengage the hook inside the CR Unit to remove the sensor cover.
18. Disconnect the FFC from the connector on the PW Sensor, remove the PW Sensor.

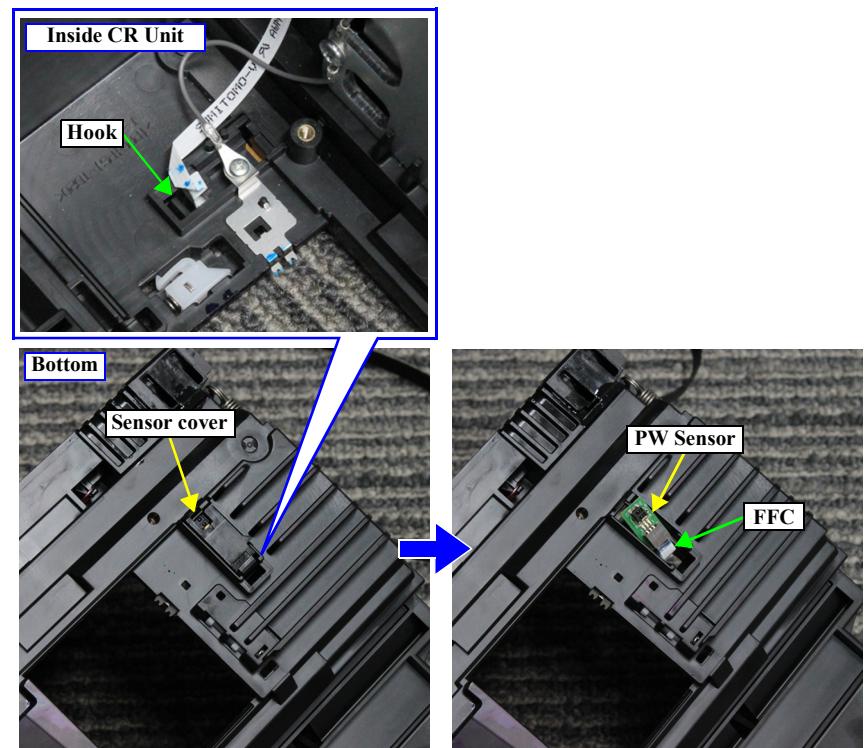


Figure 3-81. Removing the PW Sensor

### 3.4.4.15 CR Belt



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Remove the CR Cover. (p185)
7. Unlock the CR Unit. (p146)
8. Remove the Head FFC Cover Upper. (p197)
9. Remove the Print Head Assy. (p187)
10. Remove the Head FFC Cover Lower. (p198)
11. Remove the CR Belt Pulley Assy. (p201)
12. Remove the CR Motor. (p194)
13. Remove the CR Scale. (p196)
14. Remove the Right Frame. (p203)
15. Remove the PF Switch Assy. (p248)
16. Remove the CR Unit. (p205)
17. Remove the CR Belt from the CR Unit.

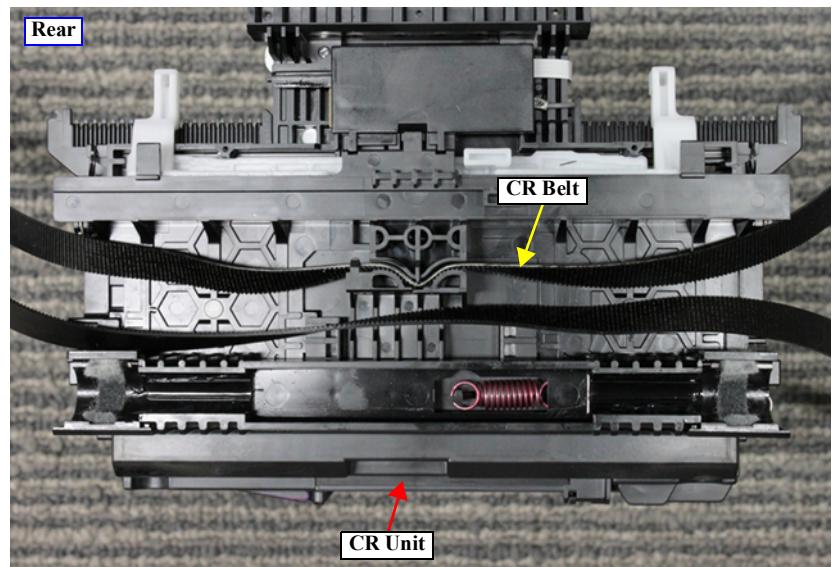


Figure 3-82. Removing the CR Belt



Make sure to install the CR Belt as the toothed side comes inside.

### 3.4.4.16 Oil Pad



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Remove the CR Cover. (p185)
7. Unlock the CR Unit. (p146)
8. Remove the Head FFC Cover Upper. (p197)
9. Remove the Print Head Assy. (p187)
10. Remove the Head FFC Cover Lower. (p198)
11. Remove the CR Belt Pulley Assy. (p201)
12. Remove the CR Motor. (p194)
13. Remove the CR Scale. (p196)
14. Remove the Right Frame. (p203)
15. Remove the PF Switch Assy. (p248)
16. Remove the CR Unit. (p205)
17. Remove the two Oil Pad.

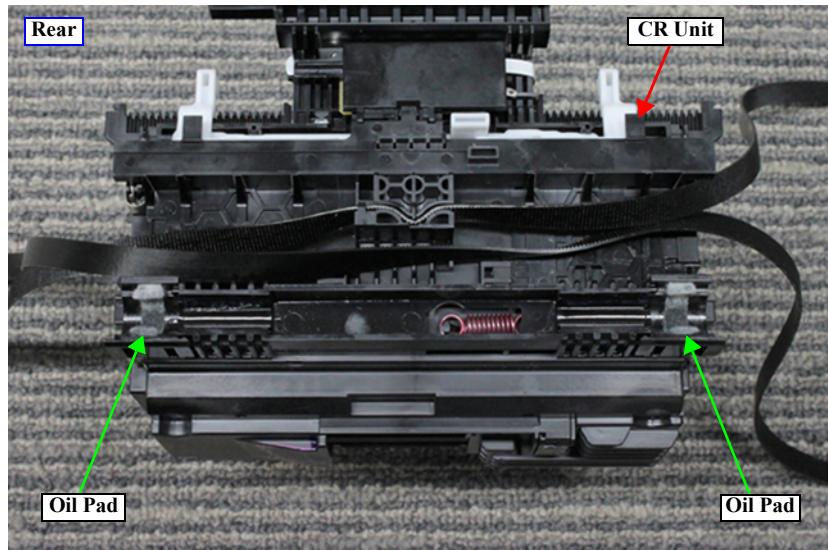


Figure 3-83. Removing the Oil Pad



When replaced with a new part, make sure to lubricate the new one referring to "5.4 Lubrication" (p398).

### 3.4.4.17 Sub C Board



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the CR Cover. ([p185](#))
7. Unlock the CR Unit. ([p146](#))
8. Remove the Head FFC Cover Upper. ([p197](#))
9. Remove the Print Head Assy. ([p187](#))
10. Remove the Head FFC Cover Lower. ([p198](#))
11. Remove the CR Belt Pulley Assy. ([p201](#))
12. Remove the CR Motor. ([p194](#))
13. Remove the CR Scale. ([p196](#))
14. Remove the Right Frame. ([p203](#))
15. Remove the PF Switch Assy. ([p248](#))
16. Remove the CR Unit. ([p205](#))
17. Disengage the hook, and remove the sensor cover.

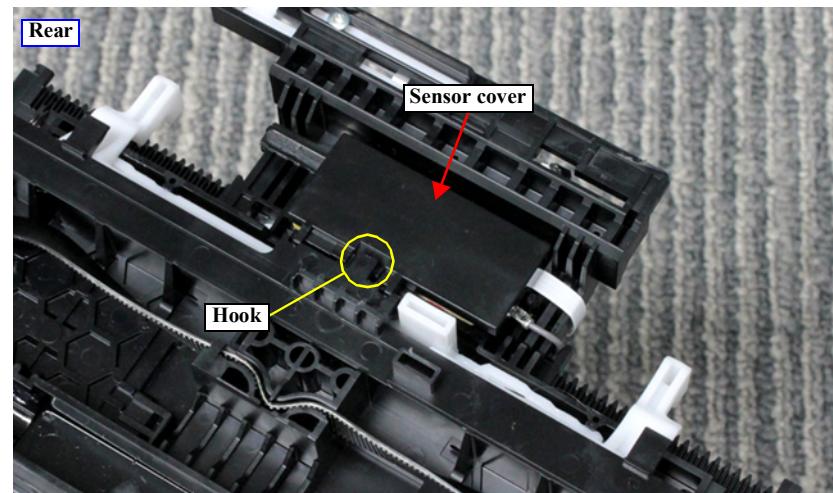


Figure 3-84. Removing the sensor cover

*Continue to the next page.*

18. Remove the three screws that secure the Sub C Board.

- A) Silver M2x6 P-tite screw: 2 pcs
- B) Silver M2x6 P-tite screw: 1 pc



**Make sure to secure the grounding wire with securing screw B.  
(Figure 3-85)**

19. Disconnect the FFC from the connector on the Sub C Board.

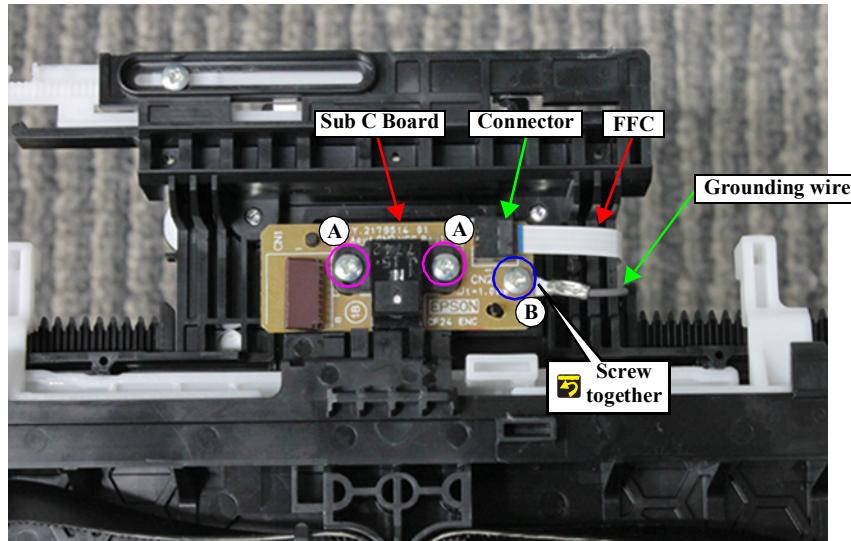


Figure 3-85. Removing the Sub C Board

### 3.4.4.18 Pump Cap Unit



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Unlock the CR Unit. ([p146](#))



In the next step, prepare a waste cloth or the like in advance since the waste ink may drip from the waste ink tube.

7. Slide the tube clip, remove the waste ink tube from the Maintenance Box Unit.
8. Release the waste ink tube from the two clamps.
9. Disconnect the Pump Motor cable from the relay connector.
10. Release the Pump Motor cable from the two clamps.

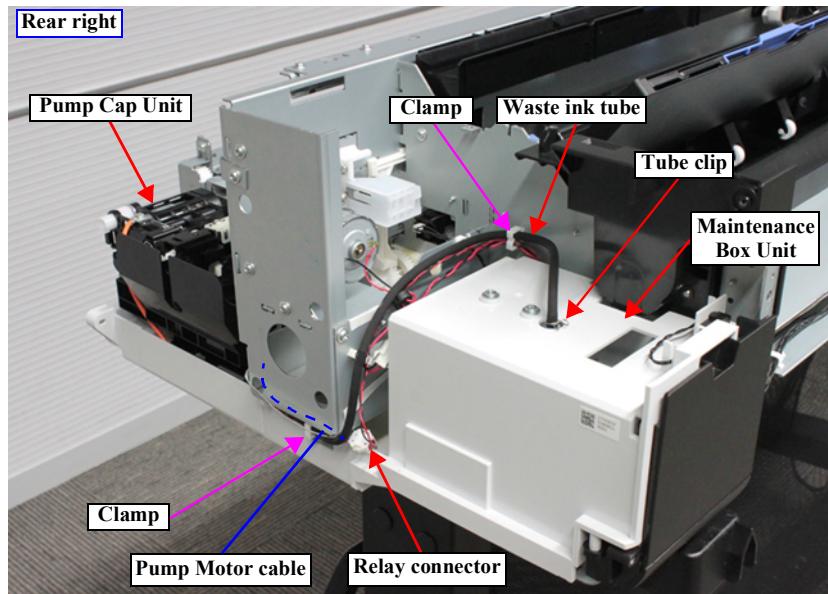


Figure 3-86. Releasing the waste ink tube and cables

*Continue to the next page.*

11. Remove the two screws, and remove the Pump Cap Unit cover.

A) Silver M3x10 P-tite screw: 2 pcs

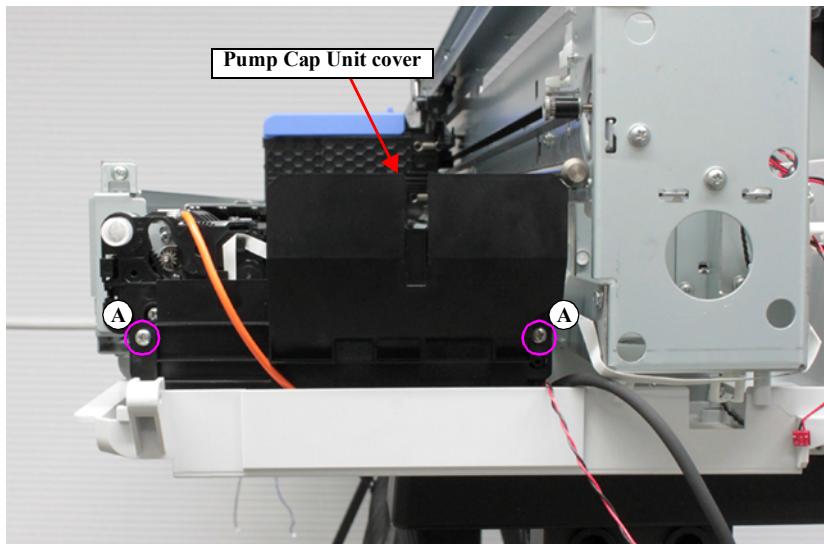


Figure 3-87. Removing the Pump Cap Unit cover

12. Disengage the hook, and remove the sensor cover in the direction of the arrow.

13. Disconnect the FFC from the connector on the Encoder Sensor.

14. Release the FFC from the four tabs on the Pump Cap Unit.

15. Remove the screw, and remove the grounding wire.

B) Silver M3x6 S-tite screw: 1 pc

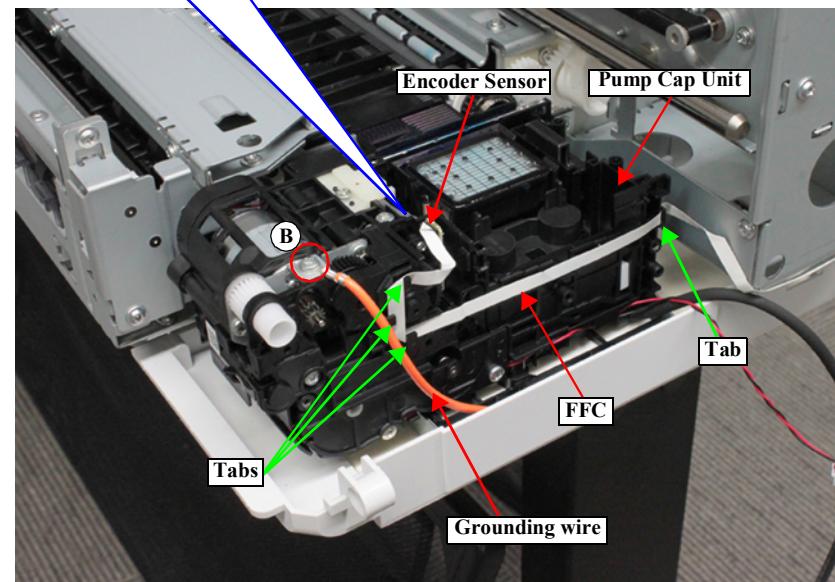
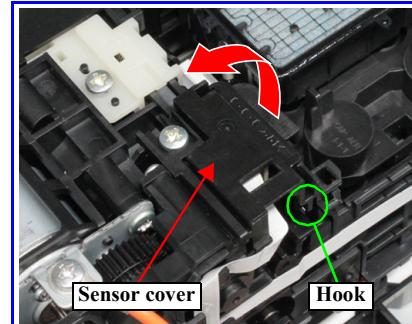
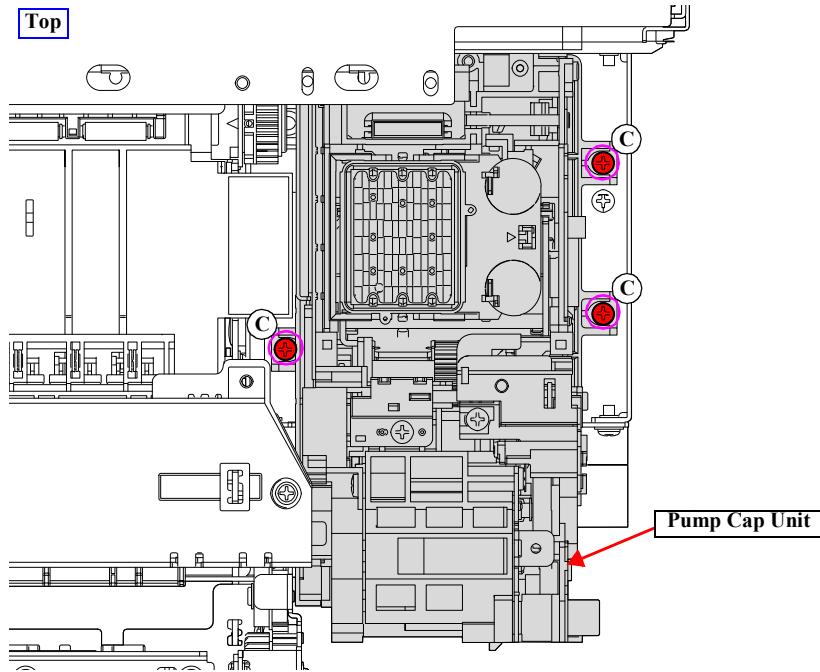


Figure 3-88. Releasing the FFC

Continue to the next page.

16. Remove the three screws, and remove the Pump Cap Unit.

C) Silver M3x6 S-tite screw: 3 pcs



For replacement of Pump Cap Unit due to the end of life, replace the CR Porous Pad with the included pad. (Porous Pad are included with a new Pump Cap Unit)

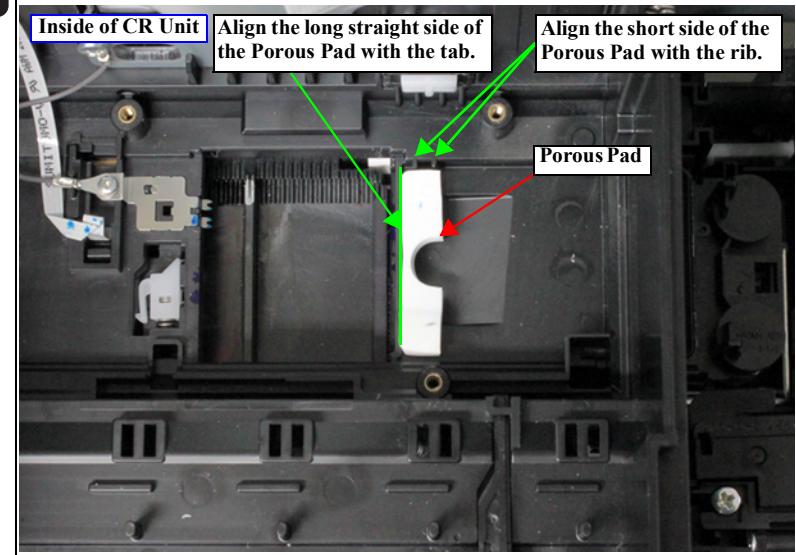


Figure 3-89. Removing the Pump Cap Unit

### 3.4.4.19 Ink Tank Upper Porous Pad



The Ink Tank Upper Porous Pad is installed on SC-T3100X Series/  
SC-T3100D Series/SC-F500 Series only.

1. Remove the Front Cover. ([p149](#))
2. Remove the Left Upper Cover A. ([p155](#))
3. Remove the Left Upper Cover B. ([p157](#))
4. Remove the Top Cover. ([p158](#))
5. Remove the four screws securing the Key Slot Assy.

A)Silver M3x6 S-tite screw: 4 pcs

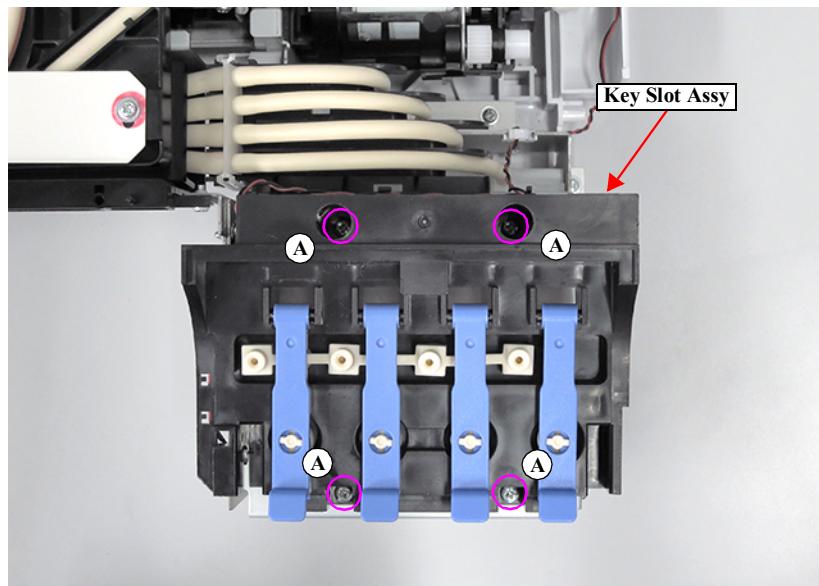


Figure 3-90. Removing the Ink Tank Upper Porous Pad

6. With the Key Slot Assy lifted, remove the Ink Tank Upper Porous Pad.

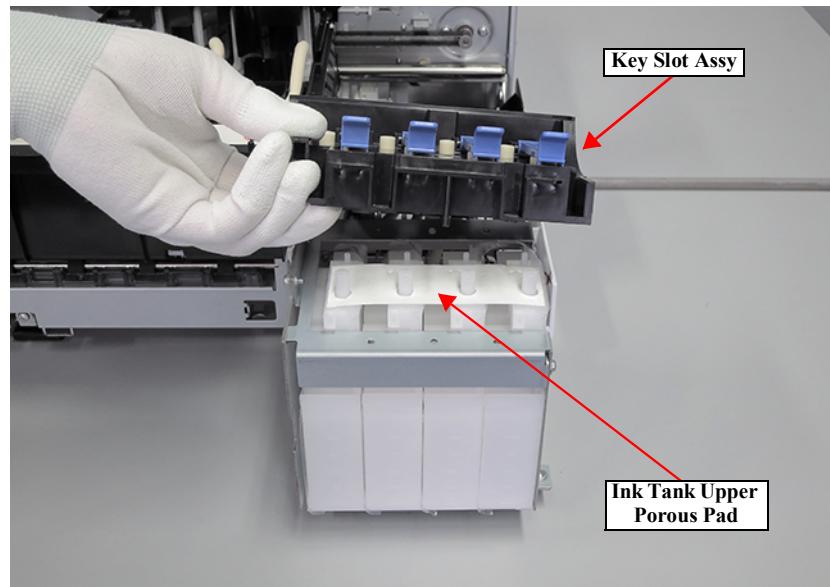
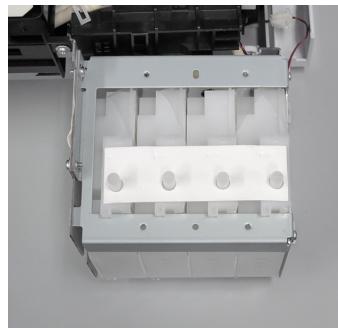


Figure 3-91. Removing the Ink Tank Upper Porous Pad



Attach the Ink Tank Upper Porous Pad as illustrated below.

**OK**



**NG**



### 3.4.4.20 Ink Tank Cap



The Ink Tank Cap is installed on SC-T3100X Series/SC-T3100D Series/SC-F500 Series only.

1. Open the Ink Tank Upper Cover.
2. Open the Ink Tank Cap.
3. Press the bearing of the Ink Tank Cap in the direction of the illustrated arrow and then remove the Ink Tank Cap.

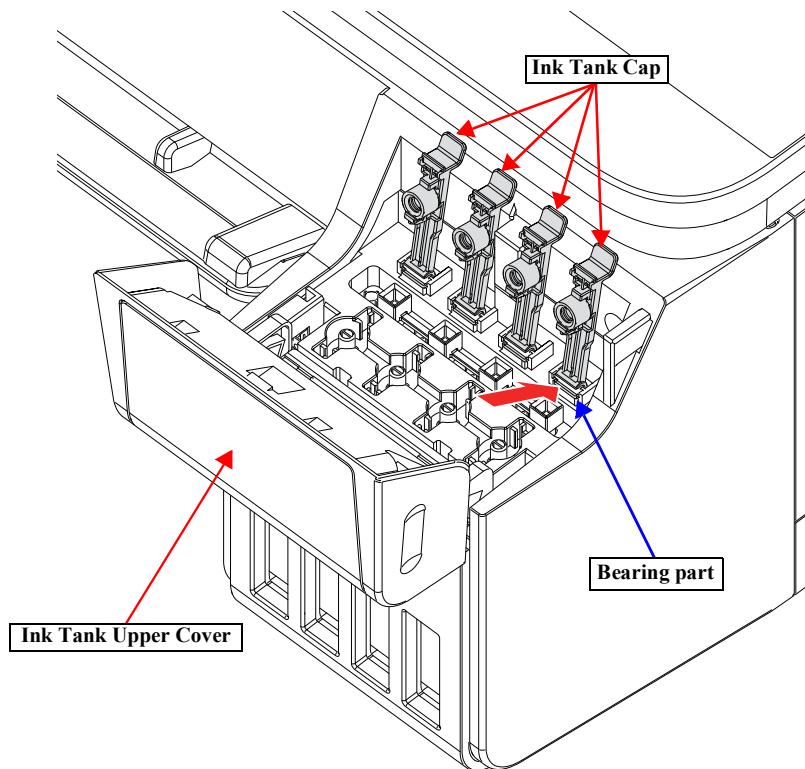


Figure 3-92. Removing the Ink Tank Cap

### 3.4.4.21 Ink Tank Cap Rubber



The Ink Tank Cap Rubber is not installed on SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series.

1. Open the Ink Tank Upper Cover.
2. Open the Ink Tank Cap.
3. Rotate the Ink Tank Cap Rubber 90 degrees counterclockwise and remove.

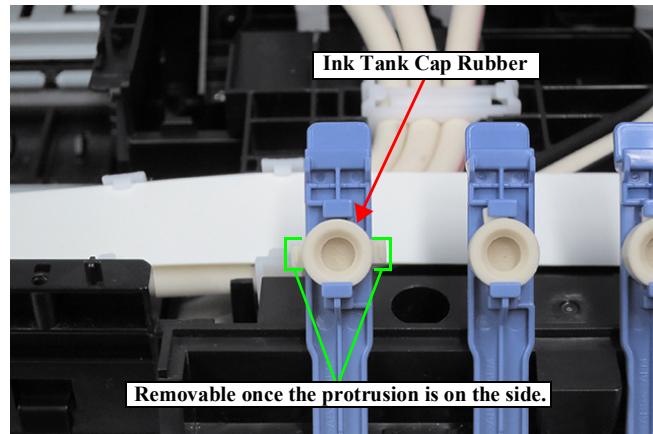
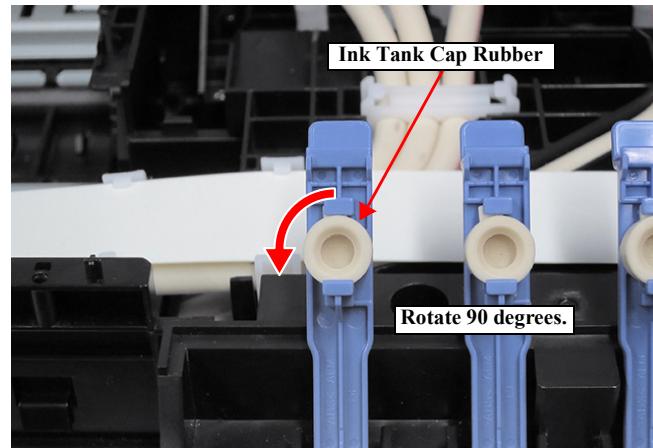


Figure 3-93. Removing the Ink Tank Cap Rubber

Continue to the next page.

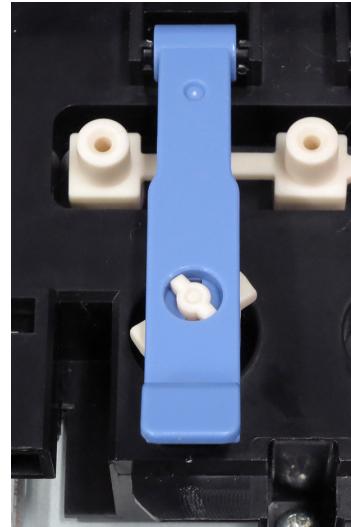


Make sure the Ink Tank Cap Rubber is installed correctly after installation.

OK



NG



### 3.4.4.22 Ink Tube Assy



The Ink Tube Assy is not installed on SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series.

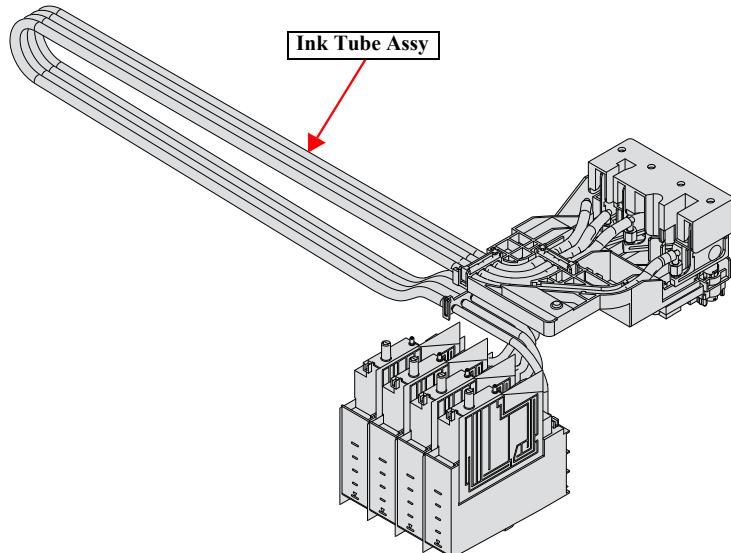


Figure 3-94. Ink Tube Assy

1. Remove the Front Cover. ([p149](#))
2. Remove the Left Upper Cover A. ([p155](#))
3. Remove the Left Upper Cover B. ([p157](#))
4. Remove the Top Cover. ([p158](#))
5. Remove the CR Cover. ([p185](#))



Make sure to use the following procedure to remove the part.  
Failure to do so may result in ink leakage.

6. Remove the three screws securing the duct part of the Ink Tube Assy.
- A)Silver M3x8 P-tite screw: 3 pcs

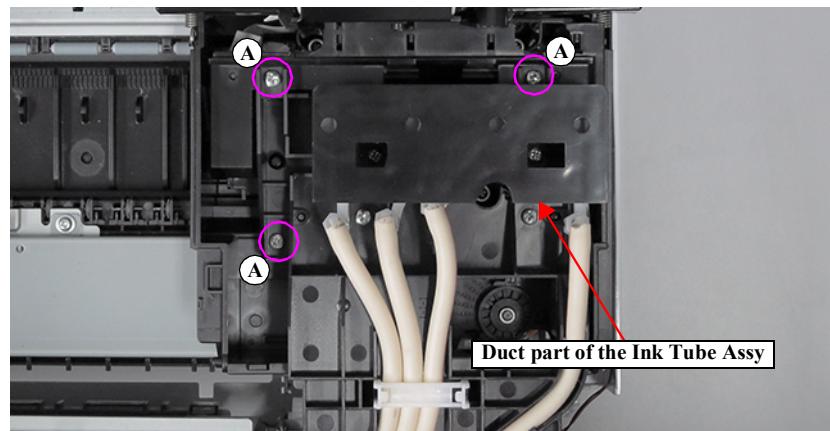


Figure 3-95. Removing the duct part of the Ink Tube Assy (1)

*Continue to the next page.*

7. Remove a screw securing the Ink Tube Sheet Guide.

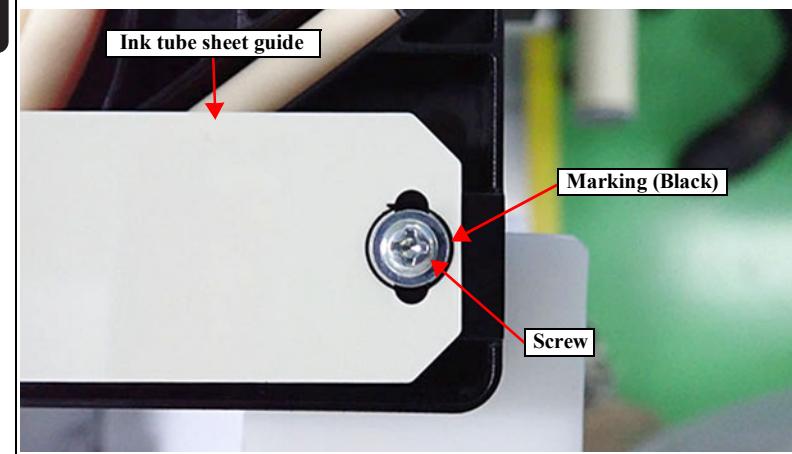
B)Silver, M3x8, Cup P-Tite: 3 pcs



**When the Ink Tube Assy is removed at the following step, ink may drip off from the tube. Prepare a waste cloth or the like in advance and be careful not to contaminate the surroundings.**



Tighten the screw inside of the black marking on the Ink Tube Sheet Guide.



8. Remove the duct part of the Ink Tube Assy from the CR Unit.

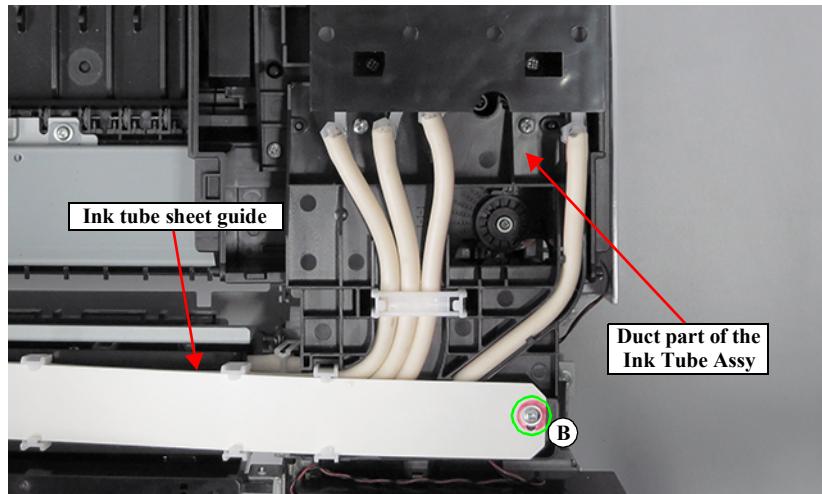


Figure 3-96. Removing the duct part of the Ink Tube Assy (2)

9. Slide the Ink Tube Sheet Guide in the direction of the illustrated arrow and remove it from the Tube Guide.

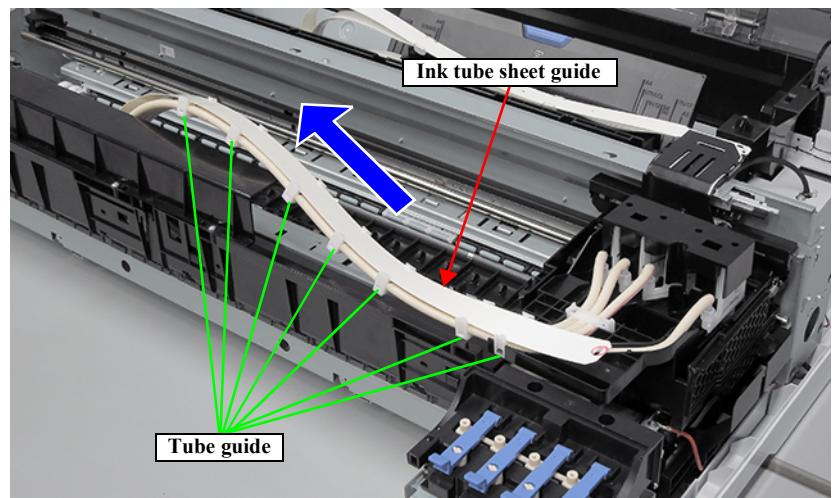


Figure 3-97. Releasing the Ink Tube Assy

Continue to the next page.

10. Remove the two screws securing the tube cover.

C)Silver, M3x8, Bind P-Tite: 2 pcs

11. Release the two hooks and remove the tube cover.

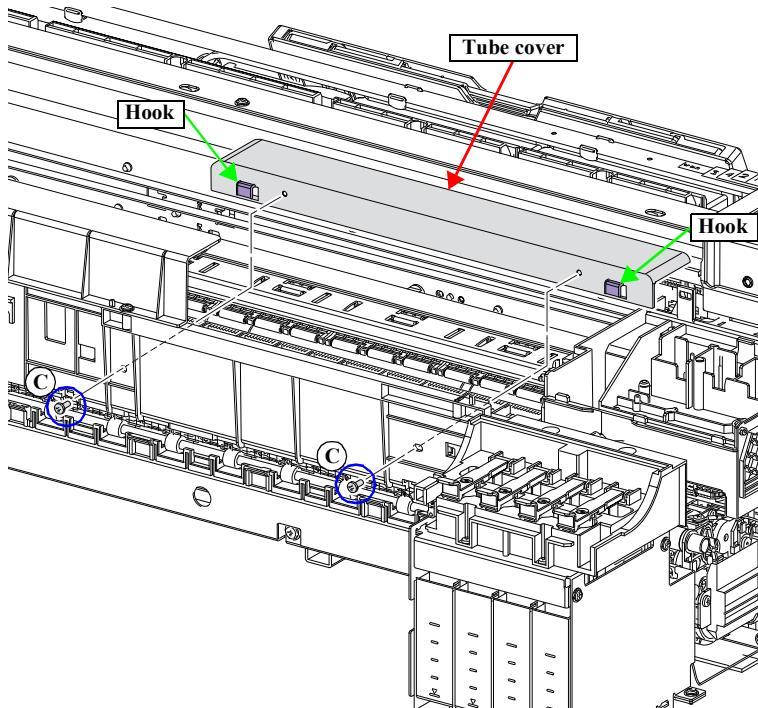


Figure 3-98. Removing the tube cover

12. Release the two hooks on tube guide A.

13. Release the two hooks on tube guide B from the front of the printer and remove tube guide B.

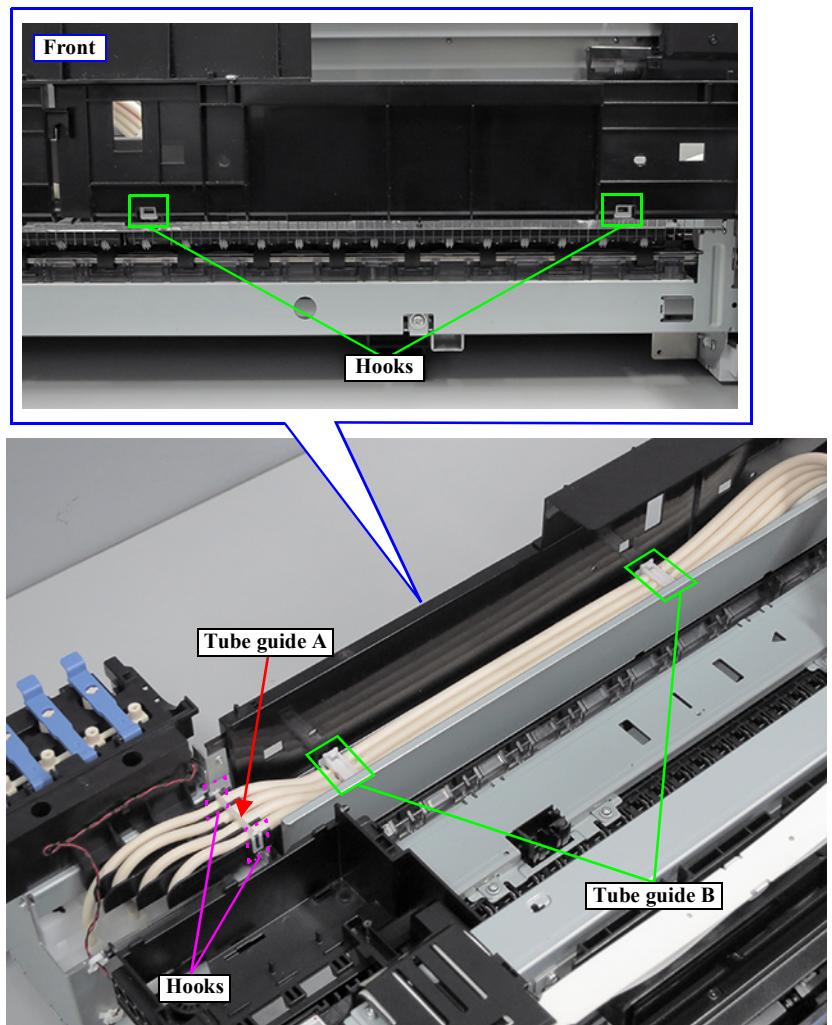
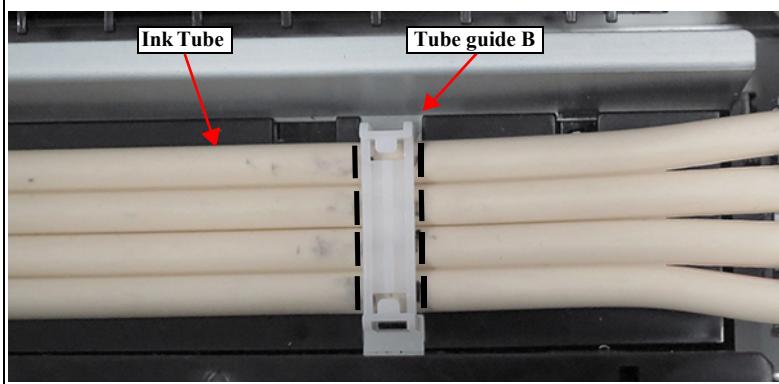


Figure 3-99. Removing the tube guide

Continue to the next page.



**Attach tube guide B along the ink tube line.**



14. Remove the four screws securing the Key Slot Assembly.

D)Silver, M3x6/ Bind P-Tite: 4 pcs

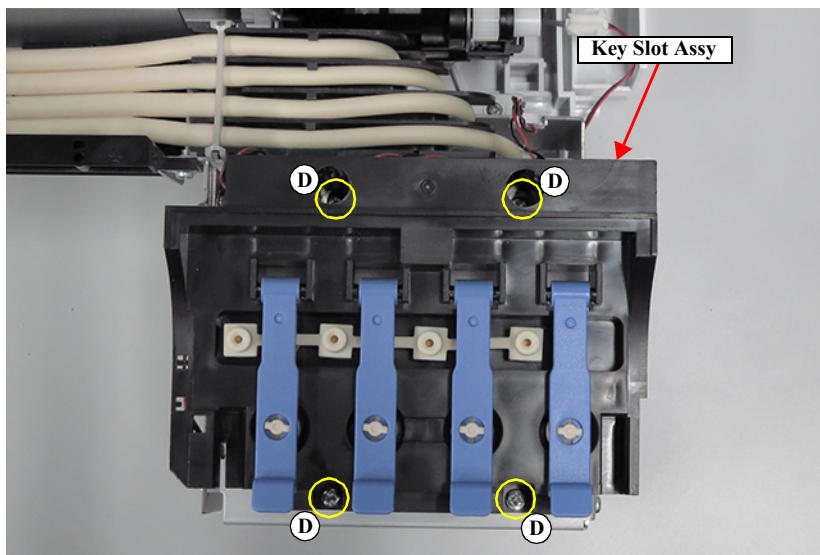


Figure 3-100. Removing the Key Slot Assy

15. Release the Ink Tube Assy from the Key Slot Assy.
16. Remove the Ink Tank Upper Cover Sensor Cable from the relay connector.
17. Release the Ink Tank Upper Cover Sensor Cable from the two clamps.
18. Remove the Key Slot Assy.

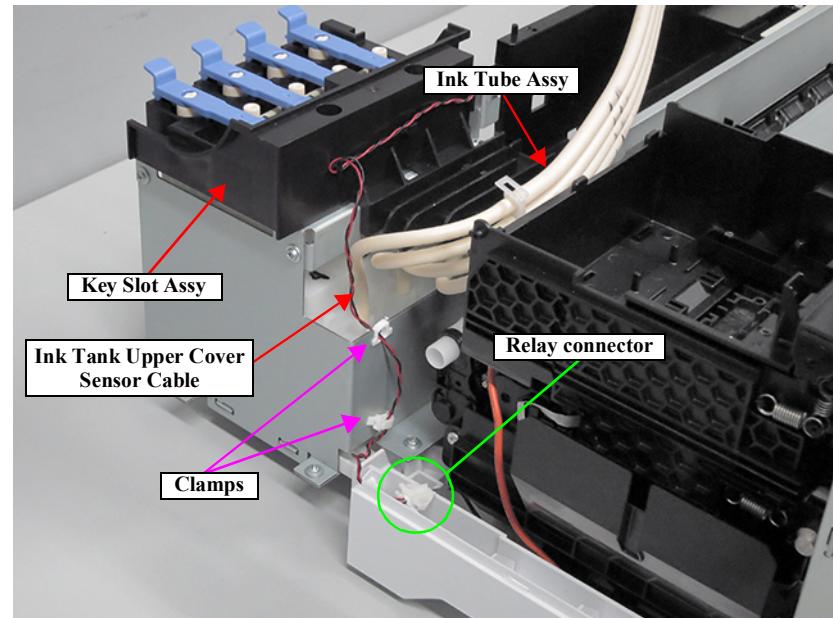


Figure 3-101. Removing the Ink Tube Assy

*Continue to the next page.*

19. Remove the Ink Tank Upper Porous Pad. ([p215](#))
20. Remove the Ink Tank Cap Rubber from the Ink Tank Cap and replace it with the Ink Tank.
21. Remove the eight screws and remove the Ink tank frame.  
E)Silver M3x6 Cup S-tite screw: 4pcs  
F)Silver M3x6 Cup S-tite screw: 2 pcs  
G)Silver M3x8 Cup P-tite screw: 2 pcs

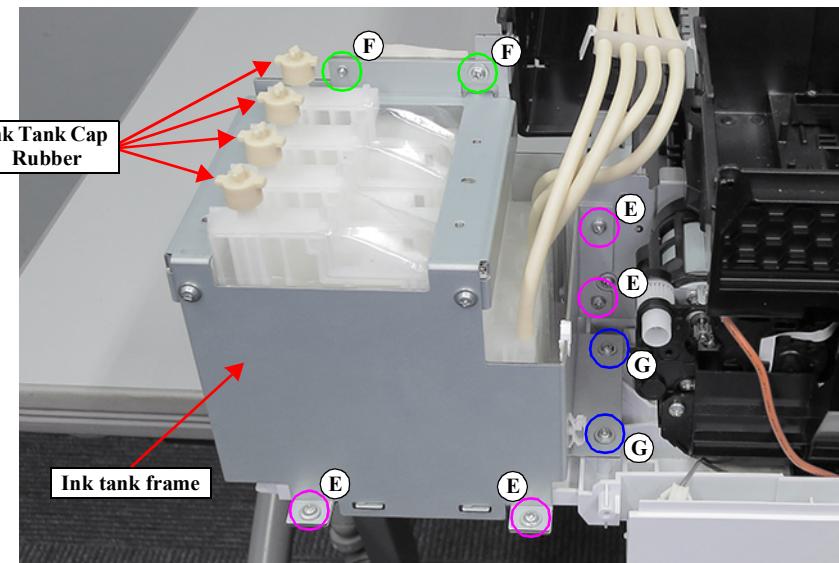
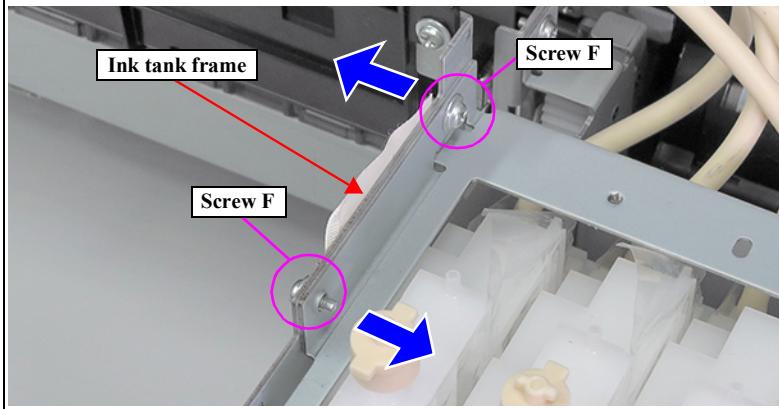
**Check the tightening orientation of screw F.**

Figure 3-102. Removing the Ink tank frame

*Continue to the next page.*

22. Remove each screw securing the Ink Tank.  
H)Silver M3x8 P-tite screw: each 1 pc
23. Slide the Ink Tank backward, release the hook on the bottom of the Ink Tank, and remove it from the Right Lower Cover B.

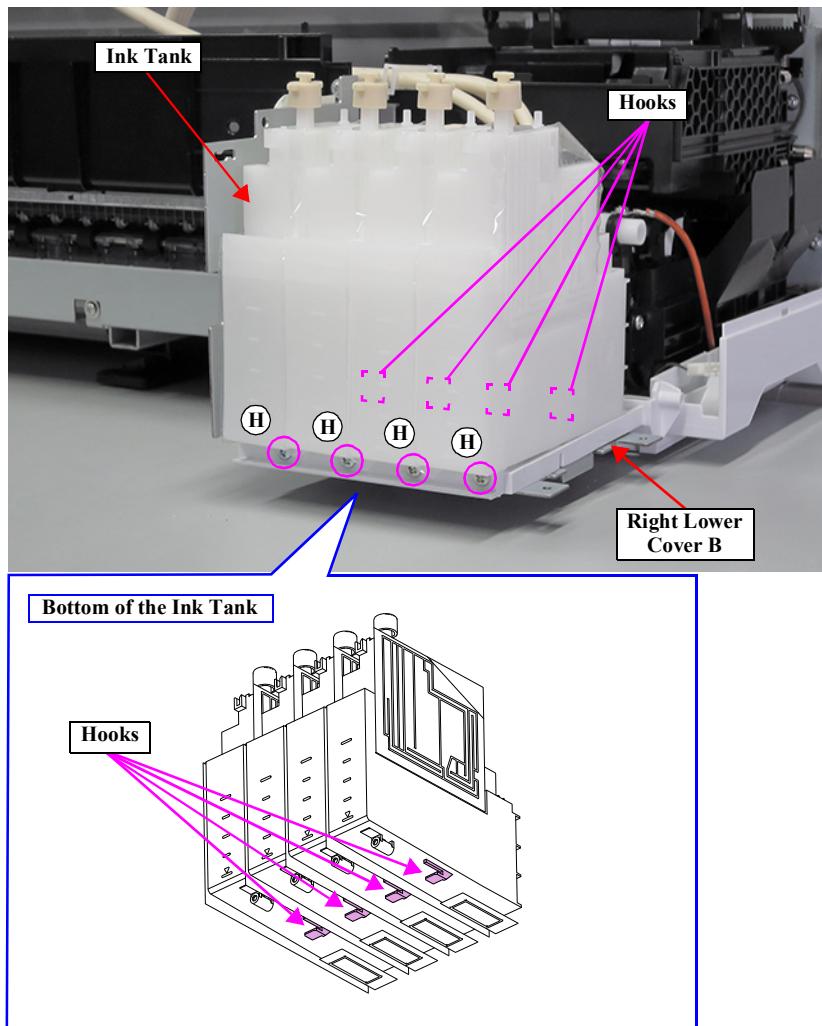


Figure 3-103. Removing the Ink Tube Assy

24. Remove the Ink Tank Cap Rubber from the Ink Tank and replace it with the Ink Tank Cap.

SC-T3100X Series/SC-T3100D Series/SC-F500 Series Ink Tube Assy

The replaced Ink Tube Assy (including ink) is classified as industrial waste. Dispose of used consumables in accordance with laws and regulations, such as by contracting an industrial waste disposal company. When using an industrial waste disposal company, make sure you also give them the Product Safety Data Sheet.

### 3.4.4.23 Cutter Blade

1. Open the Cutter Cover.
2. Loosen the screw, and remove the Cutter Blade.

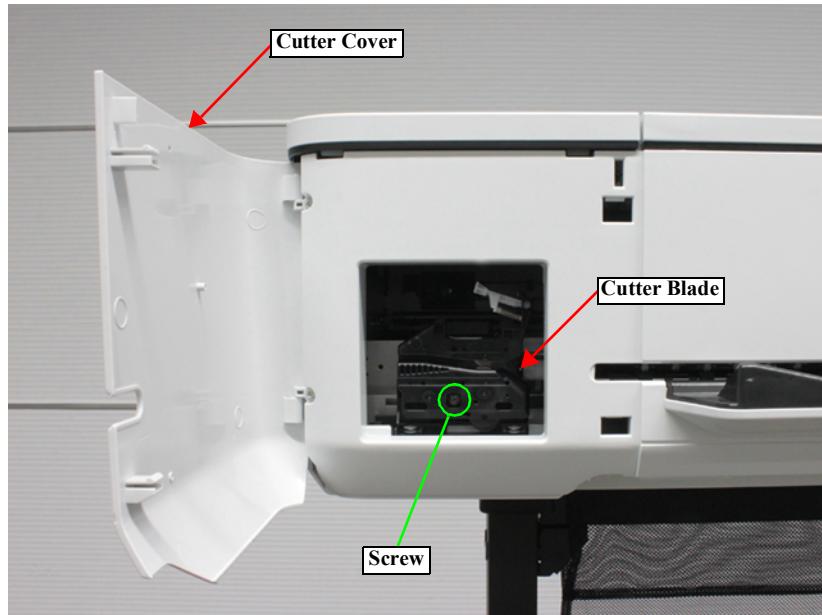


Figure 3-104. Removing the Cutter Blade

### 3.4.4.24 Cutter Stopper

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the Cutter Blade. ([p225](#))
7. Remove the screw, and remove the Cutter Stopper.

A) Silver M3x6 S-tite screw : 1 pc

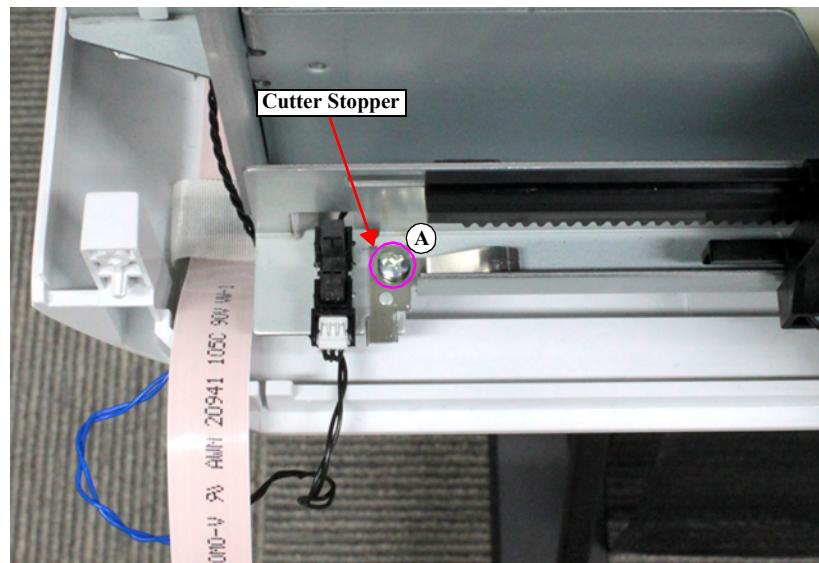


Figure 3-105. Removing the Cutter Stopper

### 3.4.4.25 Cutter Home Position Sensor



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Remove the Cutter Blade. (p225)
7. Remove the Cutter Stopper. (p226)
8. Disengage the hook, and remove the Cutter Home Position Sensor.
9. Disconnect the cable from the connector on the Cutter Home Position Sensor.

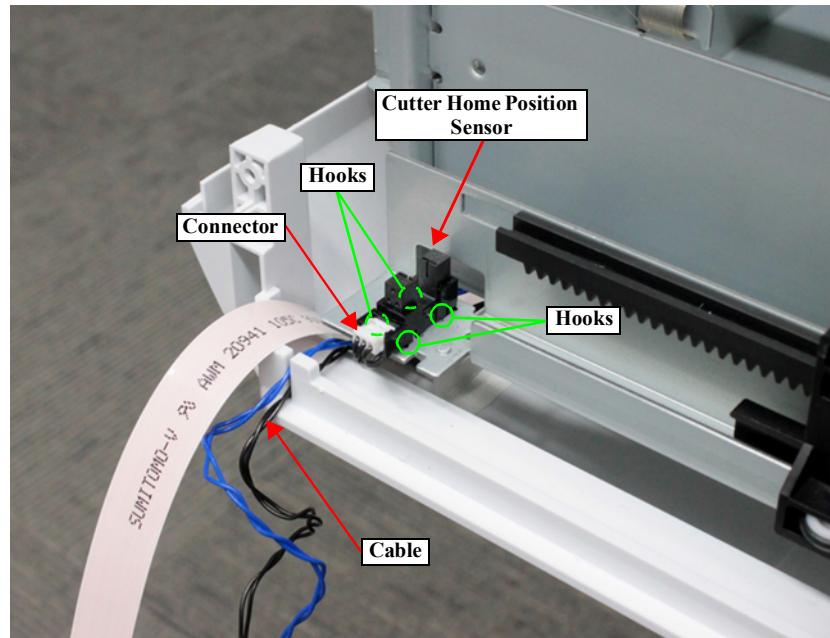


Figure 3-106. Removing the Cutter Home Position Sensor

### 3.4.4.26 Cutter Base



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the Cutter Blade. ([p225](#))
7. Remove the Cutter Stopper. ([p226](#))
8. Remove the Cutter Home Position Sensor. ([p227](#))
9. Remove the screw that secure the Left Lower Cover.  
A) Silver M3x8 P-tite screw: 1 pc
10. While sliding the Left Lower Cover outward, remove the Cutter Base in the direction of the arrow.

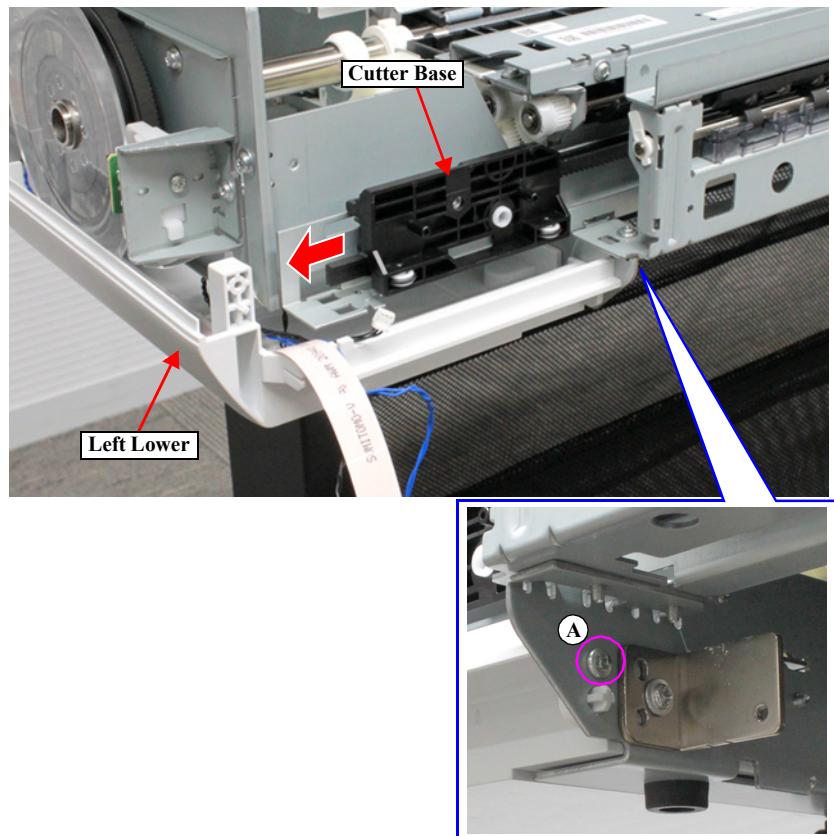


Figure 3-107. Removing the Cutter Base

### 3.4.4.27 Cutter Rail



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Remove the Cutter Blade. (p225)
7. Remove the Cutter Stopper. (p226)
8. Remove the Cutter Home Position Sensor. (p227)
9. Remove the Cutter Base. (p228)
10. Unlock the CR Unit. (p146)
11. Remove the Pump Cap Unit. (p212)
12. Remove the Eject Roller Gear Assy. (p230)
13. Remove the Eject Roller Assy. (p231)
14. Remove the screw that secure the Cutter Rail.  
A) Silver M3x8 S-tite screw: 1 pc
15. Disengage the following hooks on the Cutter Rail while sliding the Cutter Rail in the direction of the arrow, remove the Cutter Rail.
  - SC-T5100 Series/SC-T5100N Series: 11 points
  - SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T3100X Series/  
SC-T3100D Series/SC-F500 Series: 8 points

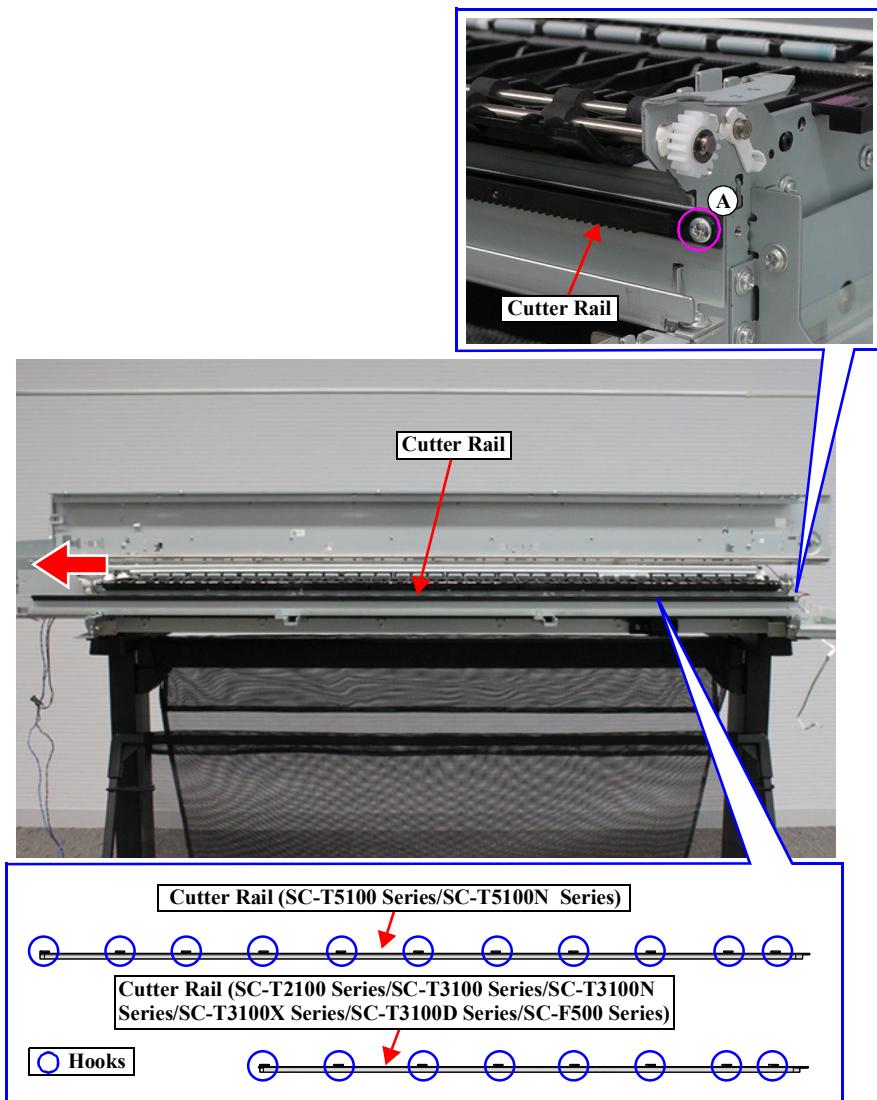


Figure 3-108. Removing the Cutter Rail

### 3.4.5 Paper Feed Mechanism

#### 3.4.5.1 Eject Roller Gear Assy

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Unlock the CR Unit. ([p146](#))
7. Remove the Pump Cap Unit. ([p212](#))
8. Remove the Ink Tube Assy. ([p219](#)) (SC-T3100X Series/SC-T3100D Series/SC-F500 Series only)
9. Remove the three screws, and the plate. (SC-T3100X Series/SC-T3100D Series/SC-F500 Series only)

A)Silver M3x6 Cup P-tite screw: 3 pcs

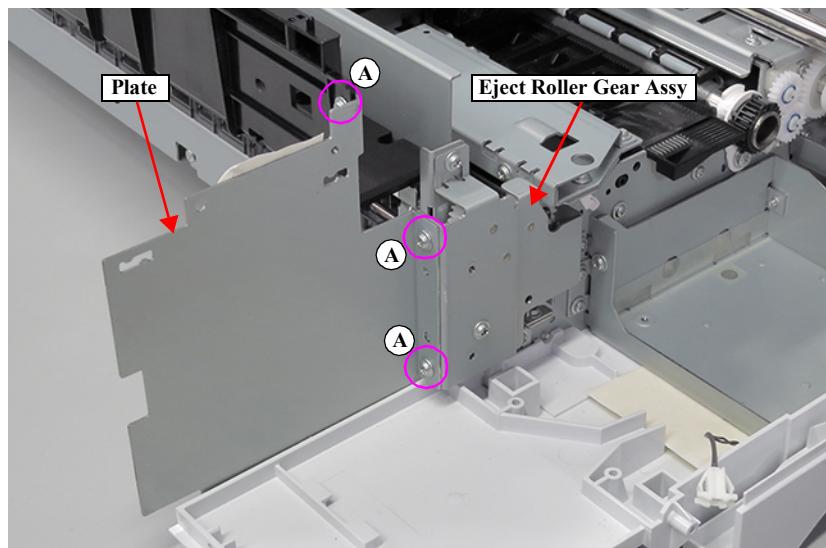


Figure 3-109. Removing the plate (SC-T3100X Series/SC-T3100D Series/SC-F500 Series)

10. Remove the three screws, and remove the Eject Roller Gear Assy.

B) Silver M3x6 Cup S-tite screw : 3 pcs

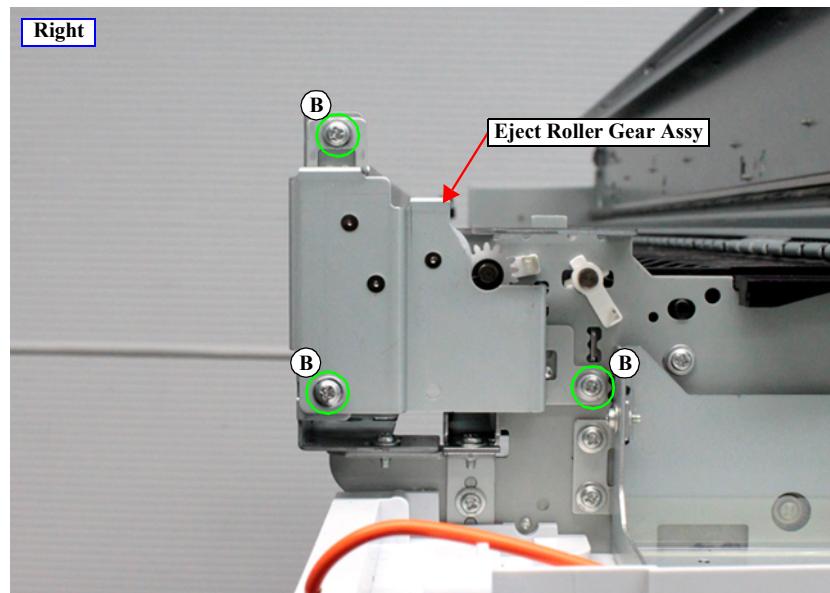


Figure 3-110. Removing the Eject Roller Gear Assy

### 3.4.5.2 Eject Roller Assy

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Unlock the CR Unit. ([p146](#))
7. Remove the Pump Cap Unit. ([p212](#))
8. Remove the Eject Roller Gear Assy. ([p230](#))
9. Remove the Ink Tube Assy. ([p219](#)) (SC-T3100X Series/SC-T3100D Series/SC-F500 Series only)
10. Remove the four screws, and remove the Eject Roller Assy.  
A) Silver M4x8 Cup S-tite screw: 2 pcs  
B) Silver M3x6 Cup S-tite screw: 2 pcs

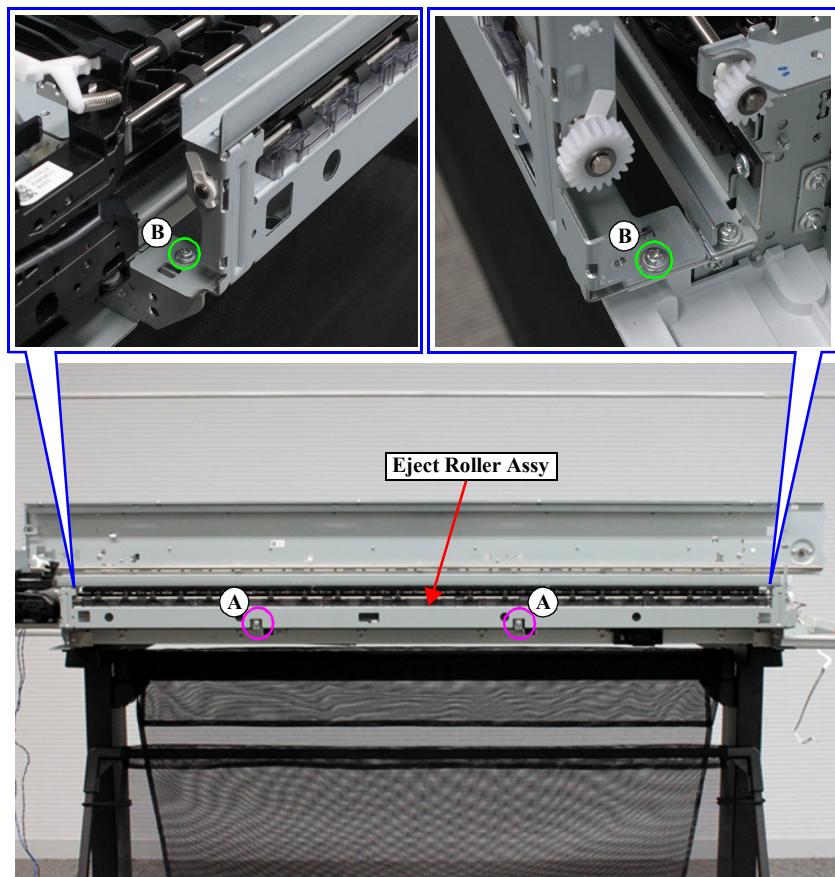


Figure 3-111. Removing the Eject Roller Assy

### 3.4.5.3 Left Spindle Holder

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the Roll Cover. ([p162](#))
7. Disconnect the cable from the connector on the Roll Cover Open Sensor.
8. Remove the three screws that secure the Left Spindle Holder.  
A) Silver M3x6 Cup S-tite screw: 3 pcs
9. Remove the Left Spindle Holder while pushing the lever in the direction of the arrow.

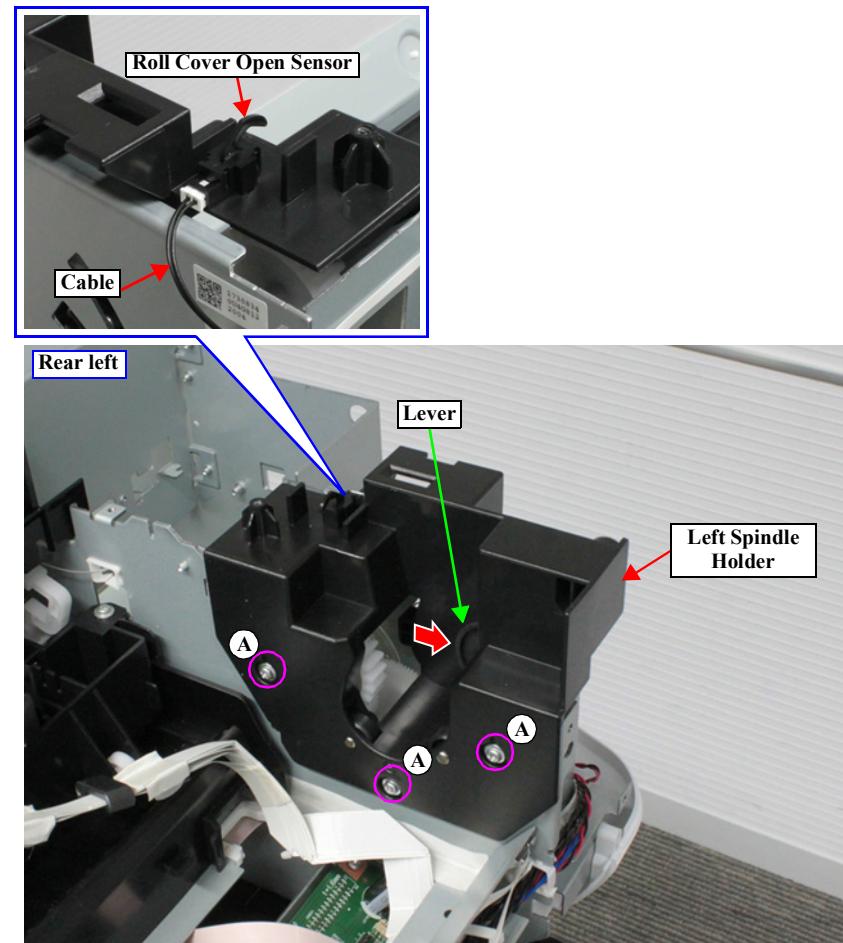


Figure 3-112. Removing the Left Spindle Holder

### 3.4.5.4 ATC Assy



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
  2. Remove the Front Cover. (p149)
  3. Remove the Left Upper Cover A. (p155)
  4. Remove the Left Upper Cover B. (p157)
  5. Remove the Top Cover. (p158)
  6. Remove the Roll Cover. (p162)
  7. Remove the Left Spindle Holder. (p232)
  8. Pull out the Main Board Box. (p163)
  9. Disconnect the ATC Motor cable from the connector (CN410) on Main Board.
  10. Release the ATC Motor cable from the four clamps.
  11. Release the cable and the FFC from the two clamps on the ATC Assy.
  12. Release the ATC Motor cable from the groove on the Left Lower Cover.
  13. Peel off the acetate tape, and release the Roll Cover Open Sensor cable.
- 
- In the next step, be careful not to damage the FFC with a screwdriver when removing the screw B.
  - If temporarily secured the Main Board Box when pulled it out, return it in the original position once since it may fall when the screw (B) is removed.
14. Remove the five screws, and remove the ATC Assy.
    - A) Silver M3x6 Cup S-tite screw: 3 pcs
    - B) Silver M3x6 Cup S-tite screw: 1 pc
    - C) Silver M3x6 S-tite screw: 1 pc

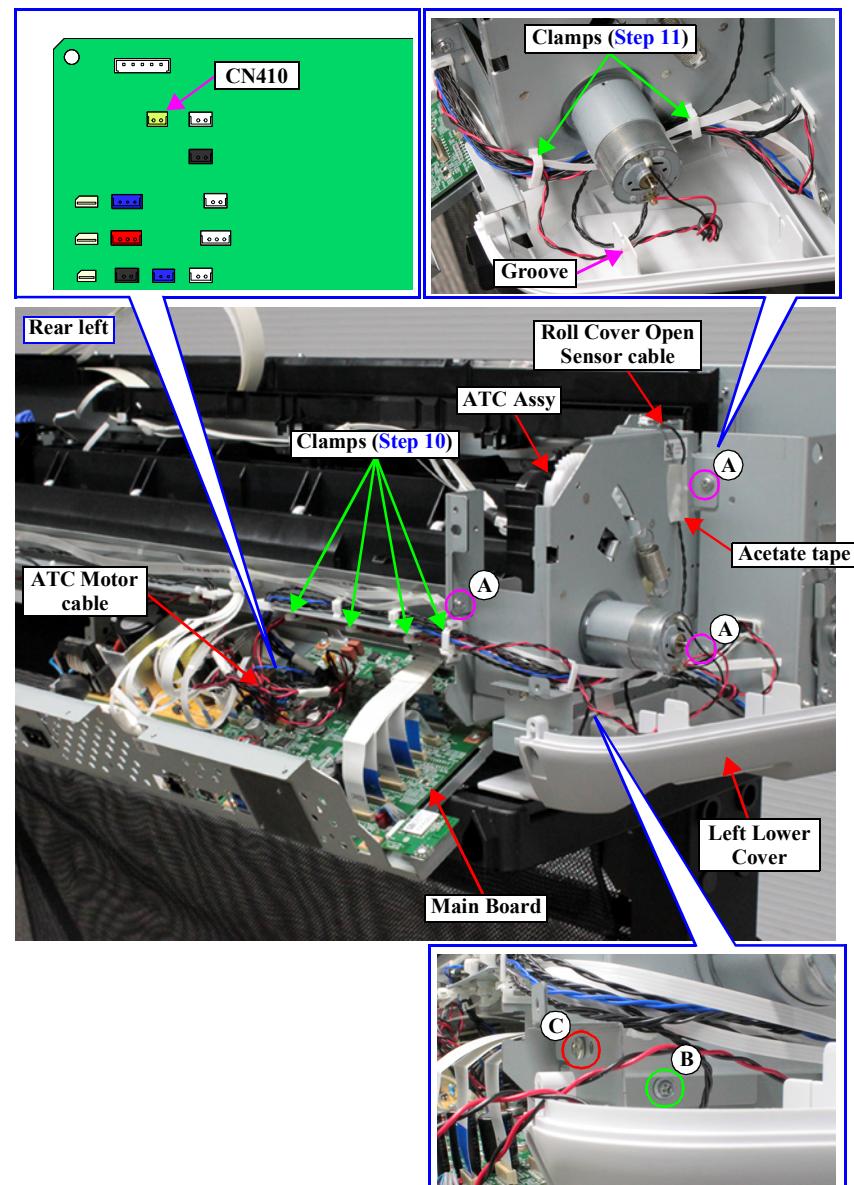


Figure 3-113. Removing the screws

Continue to the next page.

15. Peel off the FFC, disconnect the FFC from the connector on the ATC Scale Encoder.
16. Remove the ATC Assy.

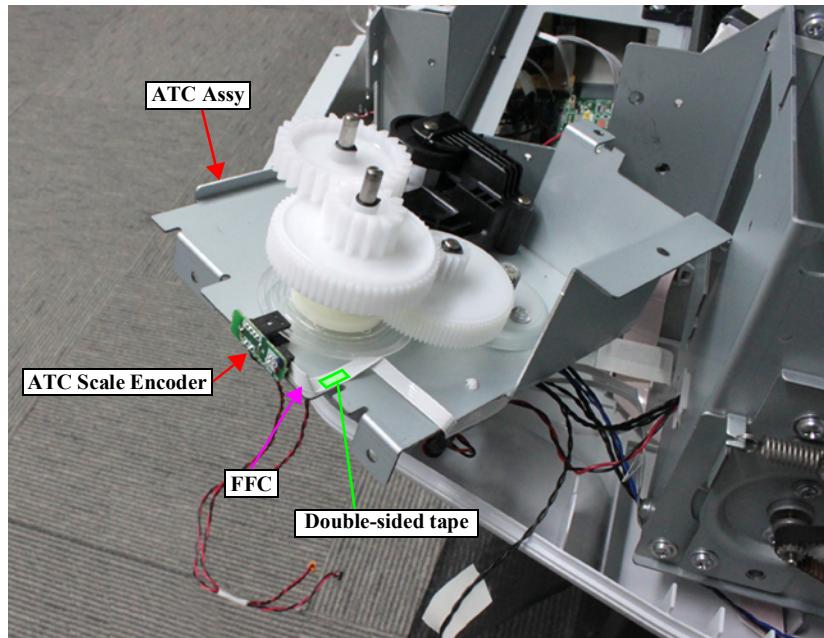


Figure 3-114. Removing the ATC Assy

### 3.4.5.5 ATC Motor



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the Roll Cover. ([p162](#))
7. Remove the Left Spindle Holder. ([p232](#))
8. Pull out the Main Board Box. ([p163](#))
9. Remove the ATC Assy. ([p233](#))
10. Remove the two screws, and remove the ATC Motor.  
A) Silver M3x4 Cup S-tite screw: 2 pcs

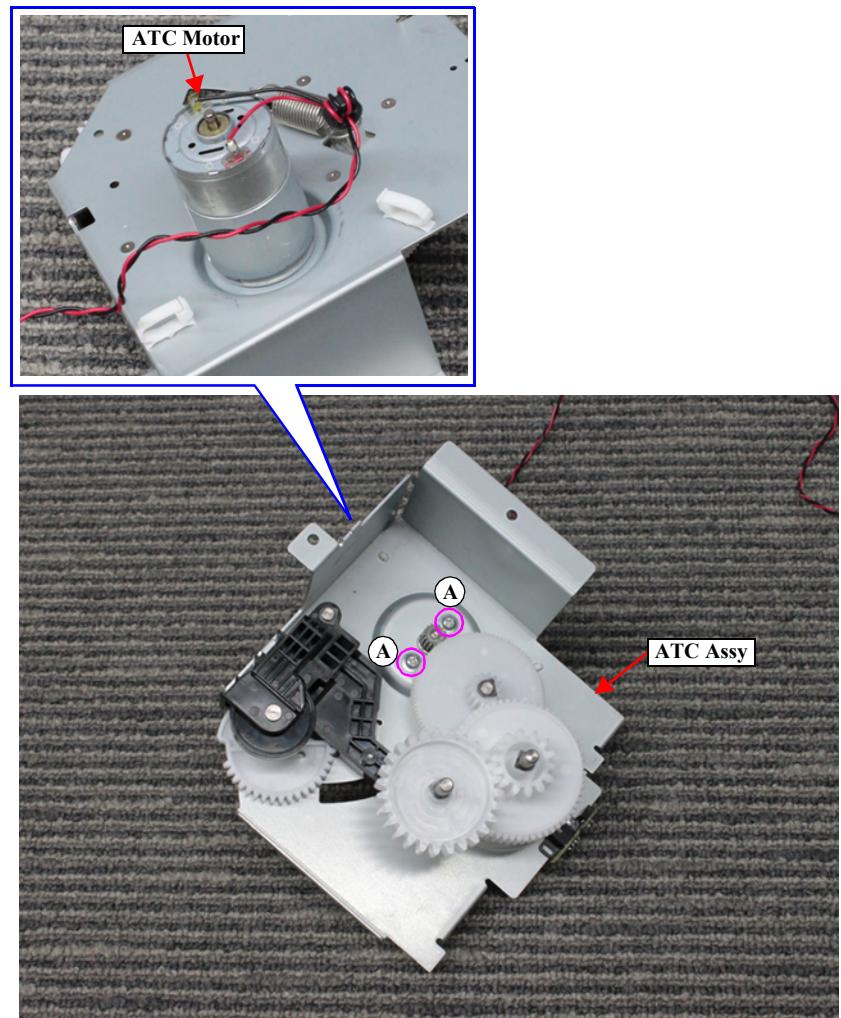


Figure 3-115. Removing the ATC Motor

### 3.4.5.6 Right Spindle Holder

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the three screws, and remove the Right Spindle Holder.

A) Silver M3x6 Cup S-tite screw: 3 pcs

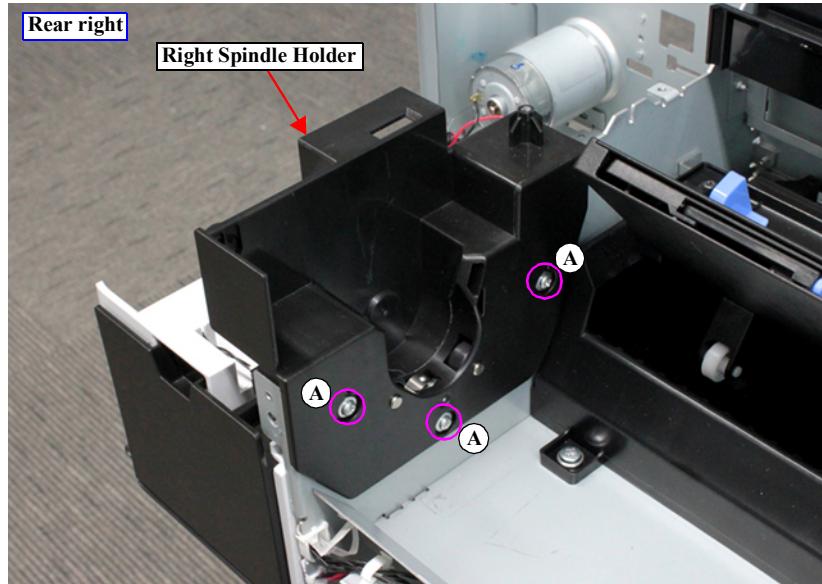


Figure 3-116. Removing the Right Spindle Holder

### 3.4.5.7 PF Motor



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the Rear Cover. ([p161](#))
7. Pull out the Main Board Box. ([p163](#))
8. Disconnect the PF Motor cable from the connector (CN404) on the Main Board
9. Release the PF Motor cable from the six clamps.
10. Route the connector of the PF Motor cable through the hole on the frame, and set the PF Motor cable inside the Frame (PF Motor side).

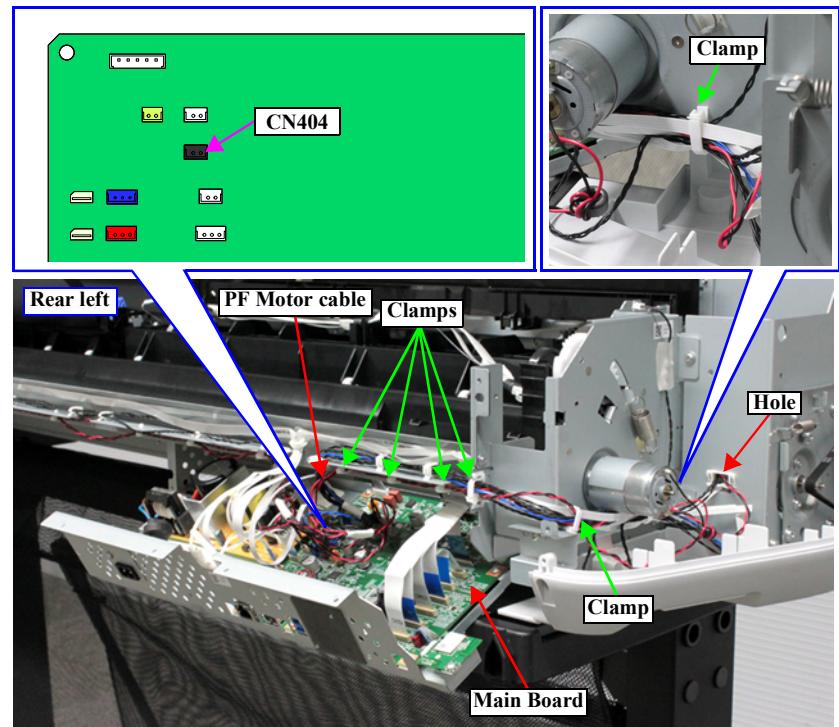


Figure 3-117. Releasing the cable

*Continue to the next page.*

11. Remove the Extension Spring.



**Before loosening the screws in the next step, mark the screw position with a pen or the like. This makes the PF Belt Tension Check & Adjustment easier.**

12. Loosen the two screws, and remove the PF Belt from the pinion gear of the PF Motor.

13. Remove the two screws, and remove the PF Motor.

A) Silver M3x4 Cup S-tite screw: 2 pcs

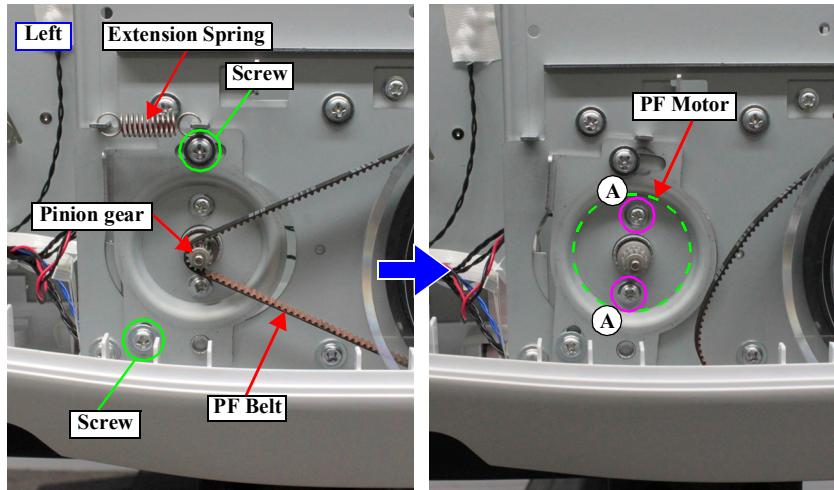


Figure 3-118. Removing the PF Motor

### 3.4.5.8 Eject Roller Middle Assy

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the Rear Cover. ([p161](#))
7. Pull out the Main Board Box. ([p163](#))
8. Remove the Left Lower Cover. ([p169](#))
9. Unlock the CR Unit. ([p146](#))
10. Disconnect the PIS FFC from the connector (CN312) on the Main Board.
11. Release the PIS FFC from the three clamps.

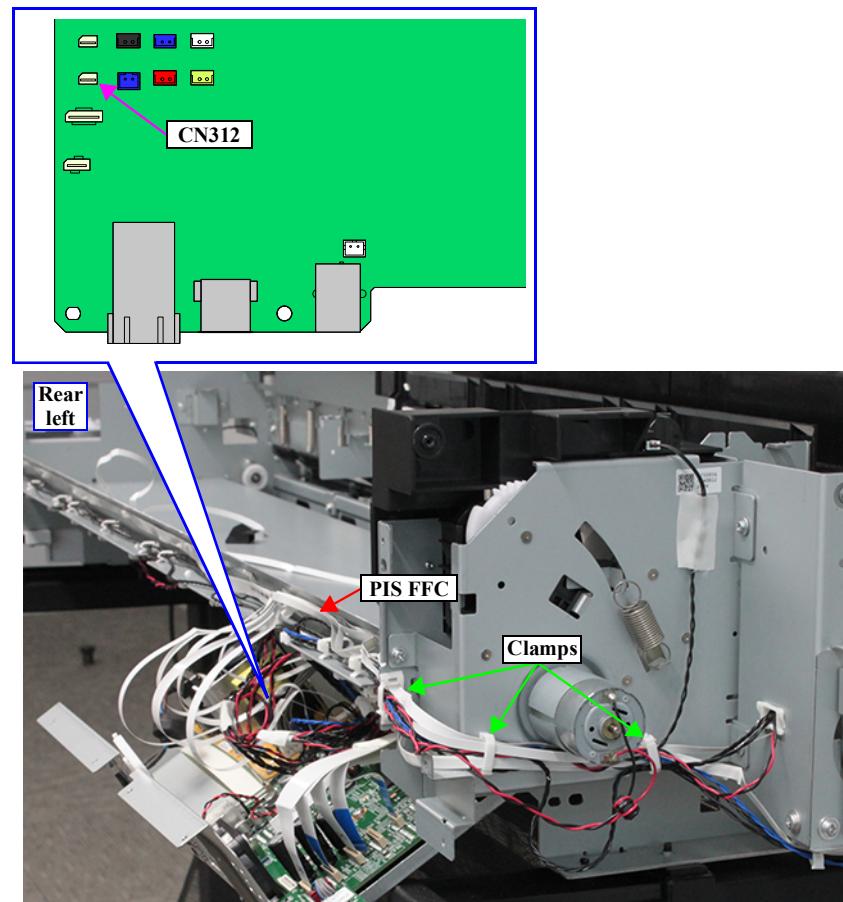


Figure 3-119. Releasing the PIS FFC (1)

*Continue to the next page.*

12. Release the PIS FFC from the two clamps on the bottom.
13. Route the PIS FFC through the hole on the frame and set the FFC inside the frame (Eject Roller Middle Assy side).

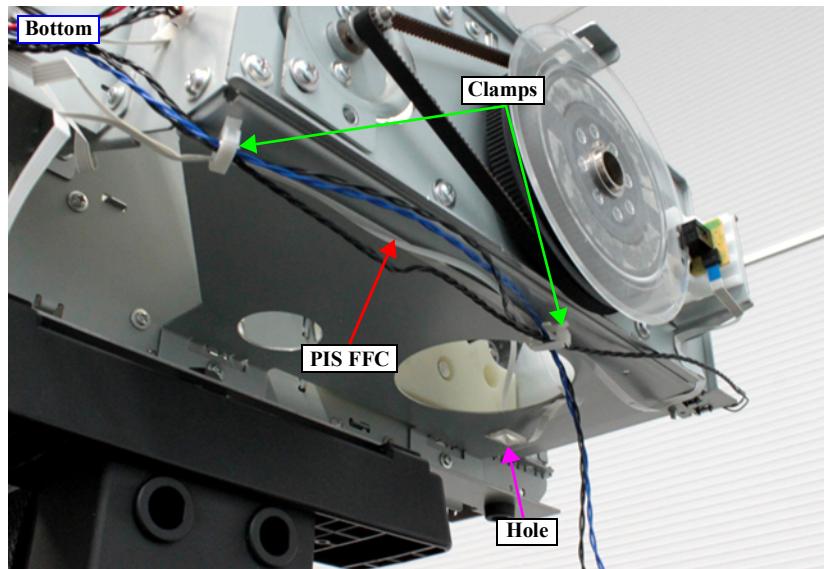


Figure 3-120. Releasing the PIS FFC (2)

14. Move the CR Unit in advance to access the screw in the next step.
15. Remove the two screws, move the CR Unit to the Home side, and then remove the Eject Roller Middle Assy.

A) Silver M3x6 Cup S-tite screw: 2 pcs

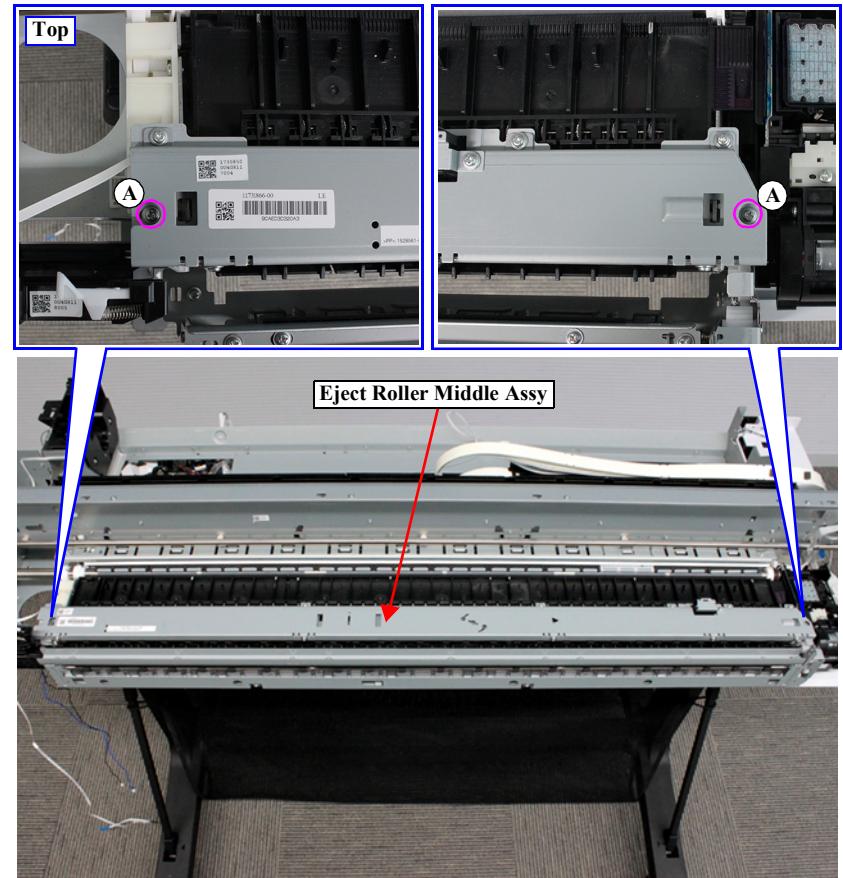


Figure 3-121. Removing the Eject Roller Middle Assy

### 3.4.5.9 Eject Roller Front



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Remove the Rear Cover. (p161)
7. Pull out the Main Board Box. (p163)
8. Remove the Left Lower Cover. (p169)
9. Unlock the CR Unit. (p146)
10. Remove the Eject Roller Middle Assy. (p239)
11. Remove the Pump Cap Unit. (p212)
12. Remove the Eject Roller Gear Assy. (p230)
13. Remove the Ink Tube Assy. (p219) (SC-T3100X Series/SC-T3100D Series/SC-F500 Series only)

14. On the Home side, remove the plastic washer to remove the gear.

15. Disengage the dowel on the bush, then remove the bush by rotating it in the direction of the arrow.

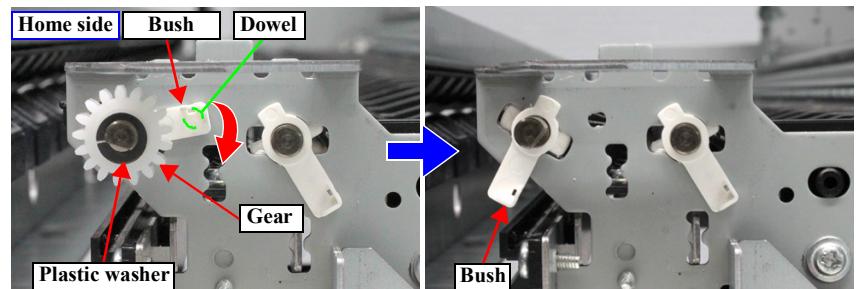


Figure 3-122. Disengaging the bush (Home side)

16. On the Full side, remove the plastic washer to remove the gear.

17. Disengage the dowel on the bush, then remove the bush by rotating it in the direction of the arrow.

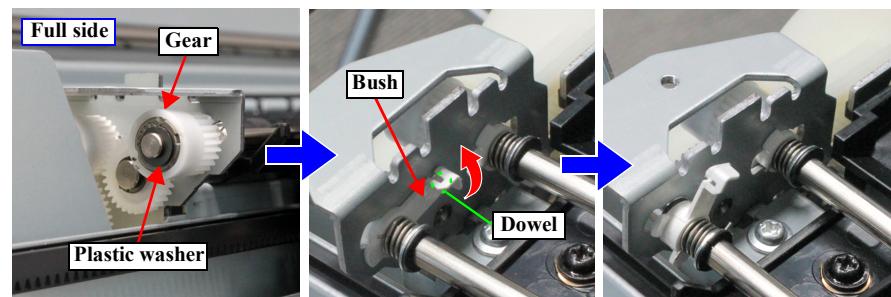


Figure 3-123. Disengaging the bush (Full side)

*Continue to the next page.*

18. Slide the Eject Roller Front to the home side and pull it out from the hole on the frame (full side).
19. Slide the Eject Roller Front to the full side and pull it out from the hole on the frame (home side), and then remove the Eject Roller Front.

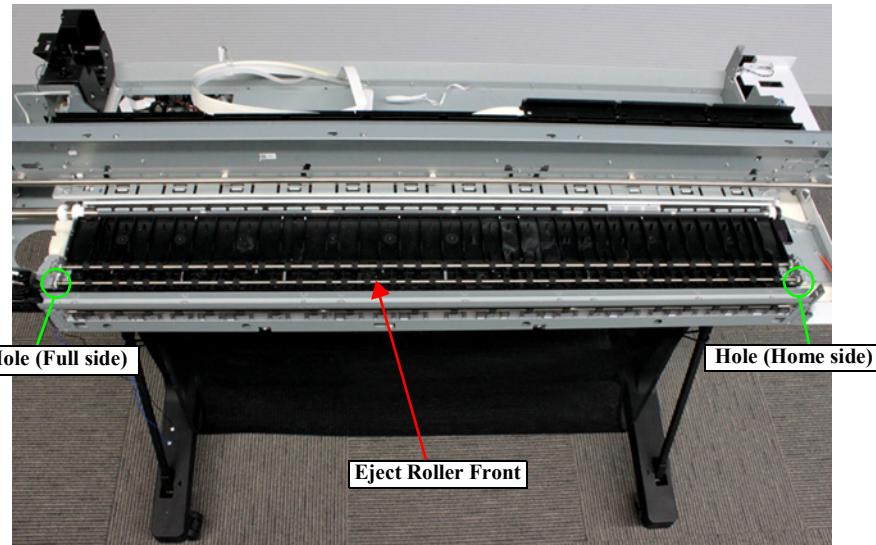


Figure 3-124. Removing the Eject Roller Front



When replaced with a new part, make sure to lubricate the new one referring to "5.4 Lubrication" (p398).

### 3.4.5.10 Eject Roller Rear



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Remove the Rear Cover. (p161)
7. Pull out the Main Board Box. (p163)
8. Remove the Left Lower Cover. (p169)
9. Unlock the CR Unit. (p146)
10. Remove the Eject Roller Middle Assy. (p239)
11. Remove the Pump Cap Unit. (p212)
12. Remove the Eject Roller Gear Assy. (p230)
13. Remove the Ink Tube Assy. (p219) (SC-T3100X Series/SC-T3100D Series/SC-F500 Series only)

14. On the Home side, disengage the dowel on the bush, then remove the bush by rotating it in the direction of the arrow.

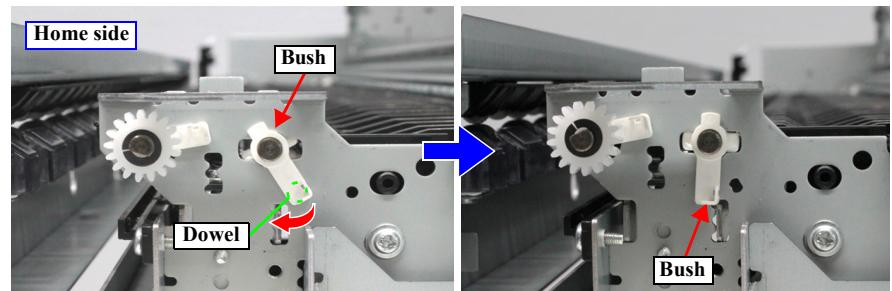


Figure 3-125. Disengaging the bush (Home side)

15. On the Full side, remove the plastic washer to remove the gear.
16. Disengage the dowel on the bush, then rotate the bush in the direction of the arrow.

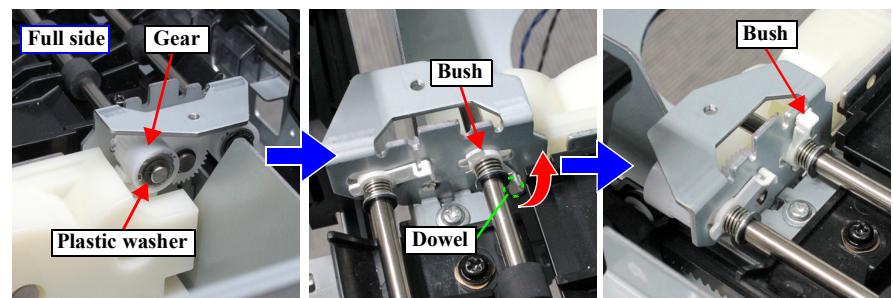


Figure 3-126. Disengaging the bush (Full side)

*Continue to the next page.*

17. Slide the Eject Roller Rear to the home side and pull it out from the hole on the frame (full side).
18. Slide the Eject Roller Rear to the full side and pull it out from the hole on the frame (home side), and then remove the Eject Roller Front.

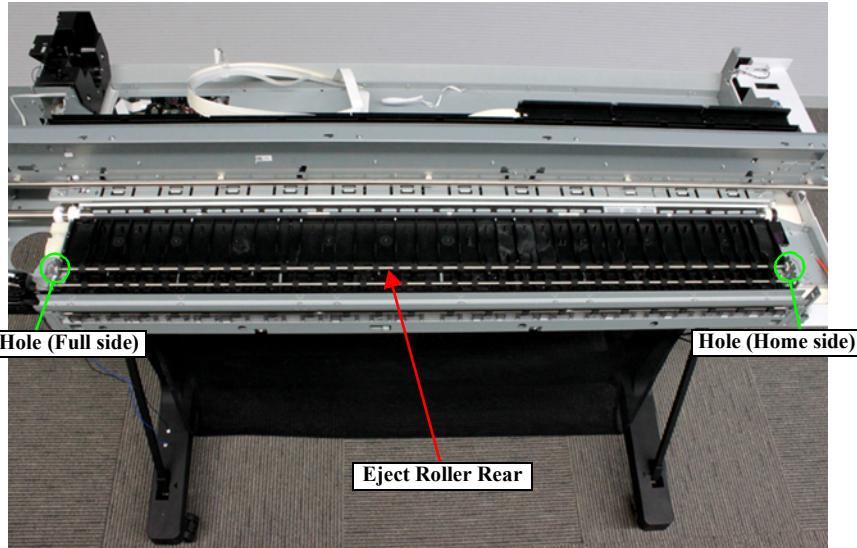


Figure 3-127. Removing the Eject Roller Rear



When replaced with a new part, make sure to lubricate the new one referring to "["5.4 Lubrication" \(p398\)](#)".

### 3.4.5.11 PF Encoder



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)



Make sure not to damage the PF Scale.

6. Remove the screw, and remove the PF Encoder.  
A) Silver M2.5x6 P-tite screw: 1 pc
7. Disconnect the FFC from the connector on the PF Encoder.



After installing the PF Encoder, make sure the sensor is not touching the PF Scale.

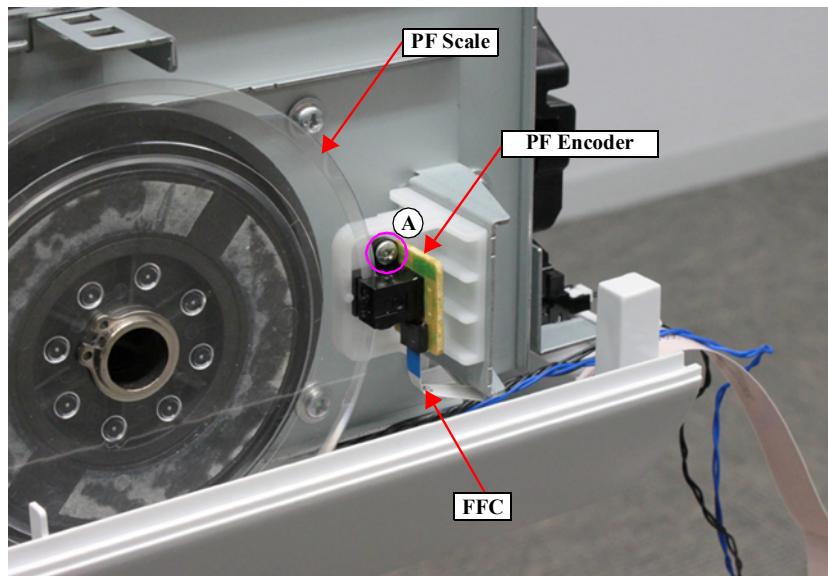


Figure 3-128. Removing the PF Encoder

### 3.4.5.12 PF Scale



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the screw, and remove the PF Encoder Assy.  
A) Silver M3x6 Cup S-tite screw: 1 pc

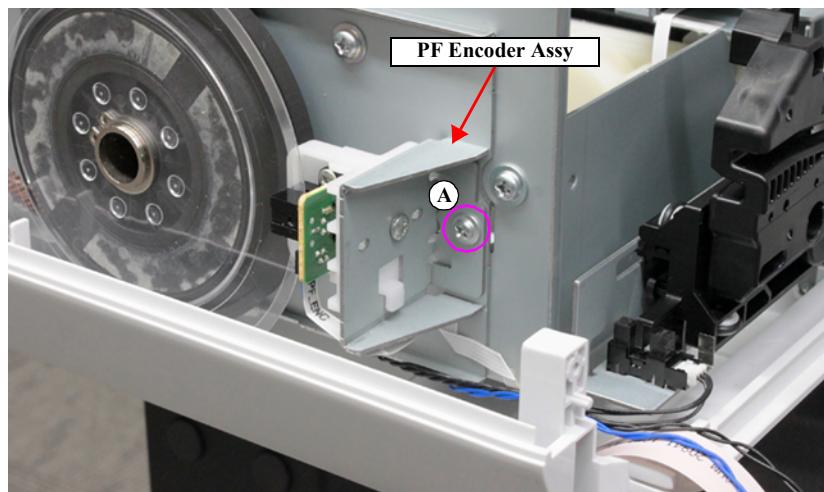


Figure 3-129. Removing the PF Encoder Assy

7. Remove the C-ring.
8. Peel off the PF Scale.

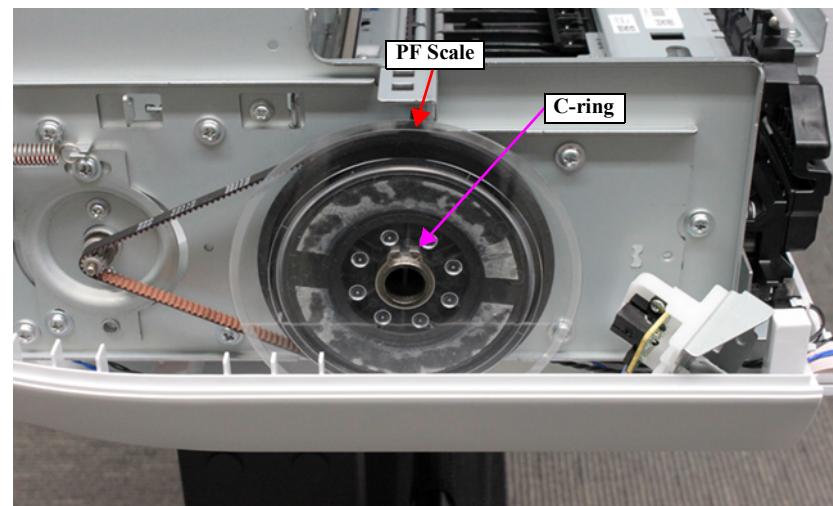


Figure 3-130. Removing the PF Scale

### 3.4.5.13 PF Belt



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the screw, and remove the PF Encoder Assy.  
A) Silver M3x6 Cup S-tite screw: 1 pc
7. Remove the Extension Spring.
8. Loosen the two screws, and remove the PF Belt from the pinion gear on the PF Motor.
9. While paying attention not to damage the PF Scale, remove the PF Belt.

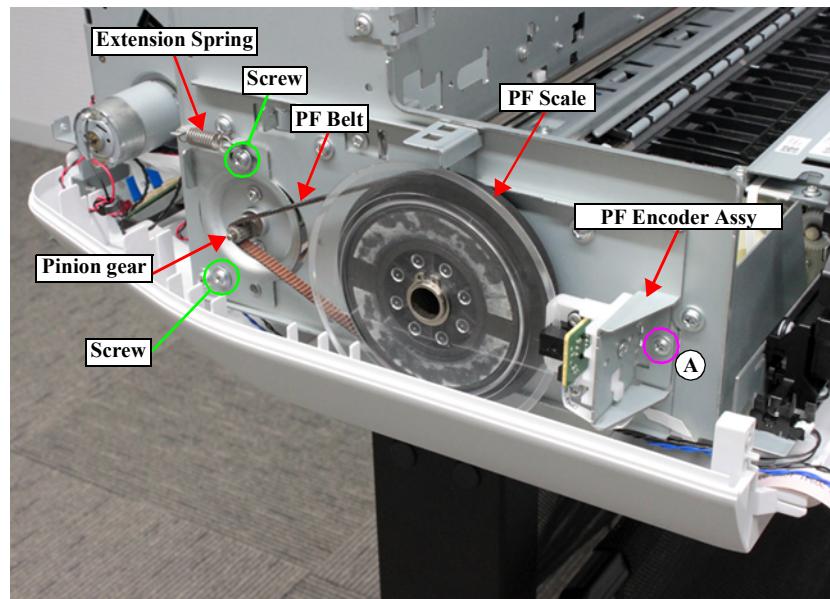


Figure 3-131. Removing the PF Belt

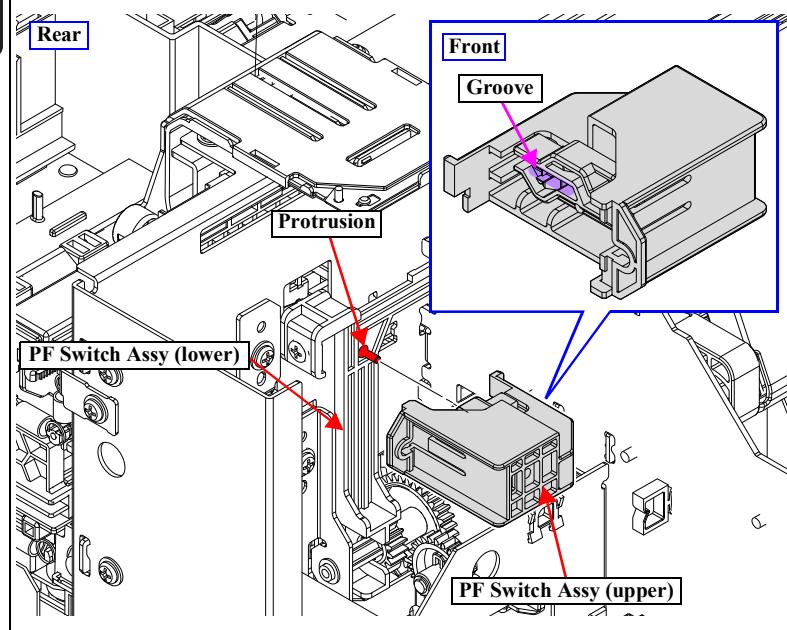
### 3.4.5.14 PF Switch Assy

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the screw, and remove the PF Switch Assy (upper).

A) Silver M3x6 Cup S-tite screw: 1 pc



**Make sure to insert the protrusion of the PF Switch Assy (lower) into the groove on the PF Switch Assy (upper).**



7. Remove the screw, and remove the frame.

B) Silver M3x6 Cup S-tite screw: 1 pc

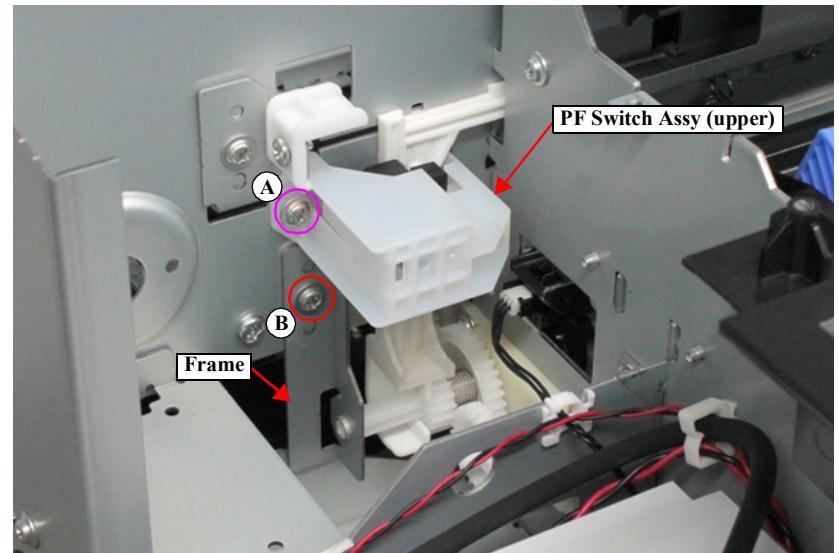


Figure 3-132. Removing the PF Switch Assy (upper)

Continue to the next page.



In the next step, be careful not to let the Extension Spring fall apart.



When the gear fell off from the PF Switch Assy (lower), install it in the position shown below.

8. Remove the Extension Spring.
9. Remove the PF Switch Assy (lower) while sliding it.

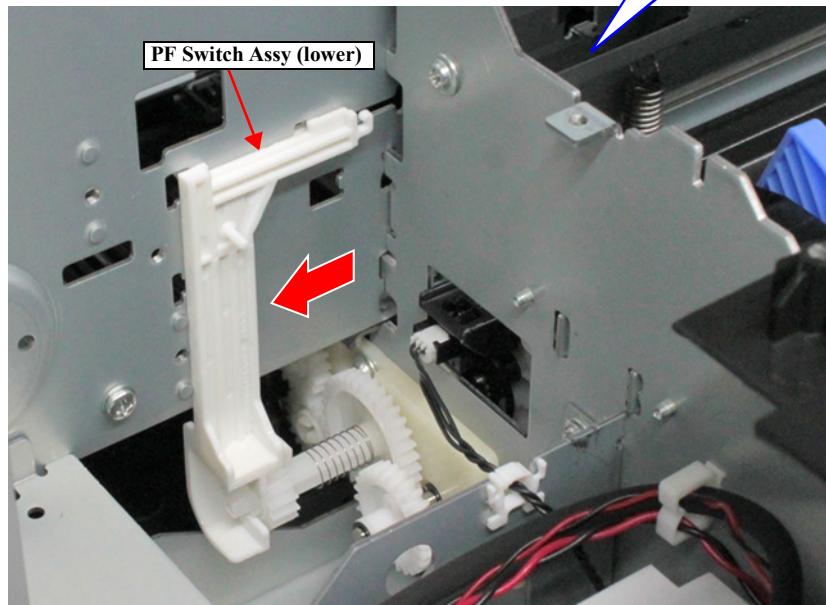
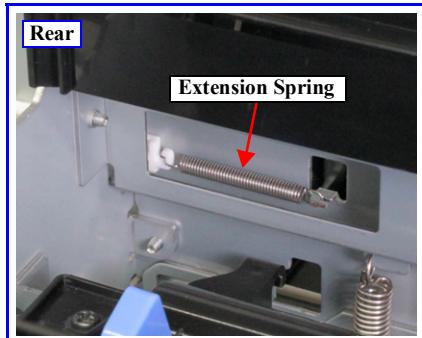


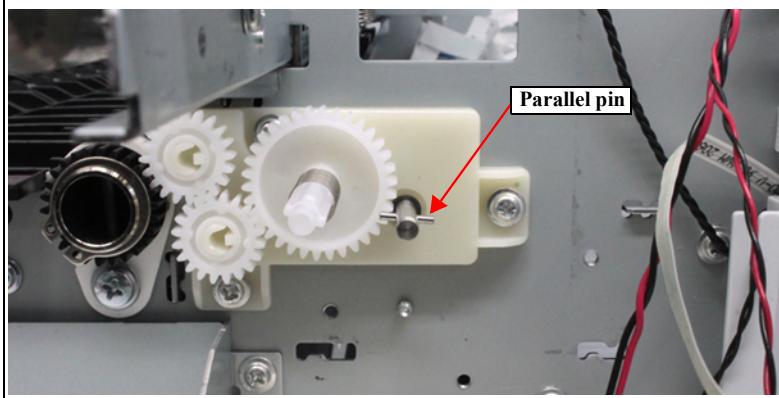
Figure 3-133. Removing the PF Switch Assy (lower)

### 3.4.5.15 Home Side PF Gear Assy

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the PF Switch Assy. ([p248](#))
7. Unlock the CR Unit. ([p146](#))
8. Remove the Pump Cap Unit. ([p212](#))



In the next step, be careful not to lose the parallel pin.



9. Remove the plastic washer, and remove the spur gear 20.8.
10. Remove the spur gear 27.2 and the compression spring.
11. Disengage the two hooks, and remove the two spur gear 16.

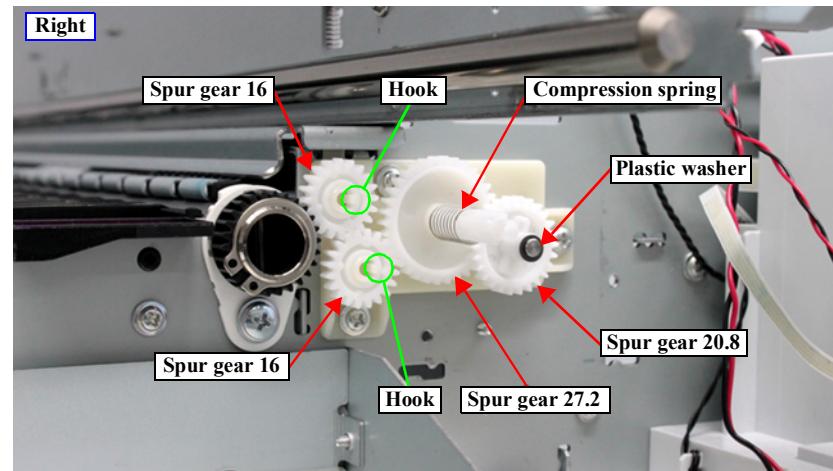


Figure 3-134. Removing the Home Side PF Gear Assy

### 3.4.5.16 ASF Paper Sensor Cover

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the screw, and remove the Head FFC Guide (Center). (SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T3100X Series/SC-T3100D Series/SC-F550 only)

A)Silver M3x6 S-tite screw: 1 pc

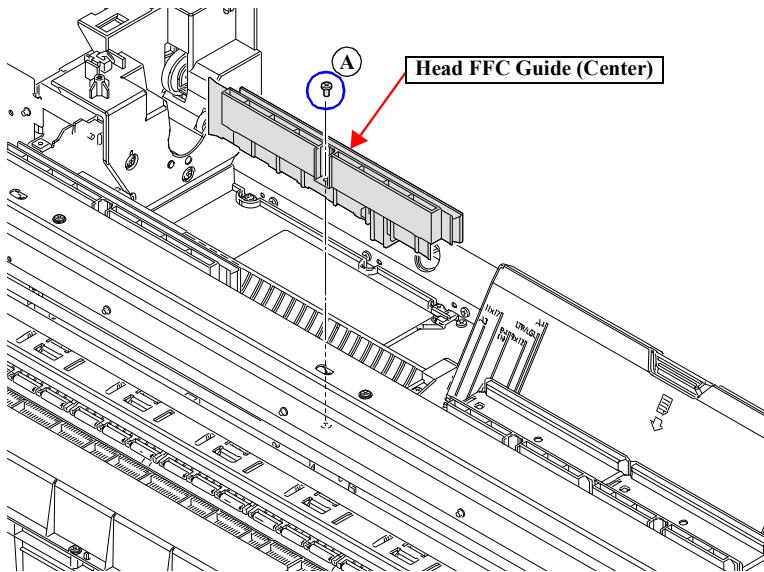


Figure 3-135. Removing the Head FFC Guide (Center)



**CAUTION**  
Be careful when removing the ASF Paper Sensor Cover since the FFC is connected to the ASF Paper Sensor Assy installed on the rear side of the ASF Paper Sensor Cover.

7. Remove the two screws, and remove the ASF Paper Sensor Cover.  
B) Black M2.5x8 P-tite screw: 2 pcs

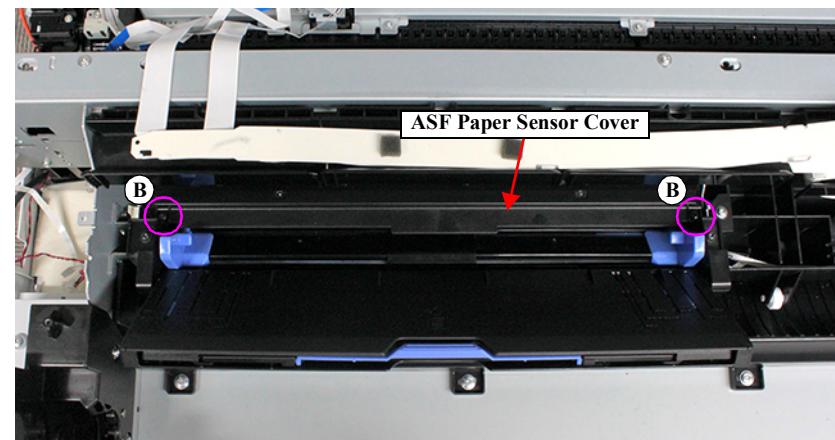


Figure 3-136. Removing the ASF Paper Sensor Cover

*Continue to the next page.*

8. Remove the screw, and remove the ASF Paper Sensor Assy.  
C) Black M2.5x8 P-tite screw: 1 pc
9. Release the FFC from the ASF Paper Sensor Cover.

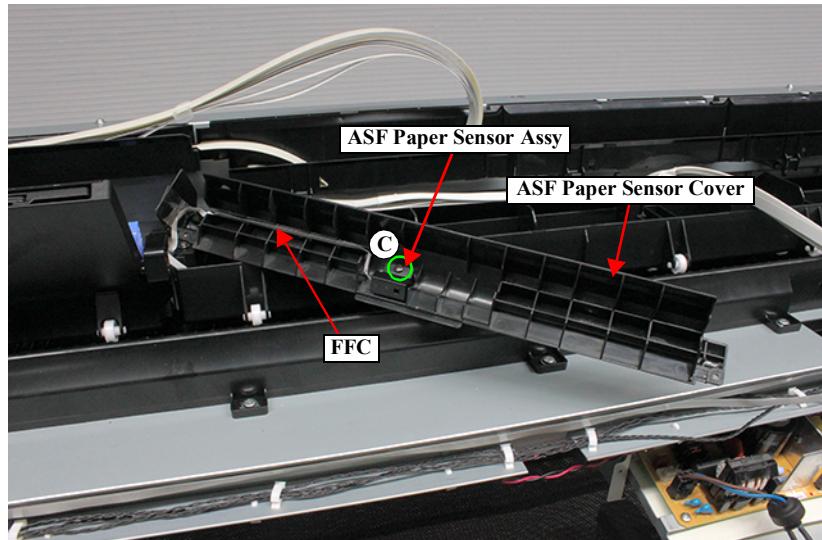
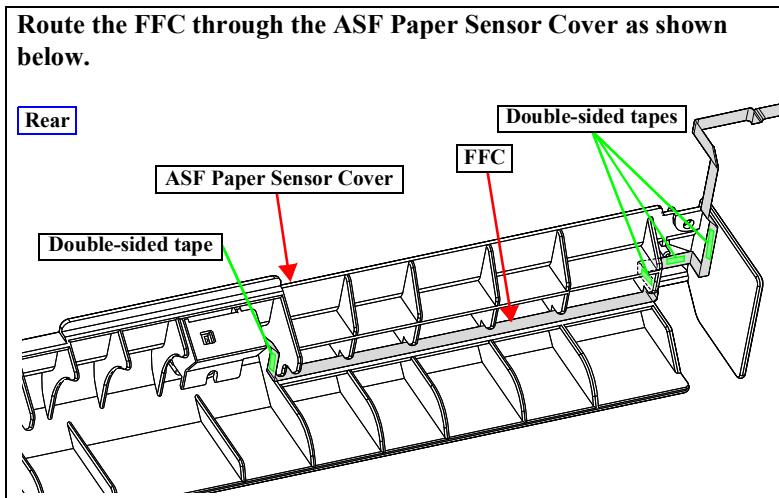


Figure 3-137. Releasing the FFC



Route the FFC through the ASF Paper Sensor Cover as shown below.



### 3.4.5.17 ASF Paper Sensor

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))

CHECK POINT

In the next step, it is not necessary to release the FFC from the ASF Paper Sensor Cover.

6. Remove the ASF Paper Sensor Cover. ([p251](#))
7. Insert a flathead screwdriver in between the connector of the ASF Paper Sensor and the holder to remove the ASF Paper Sensor.
8. Disconnect the FFC from the connector on the ASF Paper Sensor.

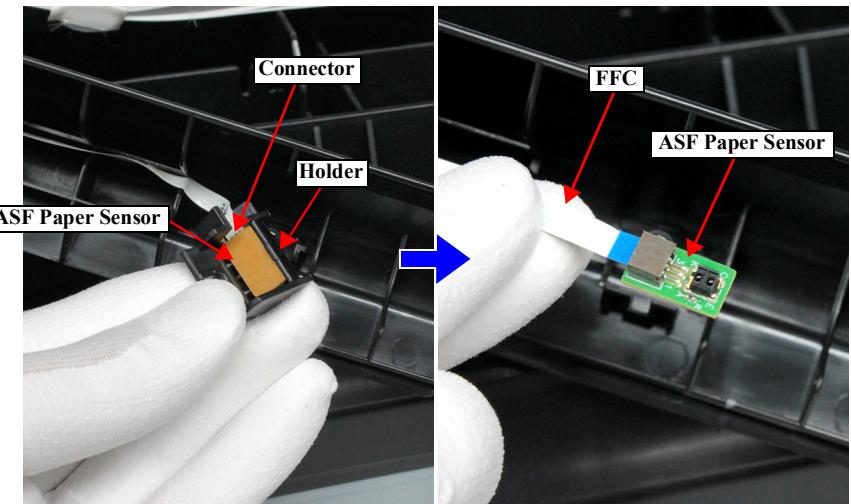


Figure 3-138. Removing the ASF Paper Sensor

### 3.4.5.18 ASF Unit

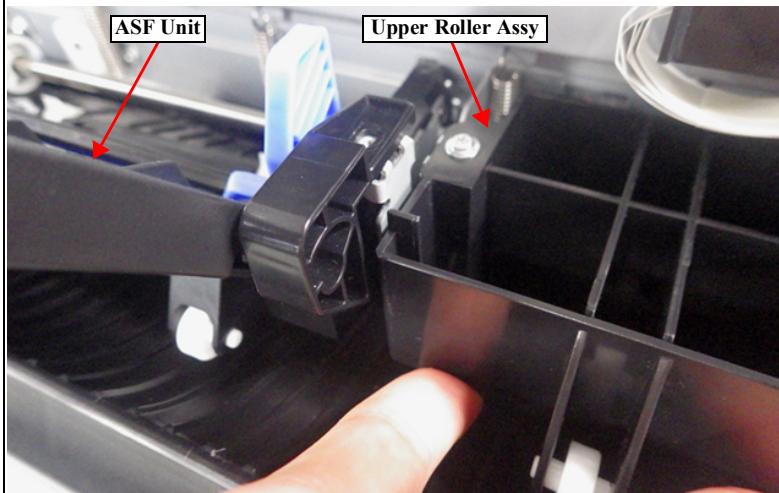
1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the ASF Paper Sensor Cover. (Perform the Step 7, ([p251](#)))
7. Disconnect the cable from the connector on the ASF Encoder Sensor.

CHECK POINT

If the cable is difficult to remove or connect, remove the PF Switch Assy. ("3.4.5.14 PF Switch Assy" ([p248](#)))

CAUTION !

When removing the screws in the next step, hold the Upper Roller Assy as shown in the figure below to prevent the frame from deforming.



8. Remove the two screws, and remove the ASF Assy.

A) Black M3x6 Cup S-tite screw: 2 pcs

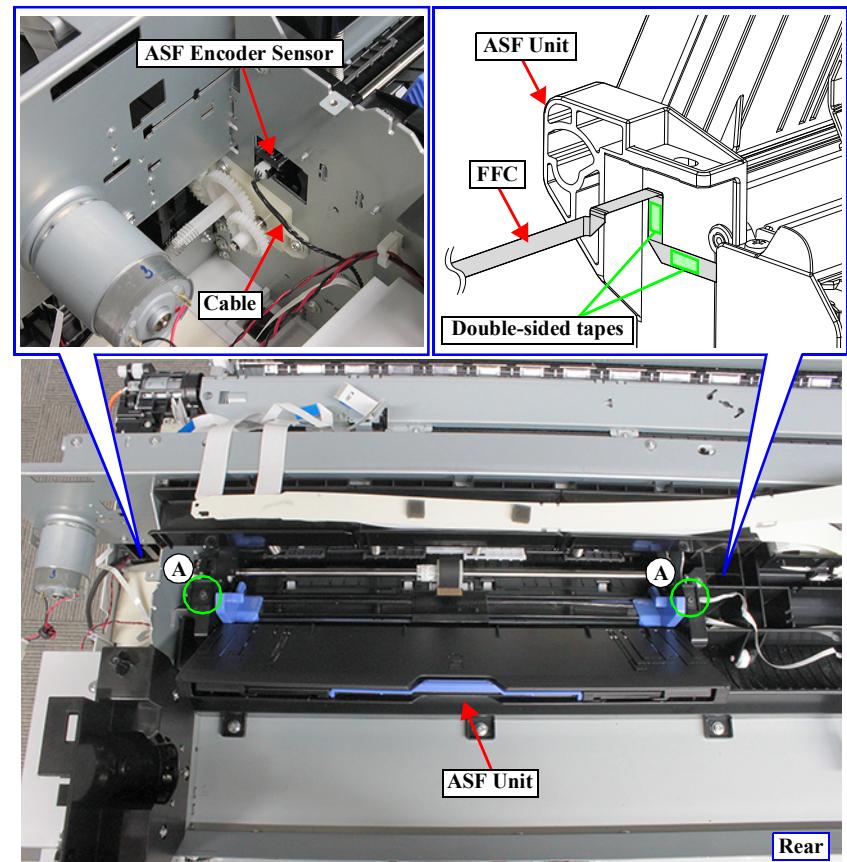
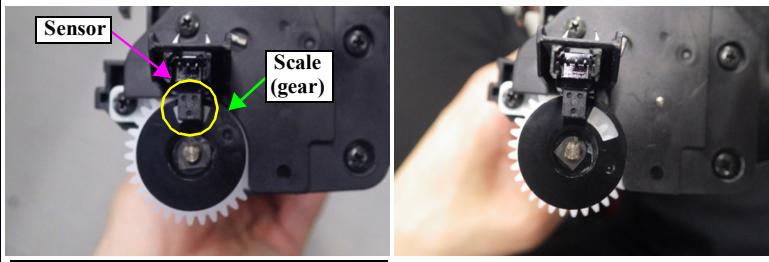


Figure 3-139. Removing the ASF Unit

*Continue to the next page.*



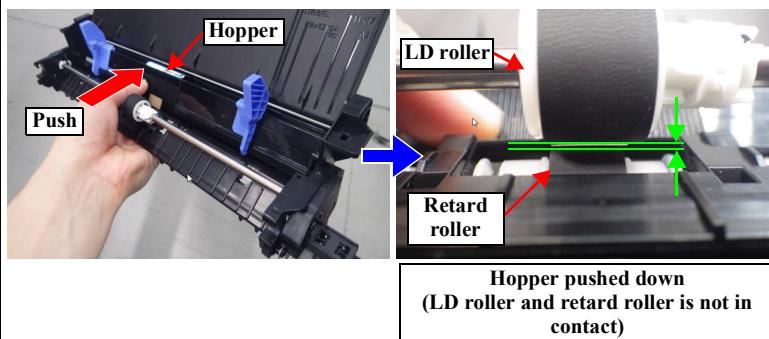
- When installing the ASF Unit, make sure the scale (gear) is in the home position. If you install the ASF Unit in the position other than the home position, ASF home position return of when turning the printer on may cause the traces of the rollers on paper. When the traces of the rollers appeared, feed paper from the ASF Unit until the traces disappear.



In the home position  
(Hole of the scale is at the sensor part)

Not in the home position

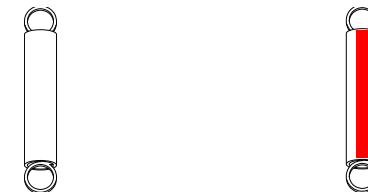
- When rotating the scale (gear), make sure to push down the hopper before rotating the scale (gear).



- Route the FFC to the ASF Unit as shown in Figure 3-139



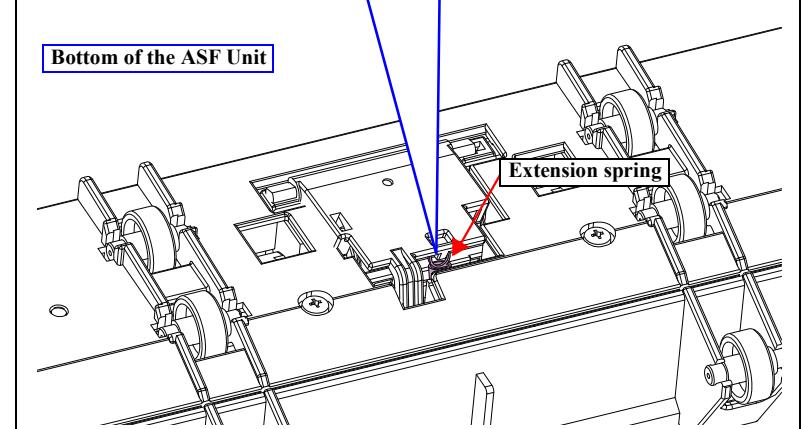
The type of ASF Unit varies depending on model. Check the marking of the extension spring so as to check if the ASF Unit is appropriate to the corresponding model.



SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/  
SC-T5100 Series/SC-T5100N Series:  
Has no marking

SC-T3100X Series/SC-T3100D Series/SC-F500 Series:  
Has marking

Bottom of the ASF Unit



### 3.4.5.19 PE Sensor



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Remove the Upper Roller Assy. (p258)
7. Remove the ASF Paper Sensor Cover. (p251)
8. Remove the ASF Unit. (p254)
9. Remove the Right Spindle Holder. (p236)
10. Remove the Paper Path. (p261)
11. Remove the Extension Spring.
12. Remove the screw that secures the PE Sensor lever.  
A) Silver M3x6 Cup S-tite screw: 1 pc
13. Remove the Driven Roller Assy and PE Sensor lever together.

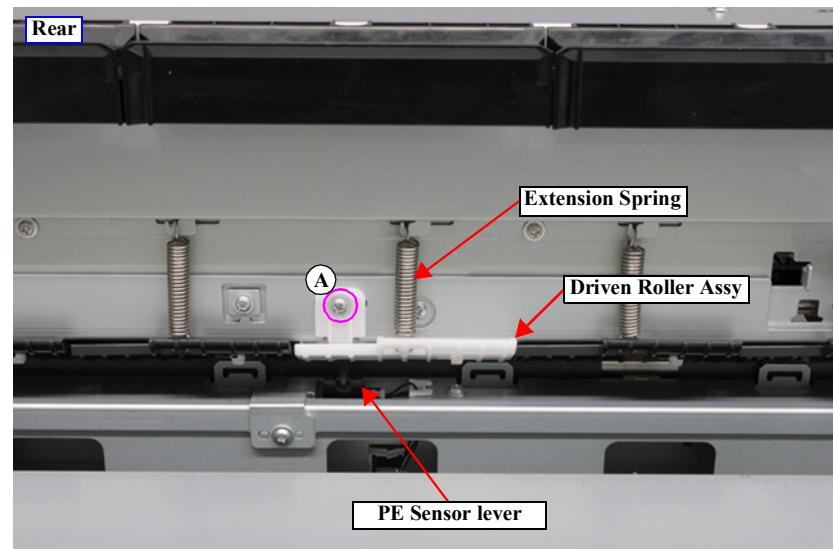


Figure 3-140. Removing the Driven Roller Assy and the PE Sensor lever

*Continue to the next page.*

14. Release the PE Sensor cable from the clamp.
  15. Insert a screwdriver through the hole on the frame to remove the screw, and then remove the PE Sensor Assy.
- B) Silver M3x6 Cup S-tite screw: 1 pc

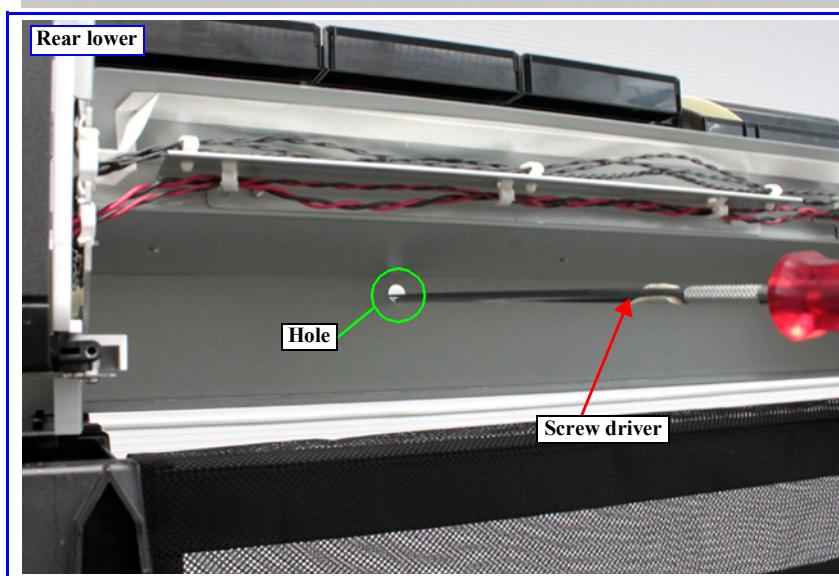
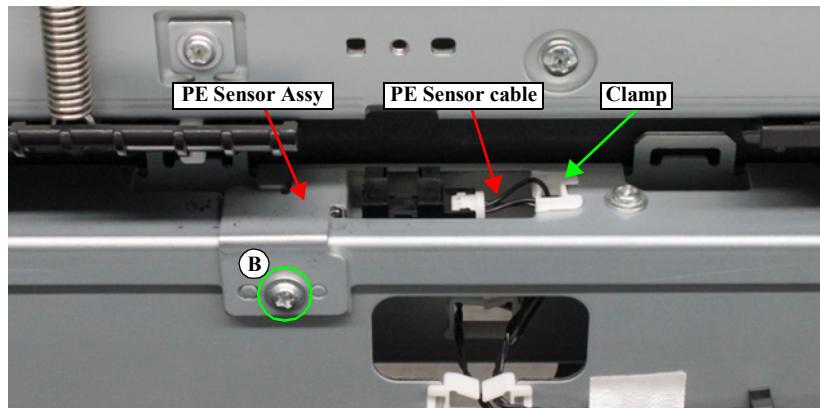


Figure 3-141. Removing the PE Sensor Assy

16. Disconnect the cable from the connector on the PE Sensor.
17. Disengage the hook, and remove the PE Sensor.

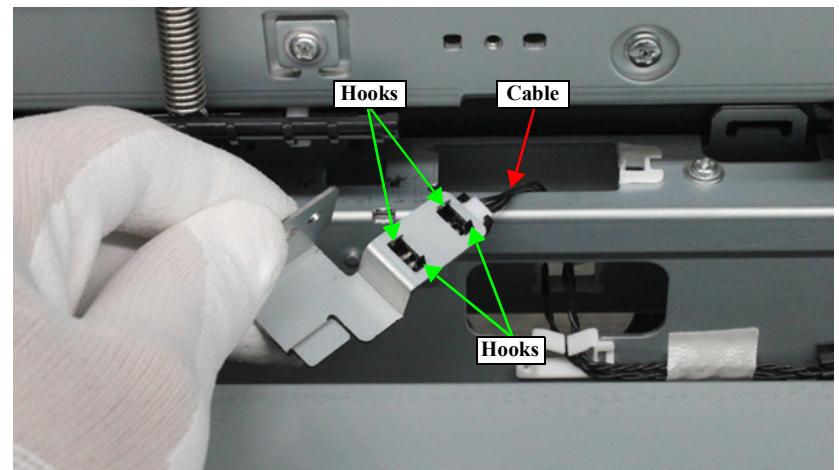


Figure 3-142. Removing the PE Sensor

### 3.4.5.20 Upper Roller Assy

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the two ferrite core on the Head FFC from the Upper Roller Assy.
7. Release the ASF Paper Sensor FFC from the Upper Roller Assy.



**When removing the screws in the next step, be careful not to damage the FFC with a screwdriver.**

8. Remove the two screws, and remove the Upper Roller Assy.  
A) Silver M3x6 Cup S-tite screw: 2 pcs

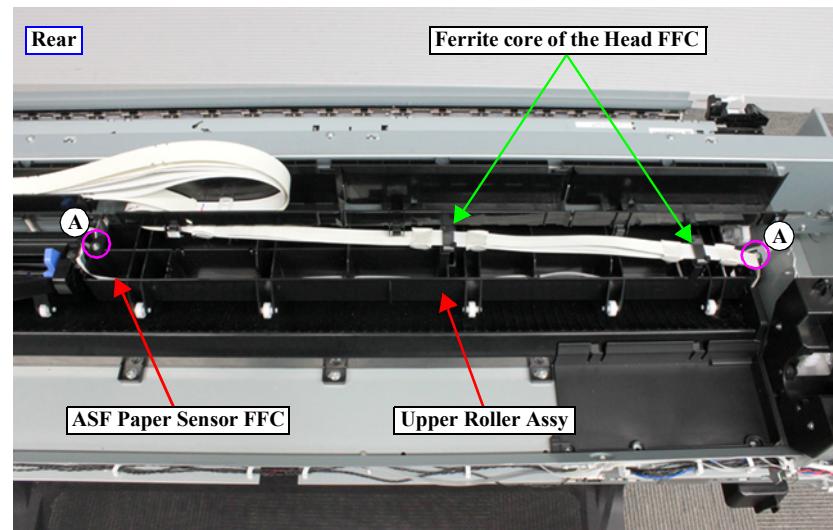
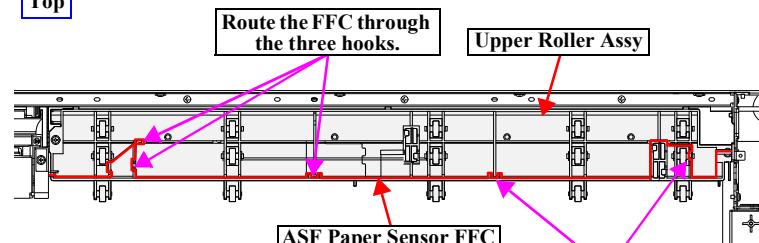


Figure 3-143. Removing the Upper Roller Assy



Route the ASF Paper Sensor FFC to the Upper Roller Assy as shown below.

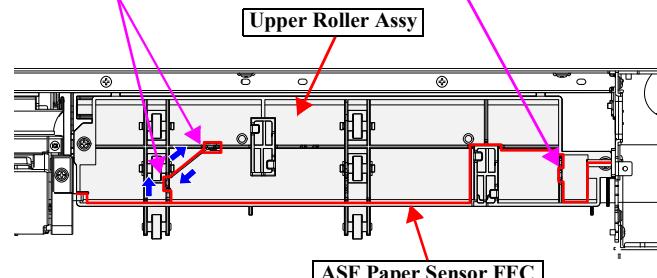
Top



SC-T5100 Series/SC-T5100N Series

Route the FFC through the two hooks.

Route the FFC through the hook



SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T3100X Series/SC-T3100D Series/SC-F500 Series

### 3.4.5.21 Driven Roller Assy

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the Upper Roller Assy. ([p258](#))
7. Remove the ASF Paper Sensor Cover. ([p251](#))



**When removing the Driven Roller Assy not near the ASF Unit, performing Step 8 is not necessary.**

8. Remove the ASF Unit. ([p254](#))
9. Remove the Extension Spring, and remove the Driven Roller Assy to the rear side.

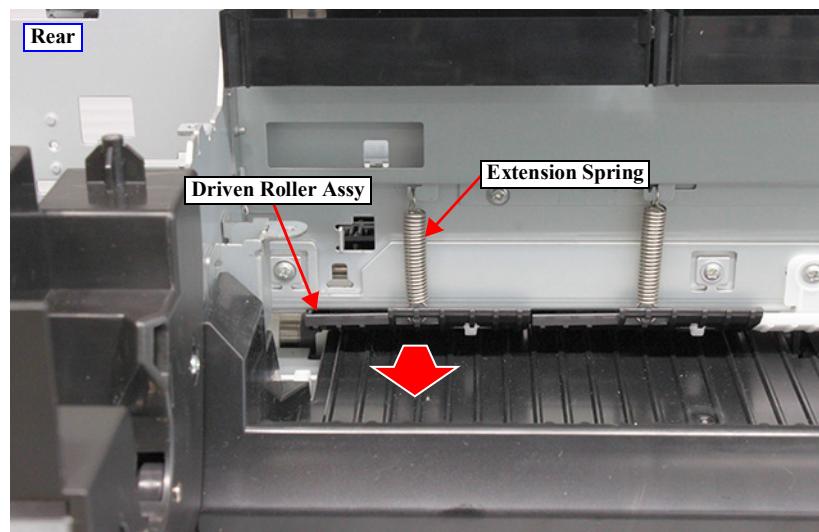


Figure 3-144. Removing the Driven Roller Assy

### 3.4.5.22 Paper Path

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the Left Upper Cover A. ([p155](#))
4. Remove the Left Upper Cover B. ([p157](#))
5. Remove the Top Cover. ([p158](#))
6. Remove the Upper Roller Assy. ([p258](#))
7. Remove the ASF Paper Sensor Cover. ([p251](#))
8. Remove the ASF Unit. ([p254](#))
9. Remove the Right Spindle Holder. ([p236](#))
10. Remove the two screws that secure the Board Cover.
  - A) Silver M3x6 S-tite screw: 1 pc
  - B) Black M3x8 step cup screw: 1 pc
11. Insert a flathead screwdriver into the groove on the Board Cover to slightly lift the Board Cover
12. Release the two hooks to remove the Board Cover. Since the double-sided tape is pasted on the Board Cover, peel off the Board Cover to remove it.

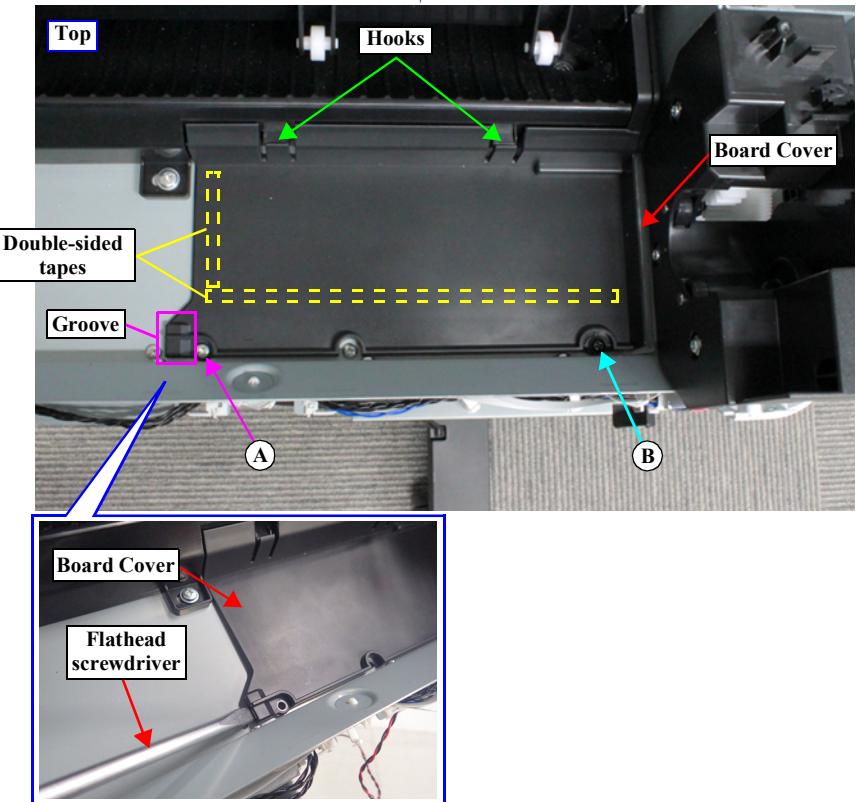


Figure 3-145. Removing the Board Cover

*Continue to the next page.*

13. Remove the six screws, and remove the Paper Path.

C) Silver M4x6 step cup S-tite screw: 6 pcs

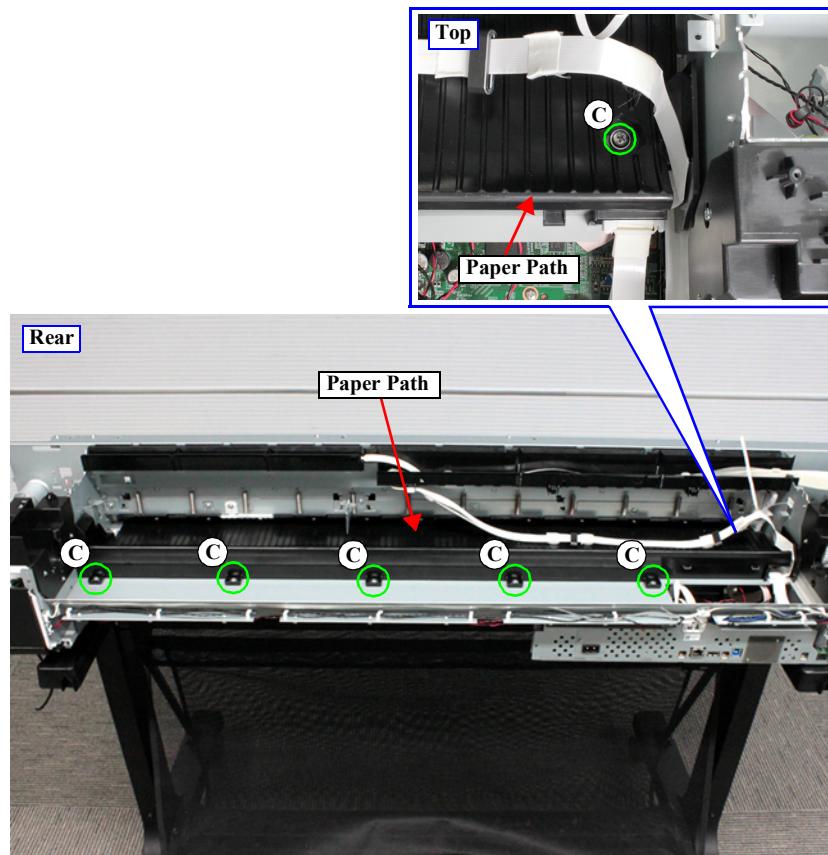
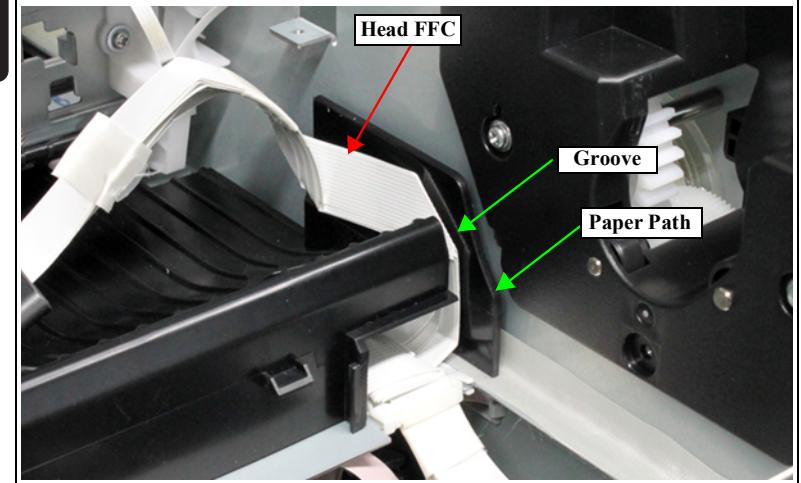


Figure 3-146. Removing the Paper Path



Route the Head FFC through the groove on the Paper Path.



### 3.4.5.23 PG Lever Assy



When replacing/removing this part, refer to "4.1.2 Adjustment Items and the Order by Repaired Part" (p269) and make sure to perform the specified operations including required adjustment.

1. Remove the Right Lower Cover A. (p147)  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. (p149)
3. Remove the Left Upper Cover A. (p155)
4. Remove the Left Upper Cover B. (p157)
5. Remove the Top Cover. (p158)
6. Remove the Upper Roller Assy. (p258)
7. Remove the ASF Paper Sensor Cover. (p251)
8. Remove the ASF Unit. (p254)
9. Remove the Right Spindle Holder. (p236)
10. Remove the Paper Path. (p261)
11. Remove the Extension Spring, and remove the Driven Roller Assy.
12. Remove the screw that secures the PG Lever Assy.  
A) Silver M3x6 Cup S-tite screw: 1 pc
13. Disengage the two dowels, remove the PG Lever Assy while sliding it in the direction of the arrow.

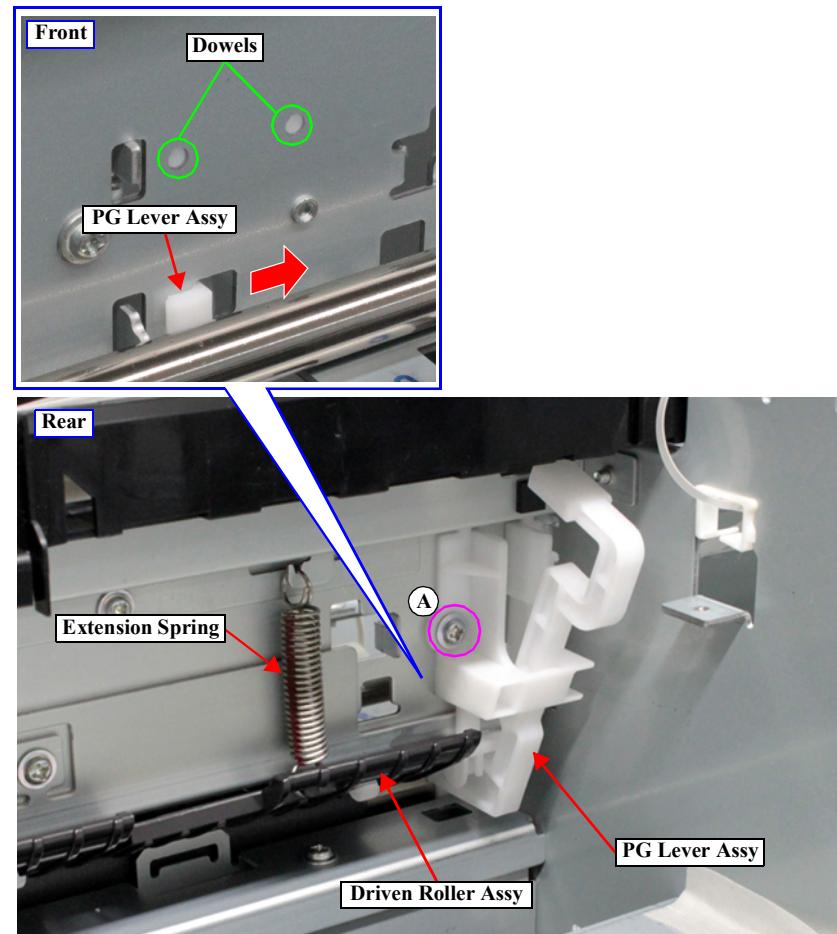
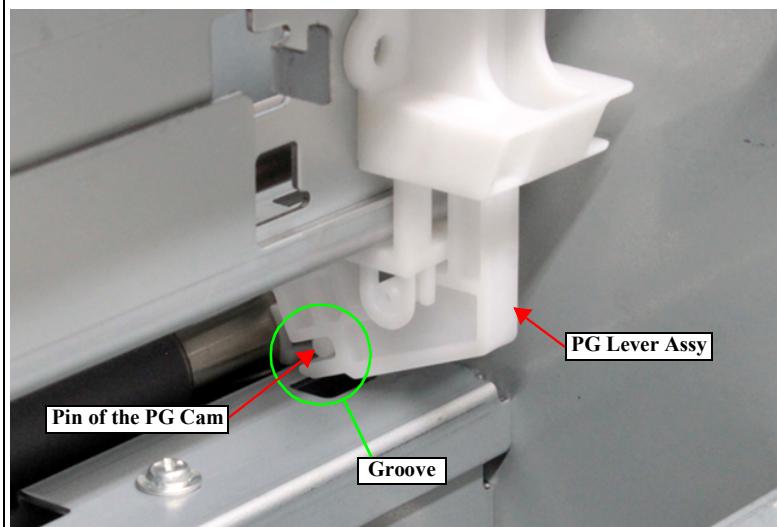


Figure 3-147. Removing the PG Lever Assy

*Continue to the next page.*



Engage the pin of the PG Cam with the groove on the PG Lever Assy.



### 3.4.5.24 Stacker Set Sensor

1. Remove the Right Lower Cover A. ([p147](#))  
(SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only)
2. Remove the Front Cover. ([p149](#))
3. Remove the two screws, and remove the sensor cover.  
A) Silver M3x6 Cup S-tite screw: 2 pcs

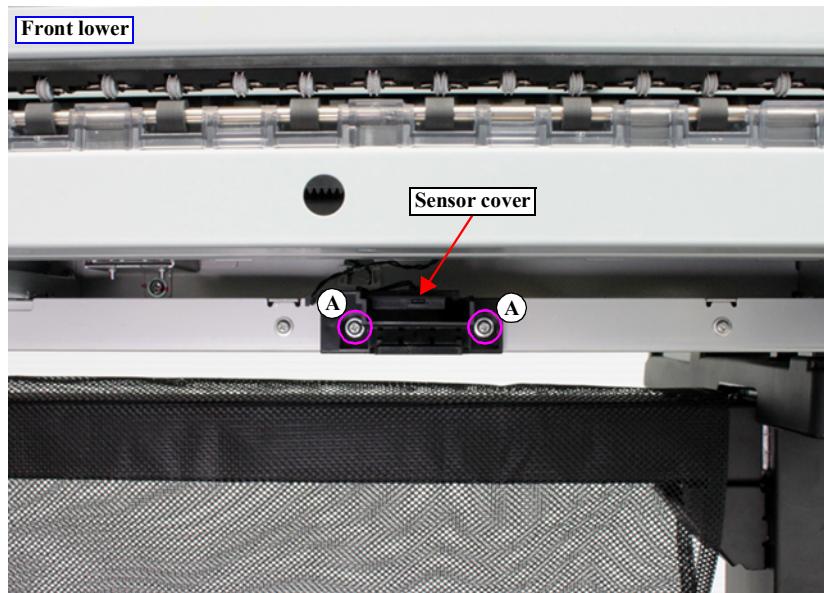


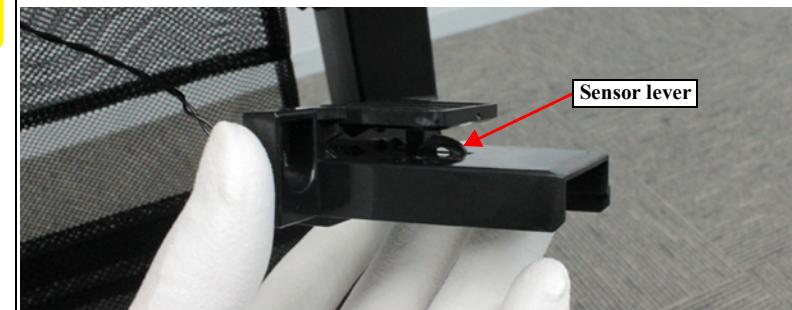
Figure 3-148. Removing the sensor cover

4. Remove the screw that secures the sensor mounting plate.

B) Black M2x6 Cup P-tite screw: 1 pc



In the next step, not to damage the sensor lever of the Stacker Set Sensor, do not pull out the sensor mounting plate carelessly.



5. Remove the sensor mounting plate while sliding it.

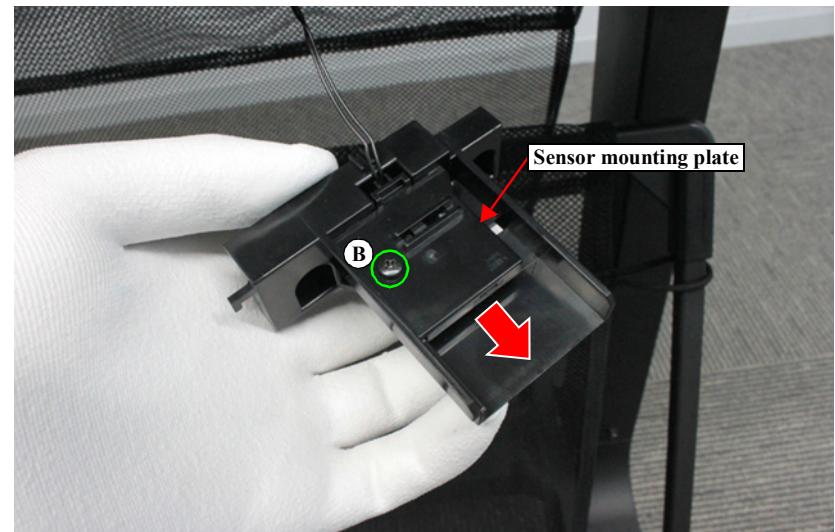
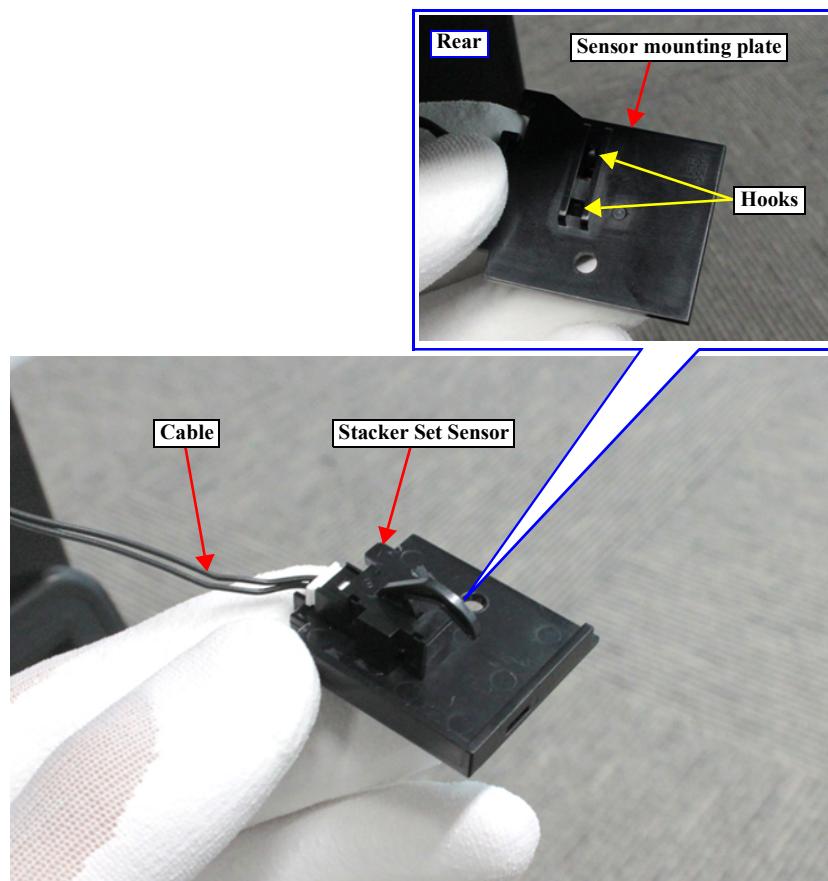


Figure 3-149. Removing the sensor mounting plate

Continue to the next page.

6. Disconnect the cable from the connector on the Stacker Set Sensor.
7. Disengage the hook, and remove the Stacker Set Sensor.



- Route the cable of the Stacker Set Sensor through the hook on the sensor cover.

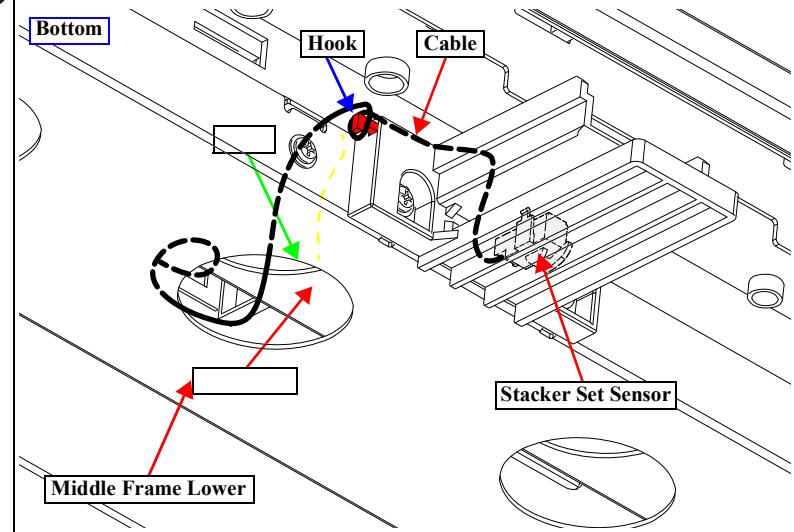
- Set the excess cable in the Middle Frame Lower.


Figure 3-150. Removing the Stacker Set Sensor

CHAPTER

4

ADJUSTMENT

## 4.1 Overview

This chapter describes the Service Program software utility and the adjustment procedures required after repairing or replacing certain parts.

### 4.1.1 Precautions

Always observe the following cautions whenever making an adjustment on the printer.



- Always refer to "["4.1.2 Adjustment Items and the Order by Repaired Part" \(p.269\)](#)" and make sure to perform all the adjustments listed in the table in the given order.
- Always read and follow the precautions given in each section that explains each adjustment. Ignoring the precautions can result in malfunction of the printer.

## 4.1.2 Adjustment Items and the Order by Repaired Part

The following table shows the required adjustments by repaired or replaced part and the order in which the adjustments must be performed.

Note \*\*: SMP : Singleweight Matte Paper 24/36 inch

Matte Paper: Archival Matte Paper/Enhanced Matte Paper

**Table 4-1. Adjustment items and the order by repaired part**

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
Board related parts/units	Main Board (backup OK)	Before replacement	1	Remove the ink cartridge/Maintenance Box.	---				---	---
			2	Turn the power on in inspection mode.	---				---	<a href="#">p. 55</a>
			3	NVRAM backup	√			√	---	<a href="#">p. 297</a>
			4	Power off	---			√	---	---
		Replacement	5		---			√	√	<a href="#">p. 178</a>
		After replacement	6	Turn the power on in firmware update mode.	---			√	---	<a href="#">p. 56</a>
			7	Firmware update	---	FW update tool		√	---	<a href="#">p. 307</a>
			8	Power off	---			√	---	---
			9	Turn the power on in inspection mode.	---			√	---	<a href="#">p. 55</a>
			10	Write NVRAM (Automatically power OFF)	√			√	---	<a href="#">p. 297</a>
			11	Turn the power on in inspection mode.	---			√	---	<a href="#">p. 55</a>
			12	RTC Input	√			√	---	<a href="#">p. 376</a>
			13	Power off	---			√	---	---
			14	Turn the power on in repair mode.	---			√	√	<a href="#">p. 56</a>
			15	Install the ink cartridge/Maintenance Box.	---			√	---	---
			16	Check the date and time is correct with the control panel.	---			√	---	---
			17	Nozzle Verification Technology Noise Check	√			√	√	<a href="#">p. 334</a>
			18	Nozzle Verification Technology Check	√			√	√	<a href="#">p. 336</a>
			19	Main Board Replacement Date & Time Setting	√			√	---	<a href="#">p. 384</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
Board related parts/units	Main Board (backup NG)	Before replacement	1	Remove the ink cartridge/Maintenance Box.	---			✓	---	---
		Replacement	2		---			✓	✓	<a href="#">p. 178</a>
		After replacement	3	Turn the power on in firmware update mode.	---			✓	---	<a href="#">p. 56</a>
			4	Firmware update	---	FW update tool		✓	---	<a href="#">p. 307</a>
			5	Power off	---			✓	---	---
			6	Turn the power on in inspection mode.	---			✓	---	<a href="#">p. 55</a>
			7	Main Board Initial Setting (Automatically power OFF)	✓			✓	---	<a href="#">p. 382</a>
			8	Turn the power on in inspection mode.	---			✓	---	<a href="#">p. 55</a>
			9	RTC Input	✓			✓	---	<a href="#">p. 376</a>
			10	MAC Address Check & Input	✓	Network cable		✓	---	<a href="#">p. 377</a>
			11	Serial Number & USB-ID Check & Input	✓			✓	---	<a href="#">p. 379</a>
			12	Initial Password Check & Input (EMEA only)	✓			✓	---	<a href="#">p. 390</a>
			13	Touch Panel Adjustment	---			✓	---	<a href="#">p. 387</a>
			14	Head ID Check & Input (Automatically power OFF)	✓			✓	---	<a href="#">p. 312</a>
			15	Turn the power on in repair mode.	---			✓	---	<a href="#">p. 56</a>
			16	Install the ink cartridge/Maintenance Box.	---			✓	---	---
			17	Check the date and time is correct with the control panel.	---			✓	---	---
			18	PG Switching Lever Position Adjustment	✓			✓	---	<a href="#">p. 327</a>
			19	CR Motor Measurement & Auto Adjustment	✓			✓	---	<a href="#">p. 341</a>
			20	PF Motor Measurement & Auto Adjustment	✓			✓	---	<a href="#">p. 370</a>
			21	ATC Motor Measurement & Auto Adjustment	✓			✓	---	<a href="#">p. 371</a>
			22	Pump Cap Unit Measurement & Auto Adjustment	✓			✓	---	<a href="#">p. 345</a>
			23	CR Active Dumper Adjustment	✓			✓	---	<a href="#">p. 340</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations		Service Program	Jig	Media*	Repl- aced	Reat- tached	Page	
Board related parts/units	Main Board (backup NG)	After replacement	24	Cutter Home Position Adjustment	✓			✓	---	<a href="#">p. 361</a>
			25	Nozzle Verification Technology Noise Check	✓	SMP	✓	✓	---	<a href="#">p. 334</a>
			26	Nozzle Verification Technology Rank Sort	✓	SMP	✓	---	---	<a href="#">p. 335</a>
			27	Nozzle Verification Technology Check	✓	SMP	✓	✓	---	<a href="#">p. 336</a>
			28	Paper Feed Adjustment (A area)	✓	SMP	✓	---	---	<a href="#">p. 357</a>
			29	Paper Feed Adjustment (B area)	✓	Matte paper	✓	---	---	<a href="#">p. 359</a>
			30	PW Sensor Check & Adjustment	✓	Matte paper	✓	---	---	<a href="#">p. 364</a>
			31	T&B&S Check & Adjustment	✓	Ruler	Matte paper	✓	---	<a href="#">p. 365</a>
			32	1st Dot Position Adjustment	✓	Ruler	Matte paper	✓	---	<a href="#">p. 367</a>
			33	Cut Position Check & Adjustment	✓	Ruler	SMP	✓	---	<a href="#">p. 362</a>
			34	Uni-D Outward Adjustment (Home -> Full)	✓	SMP	✓	---	---	<a href="#">p. 328</a>
			35	Uni-D Homeward Adjustment (Full -> Home)	✓	SMP	✓	---	---	<a href="#">p. 330</a>
			36	Bi-D Adjustment	✓	SMP	✓	---	---	<a href="#">p. 332</a>
			37	Main Board Replacement Date & Time Setting	✓			✓	---	<a href="#">p. 384</a>
	Main Board Battery	Replacement	1		---			✓	✓	---
		After replacement	2	Turn the power on in inspection mode.	---			✓	✓	<a href="#">p. 55</a>
			3	RTC Input	✓			✓	✓	<a href="#">p. 376</a>
	Power Supply Board	Replacement	1		---			✓	✓	<a href="#">p. 180</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	---	<a href="#">p. 56</a>
			3	CR Motor Measurement & Auto Adjustment	✓			✓	---	<a href="#">p. 341</a>
			4	PF Motor Measurement & Auto Adjustment	✓			✓	---	<a href="#">p. 370</a>
			5	ATC Motor Measurement & Auto Adjustment	✓			✓	---	<a href="#">p. 371</a>
			6	Pump Cap Unit Measurement & Auto Adjustment	✓			✓	---	<a href="#">p. 345</a>
			7	Power Supply Board Replacement Date & Time Setting	✓			✓	---	<a href="#">p. 385</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
Board related parts/units	Main Board Fan	Replacement	1		---			✓	✓	<a href="#">p. 184</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	Nozzle Verification Technology Noise Check	✓		SMP	✓	✓	<a href="#">p. 334</a>
			4	Nozzle Verification Technology Check	✓		SMP	✓	✓	<a href="#">p. 336</a>
	Panel Assy	Replacement	1		---			✓	✓	<a href="#">p. 181</a>
		After replacement	2	Turn the power on in inspection mode.	---			✓	✓	<a href="#">p. 55</a>
			3	Panel Check	---			✓	✓	<a href="#">p. 386</a>
			4	Touch Panel Adjustment	---			✓	---	<a href="#">p. 387</a>
	PIS	Replacement	1		---			✓	✓	<a href="#">p. 193</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	---	<a href="#">p. 56</a>
			3	PIS Replacement Date & Time Setting	✓			✓	---	<a href="#">p. 350</a>
Paper feed related parts/units	ATC Assy	Replacement	1		---			✓	✓	<a href="#">p. 233</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	ATC Motor Replacement Date & Time Setting	✓			✓	---	<a href="#">p. 372</a>
			4	ATC Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 371</a>
	ATC Motor	Replacement	1		---			✓	✓	<a href="#">p. 235</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	ATC Motor Replacement Date & Time Setting	✓			✓	---	<a href="#">p. 372</a>
			4	ATC Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 371</a>
	ATC Scale Encoder	Replacement	1		---			✓	✓	---
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	ATC Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 371</a>
	ATC Scale	Replacement	1		---			✓	✓	---
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	ATC Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 371</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
Paper feed related parts/units	PF Motor	Replacement	1		---			✓	✓	<a href="#">p. 237</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	PF Motor Counter Reset	✓			✓	---	<a href="#">p. 375</a>
			4	PF Belt Tension Check & Adjustment	✓	Sonic Tensimeter		✓	✓	<a href="#">p. 355</a>
			5	PF Scale Check	✓			✓	✓	<a href="#">p. 369</a>
			6	PF Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 370</a>
			7	Paper Feed Adjustment (A area)	✓		SMP	✓	✓	<a href="#">p. 357</a>
			8	Paper Feed Adjustment (B area)	✓		Matte paper	✓	✓	<a href="#">p. 359</a>
			9	PW Sensor Check & Adjustment	✓		Matte paper	✓	✓	<a href="#">p. 364</a>
			10	T&B&S Check & Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 365</a>
			11	1st Dot Position Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 367</a>
			12	Cut Position Check & Adjustment	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 362</a>
	PE Sensor	Replacement	1		---			✓	✓	<a href="#">p. 256</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	T&B&S Check & Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 365</a>
	ASF Unit	Replacement	1		---			✓	✓	<a href="#">p. 254</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	---	<a href="#">p. 56</a>
			3	ASF Unit Counter Reset	✓			✓	---	<a href="#">p. 374</a>
	PF Scale	Replacement	1		---			✓	✓	<a href="#">p. 246</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	PF Scale Replacement Date & Time Setting	✓			✓	---	<a href="#">p. 373</a>
			4	PF Scale Check	✓			✓	✓	<a href="#">p. 369</a>
			5	Paper Feed Adjustment (A area)	✓		SMP	✓	✓	<a href="#">p. 357</a>
			6	Paper Feed Adjustment (B area)	✓		Matte paper	✓	✓	<a href="#">p. 359</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
Paper feed related parts/units	PF Encoder	Replacement	1		---			✓	✓	<a href="#">p. 245</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	PF Scale Check	✓			✓	✓	<a href="#">p. 369</a>
			4	PF Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 370</a>
			5	Paper Feed Adjustment (A area)	✓		SMP	✓	✓	<a href="#">p. 357</a>
			6	Paper Feed Adjustment (B area)	✓		Matte paper	✓	✓	<a href="#">p. 359</a>
	PF Belt	Replacement	1		---			✓	✓	<a href="#">p. 247</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	PF Belt Tension Check & Adjustment	✓	Sonic Tensimeter		✓	✓	<a href="#">p. 355</a>
			4	PF Scale Check	✓			✓	✓	<a href="#">p. 369</a>
			5	PF Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 370</a>
			6	Paper Feed Adjustment (A area)	✓		SMP	✓	✓	<a href="#">p. 357</a>
			7	Paper Feed Adjustment (B area)	✓		Matte paper	✓	✓	<a href="#">p. 359</a>
CR/Head/ Ink system related parts/units	PG Switching Lever Assy	Replacement	1		---			✓	✓	<a href="#">p. 263</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	PG Switching Lever Position Adjustment	✓			✓	✓	<a href="#">p. 327</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
CR/Head/ Ink system related parts/units	Pump Cap Unit	Replacement	1		---			✓	✓	<a href="#">p. 212</a>
		After replacement	2	Turn the power on in inspection mode.	---			✓	✓	<a href="#">p. 55</a>
			3	Pump Cap Counter Reset	✓			✓	---	<a href="#">p. 351</a>
			4	Pump Cap Unit Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 345</a>
	Print Head	Replacement	1		---			✓	✓	<a href="#">p. 190</a>
		After replacement	2	Print Head Ground Resistance Check	---	Ohmmeter		✓	✓	<a href="#">p. 388</a>
			3	Turn the power on in inspection mode.	---			✓	---	<a href="#">p. 55</a>
			4	Print Head Counter Reset	✓			✓	---	<a href="#">p. 343</a>
			5	Head ID Check & Input (Automatically power OFF)	✓			✓	---	<a href="#">p. 312</a>
			6	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			7	Initial Ink Charge	✓			✓	---	<a href="#">p. 347</a>
			8	Cleaning (CL3)	✓			---	✓	<a href="#">p. 346</a>
			9	Head Alignment Check	✓		SMP	✓	✓	<a href="#">p. 339</a>
			10	Nozzle Verification Technology Noise Check	✓		SMP	✓	✓	<a href="#">p. 334</a>
			11	Nozzle Verification Technology Rank Sort	✓		SMP	✓	---	<a href="#">p. 335</a>
			12	Nozzle Verification Technology Check	✓		SMP	✓	✓	<a href="#">p. 336</a>
			13	Head Inclination Check & Adjustment (CR direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 316</a>
			14	Head Slant Check & Adjustment (PF direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 320</a>
			15	PG Check & Adjustment	✓	Thickness Guage		✓	✓	<a href="#">p. 313</a>
			16	PW Sensor Check & Adjustment	✓		Matte paper	✓	✓	<a href="#">p. 364</a>
			17	T&B&S Check & Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 365</a>
			18	1st Dot Position Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 367</a>
			19	Uni-D Outward Adjustment (Home -> Full)	✓		SMP	✓	✓	<a href="#">p. 328</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
CR/Head/ Ink system related parts/units	Print Head	After replacement	20	Uni-D Homeward Adjustment (Full -> Home)	✓		SMP	✓	✓	<a href="#">p. 330</a>
			21	Bi-D Adjustment	✓		SMP	✓	✓	<a href="#">p. 332</a>
	CSIC Assy	After replacement	1		---			✓	✓	<a href="#">p. 191</a>
			2	Print Head Ground Resistance Check	---	Ohmmeter		✓	✓	<a href="#">p. 388</a>
			3	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			4	Cleaning (CL3)	✓			✓	✓	<a href="#">p. 346</a>
			5	Head Alignment Check	✓		SMP	✓	✓	<a href="#">p. 339</a>
			6	Nozzle Verification Technology Noise Check	✓		SMP	✓	✓	<a href="#">p. 334</a>
			7	Nozzle Verification Technology Check	✓		SMP	✓	✓	<a href="#">p. 336</a>
			8	Head Inclination Check & Adjustment (CR direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 316</a>
			9	Head Slant Check & Adjustment (PF direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 320</a>
			10	PG Check & Adjustment	✓	Thickness Guage		✓	✓	<a href="#">p. 313</a>
			11	PW Sensor Check & Adjustment	✓		Matte paper	✓	✓	<a href="#">p. 364</a>
			12	T&B&S Check & Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 365</a>
			13	1st Dot Position Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 367</a>
			14	Uni-D Outward Adjustment (Home -> Full)	✓		SMP	✓	✓	<a href="#">p. 328</a>
			15	Uni-D Homeward Adjustment (Full -> Home)	✓		SMP	✓	✓	<a href="#">p. 330</a>
			16	Bi-D Adjustment	✓		SMP	✓	✓	<a href="#">p. 332</a>
	CR Motor	After replacement	1		---			✓	✓	<a href="#">p. 194</a>
			2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	CR Motor Counter Reset	✓			✓	---	<a href="#">p. 344</a>
			4	CR Belt Tension Check & Adjustment	✓	Sonic Tensimeter		✓	✓	<a href="#">p. 324</a>
			5	CR Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 341</a>
			6	CR Active Dumper Adjustment	✓			✓	✓	<a href="#">p. 340</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
CR/Head/ Ink system related parts/units	Head FFC	Replacement	1		---			✓	✓	<a href="#">p. 200</a>
		After replacement	2	Print Head Ground Resistance Check	---	Ohmmeter		✓	✓	<a href="#">p. 388</a>
			3	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			4	Cleaning (CL3)	✓			✓	✓	<a href="#">p. 346</a>
			5	Head Alignment Check	✓		SMP	✓	✓	<a href="#">p. 339</a>
			6	Nozzle Verification Technology Noise Check	✓		SMP	✓	✓	<a href="#">p. 334</a>
			7	Nozzle Verification Technology Check	✓		SMP	✓	✓	<a href="#">p. 336</a>
			8	Head Inclination Check & Adjustment (CR direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 316</a>
			9	Head Slant Check & Adjustment (PF direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 320</a>
			10	PG Check & Adjustment	✓	Thickness Guage		✓	✓	<a href="#">p. 313</a>
			11	PW Sensor Check & Adjustment	✓		Matte paper	✓	✓	<a href="#">p. 364</a>
			12	T&B&S Check & Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 365</a>
			13	1st Dot Position Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 367</a>
			14	Uni-D Outward Adjustment (Home -> Full)	✓		SMP	✓	✓	<a href="#">p. 328</a>
			15	Uni-D Homeward Adjustment (Full -> Home)	✓		SMP	✓	✓	<a href="#">p. 330</a>
			16	Bi-D Adjustment	✓		SMP	✓	✓	<a href="#">p. 332</a>
CR Scale	CR Scale	Replacement	1		---			✓	✓	<a href="#">p. 196</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	CR Scale Replacement Date & Time Setting	✓			✓	---	<a href="#">p. 342</a>
			4	CR Scale Check	✓			✓	✓	<a href="#">p. 338</a>
			5	PG Switching Lever Position Adjustment	✓			✓	✓	<a href="#">p. 327</a>
CR Belt Pulley Assy	CR Belt Pulley Assy	Replacement	1		---			✓	✓	<a href="#">p. 201</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	CR Belt Tension Check & Adjustment	✓	Sonic Tensimeter		✓	✓	<a href="#">p. 324</a>
			4	CR Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 341</a>
			5	CR Active Dumper Adjustment	✓			✓	✓	<a href="#">p. 340</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
CR/Head/ Ink system related parts/units	CR Unit	Replacement	1		---			✓	✓	<a href="#">p. 205</a>
		After replacement	2	Print Head Ground Resistance Check	---	Ohmmeter		✓	✓	<a href="#">p. 388</a>
			3	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			4	CR Belt Tension Check & Adjustment	✓	Sonic Tensimeter		✓	✓	<a href="#">p. 324</a>
			5	CR Scale Check	✓			✓	✓	<a href="#">p. 338</a>
			6	CR Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 341</a>
			7	CR Active Dumper Adjustment	✓			✓	✓	<a href="#">p. 340</a>
			8	Cleaning (CL3)	✓			✓	✓	<a href="#">p. 346</a>
			9	Head Alignment Check	✓		SMP	✓	✓	<a href="#">p. 339</a>
			10	Nozzle Verification Technology Noise Check	✓		SMP	✓	✓	<a href="#">p. 334</a>
			11	Nozzle Verification Technology Check	✓		SMP	✓	✓	<a href="#">p. 336</a>
			12	Head Inclination Check & Adjustment (CR direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 316</a>
			13	Head Slant Check & Adjustment (PF direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 320</a>
			14	PG Check & Adjustment	✓	Thickness Guage		✓	✓	<a href="#">p. 313</a>
			15	PW Sensor Check & Adjustment	✓		Matte paper	✓	✓	<a href="#">p. 364</a>
			16	T&B&S Check & Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 365</a>
			17	1st Dot Position Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 367</a>
			18	Uni-D Outward Adjustment (Home -> Full)	✓		SMP	✓	✓	<a href="#">p. 328</a>
			19	Uni-D Homeward Adjustment (Full -> Home)	✓		SMP	✓	✓	<a href="#">p. 330</a>
			20	Bi-D Adjustment	✓		SMP	✓	✓	<a href="#">p. 332</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
CR/Head/ Ink system related parts/units	PW Sensor	Replacement	1		---			✓	✓	<a href="#">p. 207</a>
		After replacement	2	Print Head Ground Resistance Check	---	Ohmmeter		✓	✓	<a href="#">p. 388</a>
			3	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			4	CR Belt Tension Check & Adjustment	✓	Sonic Tensimeter		✓	✓	<a href="#">p. 324</a>
			5	CR Scale Check	✓			✓	✓	<a href="#">p. 338</a>
			6	CR Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 341</a>
			7	CR Active Dumper Adjustment	✓			✓	✓	<a href="#">p. 340</a>
			8	Cleaning (CL3)	✓			✓	✓	<a href="#">p. 346</a>
			9	Head Alignment Check	✓		SMP	✓	✓	<a href="#">p. 339</a>
			10	Nozzle Verification Technology Noise Check	✓		SMP	✓	✓	<a href="#">p. 334</a>
			11	Nozzle Verification Technology Check	✓		SMP	✓	✓	<a href="#">p. 336</a>
			12	Head Inclination Check & Adjustment (CR direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 316</a>
			13	Head Slant Check & Adjustment (PF direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 320</a>
			14	PG Check & Adjustment	✓	Thickness Guage		✓	✓	<a href="#">p. 313</a>
			15	PW Sensor Check & Adjustment	✓		Matte paper	✓	✓	<a href="#">p. 364</a>
			16	T&B&S Check & Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 365</a>
			17	1st Dot Position Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 367</a>
			18	Uni-D Outward Adjustment (Home -> Full)	✓		SMP	✓	✓	<a href="#">p. 328</a>
			19	Uni-D Homeward Adjustment (Full -> Home)	✓		SMP	✓	✓	<a href="#">p. 330</a>
			20	Bi-D Adjustment	✓		SMP	✓	✓	<a href="#">p. 332</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
CR/Head/ Ink system related parts/units	CR Belt	Replacement	1		---			✓	✓	<a href="#">p. 208</a>
		After replacement	2	Print Head Ground Resistance Check	---	Ohmmeter		✓	✓	<a href="#">p. 388</a>
			3	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			4	CR Belt Tension Check & Adjustment	✓	Sonic Tensimeter		✓	✓	<a href="#">p. 324</a>
			5	CR Scale Check	✓			✓	✓	<a href="#">p. 338</a>
			6	CR Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 341</a>
			7	CR Active Dumper Adjustment	✓			✓	✓	<a href="#">p. 340</a>
			8	Cleaning (CL3)	✓			✓	✓	<a href="#">p. 346</a>
			9	Head Alignment Check	✓		SMP	✓	✓	<a href="#">p. 339</a>
			10	Nozzle Verification Technology Noise Check	✓		SMP	✓	✓	<a href="#">p. 334</a>
			11	Nozzle Verification Technology Check	✓		SMP	✓	✓	<a href="#">p. 336</a>
			12	Head Inclination Check & Adjustment (CR direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 316</a>
			13	Head Slant Check & Adjustment (PF direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 320</a>
			14	PG Check & Adjustment	✓	Thickness Guage		✓	✓	<a href="#">p. 313</a>
			15	PW Sensor Check & Adjustment	✓		Matte paper	✓	✓	<a href="#">p. 364</a>
			16	T&B&S Check & Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 365</a>
			17	1st Dot Position Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 367</a>
			18	Uni-D Outward Adjustment (Home -> Full)	✓		SMP	✓	✓	<a href="#">p. 328</a>
			19	Uni-D Homeward Adjustment (Full -> Home)	✓		SMP	✓	✓	<a href="#">p. 330</a>
			20	Bi-D Adjustment	✓		SMP	✓	✓	<a href="#">p. 332</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
CR/Head/ Ink system related parts/units	Oil Pad	Replacement	1		---			✓	✓	<a href="#">p. 209</a>
		After replacement	2	Print Head Ground Resistance Check	---	Ohmmeter		✓	✓	<a href="#">p. 388</a>
			3	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			4	CR Belt Tension Check & Adjustment	✓	Sonic Tensimeter		✓	✓	<a href="#">p. 324</a>
			5	CR Scale Check	✓			✓	✓	<a href="#">p. 338</a>
			6	CR Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 341</a>
			7	CR Active Dumper Adjustment	✓			✓	✓	<a href="#">p. 340</a>
			8	Cleaning (CL3)	✓			✓	✓	<a href="#">p. 346</a>
			9	Head Alignment Check	✓		SMP	✓	✓	<a href="#">p. 339</a>
			10	Nozzle Verification Technology Noise Check	✓		SMP	✓	✓	<a href="#">p. 334</a>
			11	Nozzle Verification Technology Check	✓		SMP	✓	✓	<a href="#">p. 336</a>
			12	Head Inclination Check & Adjustment (CR direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 316</a>
			13	Head Slant Check & Adjustment (PF direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 320</a>
			14	PG Check & Adjustment	✓	Thickness Guage		✓	✓	<a href="#">p. 313</a>
			15	PW Sensor Check & Adjustment	✓		Matte paper	✓	✓	<a href="#">p. 364</a>
			16	T&B&S Check & Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 365</a>
			17	1st Dot Position Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 367</a>
			18	Uni-D Outward Adjustment (Home -> Full)	✓		SMP	✓	✓	<a href="#">p. 328</a>
			19	Uni-D Homeward Adjustment (Full -> Home)	✓		SMP	✓	✓	<a href="#">p. 330</a>
			20	Bi-D Adjustment	✓		SMP	✓	✓	<a href="#">p. 332</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
CR/Head/ Ink system related parts/units	Sub C Board	Replacement	1		---			✓	✓	<a href="#">p. 210</a>
		After replacement	2	Print Head Ground Resistance Check	---	Ohmmeter		✓	✓	<a href="#">p. 388</a>
			3	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			4	CR Belt Tension Check & Adjustment	✓	Sonic Tensimeter		✓	✓	<a href="#">p. 324</a>
			5	CR Scale Check	✓			✓	✓	<a href="#">p. 338</a>
			6	CR Motor Measurement & Auto Adjustment	✓			✓	✓	<a href="#">p. 341</a>
			7	CR Active Dumper Adjustment	✓			✓	✓	<a href="#">p. 340</a>
			8	Cleaning (CL3)	✓			✓	✓	<a href="#">p. 346</a>
			9	Head Alignment Check	✓		SMP	✓	✓	<a href="#">p. 339</a>
			10	Nozzle Verification Technology Noise Check	✓		SMP	✓	✓	<a href="#">p. 334</a>
			11	Nozzle Verification Technology Check	✓		SMP	✓	✓	<a href="#">p. 336</a>
			12	Head Inclination Check & Adjustment (CR direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 316</a>
			13	Head Slant Check & Adjustment (PF direction)	✓	Scale loupe	SMP	✓	✓	<a href="#">p. 320</a>
			14	PG Check & Adjustment	✓	Thickness Guage		✓	✓	<a href="#">p. 313</a>
			15	PW Sensor Check & Adjustment	✓		Matte paper	✓	✓	<a href="#">p. 364</a>
			16	T&B&S Check & Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 365</a>
			17	1st Dot Position Adjustment	✓	Ruler	Matte paper	✓	✓	<a href="#">p. 367</a>
			18	Uni-D Outward Adjustment (Home -> Full)	✓		SMP	✓	✓	<a href="#">p. 328</a>
			19	Uni-D Homeward Adjustment (Full -> Home)	✓		SMP	✓	✓	<a href="#">p. 330</a>
			20	Bi-D Adjustment	✓		SMP	✓	✓	<a href="#">p. 332</a>
Cutter Home Position Sensor	Cutter Home Position Sensor	Replacement	1		---			✓	✓	<a href="#">p. 227</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	Cutter Home Position Adjustment	✓			✓	✓	<a href="#">p. 361</a>

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media*	Repl- aced	Reat- tached	Page
CR/Head/ Ink system related parts/units	Cutter Rail	Replacement	1		---			✓	✓	<a href="#">p. 229</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	Cutter Home Position Adjustment	✓			✓	✓	<a href="#">p. 361</a>
			4	Cut Position Check & Adjustment	✓	Ruler	SMP	✓	✓	<a href="#">p. 362</a>
	Cutter Base	Replacement	1		---			✓	✓	<a href="#">p. 228</a>
		After replacement	2	Turn the power on in repair mode.	---			✓	✓	<a href="#">p. 56</a>
			3	Cutter Home Position Adjustment	✓			✓	✓	<a href="#">p. 361</a>
			4	Cut Position Check & Adjustment	✓	Ruler	SMP	✓	✓	<a href="#">p. 362</a>
	Ink Leak Sensor	Replacement	1		---			✓	✓	<a href="#">p. 166</a>
		After replacement	2	Turn the power on in inspection mode.	---			✓	---	<a href="#">p. 55</a>
			3	Ink Leak Flag Reset	✓			✓	---	<a href="#">p. 348</a>
	Ink Tank Upper Porous Pad	Replacement	1		---			✓	✓	<a href="#">p. 215</a>
		After replacement	2	Turn the power on in inspection mode/repair mode.	---			✓	---	<a href="#">p. 55, p. 56</a>
			3	Ink Tank Upper Porous Pad Counter Reset	✓			✓	---	<a href="#">p. 352</a>
	Ink Tube Assy	Replacement	1		---			✓	✓	<a href="#">p. 219</a>
		After replacement	2	Turn the power on in inspection mode/repair mode.	---			✓	---	<a href="#">p. 55, p. 56</a>
			3	Ink Tube Assy Counter Reset	✓			✓	---	<a href="#">p. 353</a>
			4	Initial Ink Charge	✓			✓	---	<a href="#">p. 347</a>

### 4.1.3 Adjustment Items

The following table describes the general outline of the adjustments.

Note \*\*: SMP : Singleweight Matte Paper 24/36 inch  
Matte paper: Archival Matte Paper/Enhanced Matte Paper

**Table 4-2. Adjustment Items**

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
	Head ID Check & Input	Register the head rank ID to the printer using the Service Program or check the currently registered head rank ID. Head rank ID is information needed to drive the Print Head with proper voltages so that proper amount of ink droplets are fired.	If the new ID is not registered after replacing the head, the head ID of the older head is used and the proper drive voltage cannot be set. The following symptoms may occur. <input type="checkbox"/> Since the amount of ink droplets is not proper, the color and density abnormalities are found on prints. <input type="checkbox"/> Since the amount of ink droplets turns to be unstable, dot missing or misaligned dots occur while printing or flushing.	Repair mode/ Inspection mode	√			p. 312
CR and head related	PG Check & Adjustment	Adjust the platen gap of the CR Unit using the thickness gauge.	When the PG is out of standards, the following symptoms may occur. <input type="checkbox"/> Gap is too wide Unstable ink droplet paths or misaligned dots occur, and it causes low printing quality such as banding, printing misalignment, or grainy image. <input type="checkbox"/> Gap is too narrow The head rubs paper.	Repair mode	√	Thickness Guage		p. 313
	Head Inclination Check & Adjustment (CR direction)	Corrects inclination of the Print Head in the CR direction. [Manual adjustment only] Print an adjustment pattern, and visually check the pattern to see if the adjustment is needed. To correct the head inclination, turn the cam.	If this adjustment is not made, print quality problems such as misaligned lines, grainy image, banding, or color unevenness may occur in the scale of Print Head surface area.	Repair mode	√	Scale loupe	SMP	p. 316

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
CR and head related	Head Slant Check & Adjustment (PF direction)	Corrects slant of the Print Head in the PF direction. [Manual adjustment only] Print an adjustment pattern, and visually check the pattern to see if the adjustment is needed. To correct the head slant, move the lever.	If this adjustment is not made, the gap between the Print Head surface and paper is kept uneven (e.g.: the gap at the front side is wider than that at the rear side), and causes irregularity in size and position of printed dots. This may be observed as print quality problems such as grainy image, banding, or color unevenness.	Repair mode	√	Scale loupe	SMP	p. 320
	CR Belt Tension Check & Adjustment	Measure the tension of the belt using the sonic tensimeter to check if it is within standards.	When the belt tension is out of standards, the following symptoms may occur. <input type="checkbox"/> Belt tension is high The life of the belt will be shortened. High load applied to the carriage causes frequent wait control over the carriage movements to prevent overheating. If the tension is too high, the shaft of the motor leans and the brush in the motor becomes worn, and will result in CR overload error. <input type="checkbox"/> Belt tension is low The belt teeth slip and the carriage swings. The correction by the active damper does not work and the bands (vertical bands) occur near the side edges of paper.	Repair mode	√	Sonic Tensimeter U-507		p. 324
	PG Switching Lever Position Adjustment	Perform position adjustment of Switching Lever by the software to operate PG switching properly.	PG switching does not finish properly.	Repair mode	√			p. 327

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
CR and head related	Uni-D Outward Adjustment (Home -> Full)	Reduces misalignment of ink droplets fired to paper while printing outward caused by dispersion (parts size, waveform, PG, and so on). [Manual adjustment only] Print an adjustment pattern, visually select the proper correction value, and input it to the service program.	If this adjustment is not made, print quality problems such as misaligned lines, grainy image, banding may occur.	Repair mode	√	SMP	<a href="#">p. 328</a>	
	Uni-D Homeward Adjustment (Full -> Home)	Reduces misalignment of ink droplets fired to paper while printing homeward caused by dispersion (parts size, waveform, PG, and so on). [Manual adjustment only] Print an adjustment pattern, visually select the proper correction value, and input it to the service program.						
	Bi-D Adjustment	Reduces misalignment of ink droplets fired to paper caused by dispersion (parts size, waveform, PG, and so on). [Manual adjustment only] Print an adjustment pattern, visually select the proper correction value, and input it to the service program.						
	Nozzle Verification Technology Noise Check	Check if there are any noises due to the connection state or damage of the Print Head or FFCs.	Since Nozzle Verification Technology does not work normally, auto nozzle check may not be performed correctly.					
	Nozzle Verification Technology Rank Sort	To improve the detection accuracy of Nozzle Verification Technology, rank the nozzles.	Since the possibility of mal-detection of nozzle clogging increases due to the incorrect threshold value, unnecessary cleanings have been performed.					

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
CR and head related	Nozzle Verification Technology Check	Carry out Nozzle Verification Technology to all the nozzles and make sure no abnormality is detected.	Since Nozzle Verification Technology does not work normally, auto nozzle check may not be performed correctly.	Repair mode	√		SMP	<a href="#">p. 336</a>
	CR Scale Check	Checks the CR Scale for any abnormality such as damage or dirt and checks if the scale can be properly read by the encoder.	When the CR Scale is not read properly, the carriage will not operate normally.	Repair mode	√			<a href="#">p. 338</a>
	Head Alignment Check	Print the pattern on which the nozzle discharging condition can be checked from the Service Program.	---	Repair mode	√		SMP	<a href="#">p. 339</a>
	CR Active Dumper Adjustment	Calibrate the active damper. Reduces the carriage vibration which causes vertical bands on prints by outputting waveforms which have phases opposite to the motor vibration.	Because the carriage vibration cannot be reduced, vertical bands may appear on prints.	Repair mode	√			<a href="#">p. 340</a>
	CR Motor Measurement & Auto Adjustment	The CR Motor is designed to stop when the amount of heat generation (motor temperature) during motor operation reaches a predetermined limit. The amount of heat generation is estimated based on the electrical characteristics of the motor, which vary by motor and power supply of the printer. Therefore, to get the motor control to work properly, the electrical characteristics values of the motor need to be measured and stored in the memory on the Main Board.	If this adjustment is not made, the estimation of the motor temperature cannot be made properly and may cause the following symptoms. □ Even though there is no problem with the motor temperature, the printer pauses during printing because it judges that the motor is in high-temperature state. □ Despite the motor is in a high-temperature state, a lower motor temperature is estimated and the printer does not stop. This may cause the printer to malfunction.	Repair mode	√			<a href="#">p. 341</a>
	CR Scale Replacement Date & Time Setting	Writes the date of replacement of the CR Scale into the printer.	Correct history is not recorded.	Repair mode	√			<a href="#">p. 342</a>

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Ink system related	Pump Cap Unit Measurement & Auto Adjustment	The pump cap motor is designed to stop when the amount of heat generation (motor temperature) during motor operation reaches a predetermined limit. The amount of heat generation is estimated based on the electrical characteristics of the motor, which vary by motor and power supply of the printer. Therefore, to get the motor control to work properly, the electrical characteristics values of the motor need to be measured and stored in the memory on the Main Board.	If this adjustment is not made, the estimation of the motor temperature cannot be made properly and may cause the following symptoms. <ul style="list-style-type: none"><li>□ Even though there is no problem with the motor temperature, the printer pauses during printing because it judges that the motor is in high-temperature state.</li><li>□ Despite the motor is in a high-temperature state, a lower motor temperature is estimated and the printer does not stop. This may cause the printer to malfunction.</li></ul>	Repair mode	√			<a href="#">p. 345</a>
	Cleaning	Specify the power and the color from the Service Program and execute the head cleaning.	Nozzle clogging is not solved and the printing cannot be executed properly.	Repair mode	√			<a href="#">p. 346</a>
	Initial Ink Charge	Perform Initial Ink Charge from the service program.	---	Repair mode	√			<a href="#">p. 347</a>
	Ink Leak Flag Reset	Turn the flag which is set to the printer when detected ink leakage off. *Make sure to escalate information in specified route when ink leakage occurred.	Ink Leak Error (SC0014BD) does not stop.	Inspection mode	√			<a href="#">p. 348</a>
	Initial Ink Charge Flag ON/OFF	<ul style="list-style-type: none"><li>□ Turn on the flag to carry out Initial Ink Charge when the printer's power is turned back on.</li><li>□ When replacing the Main Board, if NVRAM cannot be backed up, turn off the flag.</li></ul>	<ul style="list-style-type: none"><li>□ During refurbishment, Initial Ink Charge cannot be carried out.</li><li>□ When replacing the Main Board (NVRAM backup is NG), Initial Ink Charge is performed.</li></ul>	Inspection mode	√			<a href="#">p. 349</a>
	PIS Replacement Date & Time Setting	Writes the date of replacement of the PIS into the printer.	Correct history is not recorded.	Repair mode	√			<a href="#">p. 350</a>

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Paper feed related parts/units	PF Belt Tension Check & Adjustment	Apply a specified tension to the PF timing belt. Measure the tension of the belt using the sonic tension meter to check if it is within standards. If not, adjust the tension.	When the belt tension is out of standards, the following symptoms may occur. <ul style="list-style-type: none"><li><input type="checkbox"/> Belt tension is high The life of the belt will be shortened. High load applied to the PF Motor causes frequent wait controls during paper feeding to prevent overheating. If the tension is too high, the shaft of the motor leans and the brush in the motor becomes worn, and will result in PF Motor overload error.</li><li><input type="checkbox"/> Belt tension is low The belt teeth slip and paper cannot be fed properly.</li></ul>	Repair mode	√	Sonic Tensimeter U-507		<a href="#">p. 355</a>
	Paper Feed Adjustment (A area)	Adjusts the amount of paper feeding which usually varies between the printers. [Manual adjustment only]	If paper feeding accuracy lowers, print quality problems such as banding may occur.	Repair mode	√	SMP	<a href="#">p. 357</a>	
	Paper Feed Adjustment (B area)	Print an adjustment pattern, visually select the proper correction value, and input it to the service program.						<a href="#">p. 359</a>
	Cutter Home Position Adjustment	Corrects the home position of the Cutter referring to the Cutter Home Position Sensor and cutter (CR) detected position.	Cut failure may occur.	Inspection mode	√			<a href="#">p. 361</a>
	Cut Position Check & Adjustment	Adjust the auto cut with the auto cutter to cut paper at the proper position. Feed the roll paper and execute printing and cutting of the adjustment pattern using the Service Program. Measuring the gap between the bottom edge of the printed paper and the pattern and inputting the measurement result adjusts the cut position.	The cut position may be misaligned.	Repair mode	√	Ruler	SMP	<a href="#">p. 362</a>

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Paper feed related parts/units	PW Sensor Check & Adjustment	Checks that the PW sensor detects the edges of paper correctly. If any misalignment exist, perform adjustment.	If the adjustment is not made, the width or the length may not be detected correctly. This may occur printing misalignment, margin not remained correctly, or image get cut.	Repair mode	√	Ruler	Matte paper	<a href="#">p. 364</a>
	T&B&S Check & Adjustment	Adjust the printing start position on the top edge, left and right edge, and the bottom edge of paper. Also, position adjustment for PE Sensor is performed. Print the adjustment patterns using the Service Program. Measure the adjustment patterns then input the measurement result. The print start position is automatically adjusted.						
	1st Dot Position Adjustment	Adjusts 1st dot position. Print an adjustment pattern using the service program. Measure the adjustment patter, and by inputting the result, 1st Dot Position Adjustment starts automatically.						
	PF Scale Check	Check the PF scale for any abnormality such as damage or dirt and check if the scale can be properly read by the encoder using the Service Program.	When the PF Scale is not read properly, paper feeding may become impossible and an error may occur.	Repair mode	√			<a href="#">p. 369</a>

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Paper feed related parts/units	PF Motor Measurement & Auto Adjustment	The PF Motor is designed to stop when the amount of heat generation (motor temperature) during motor operation reaches a predetermined limit. The amount of heat generation is estimated based on the electrical characteristics of the motor, which vary by motor and power supply of the printer. Therefore, to get the motor control to work properly, the electrical characteristics values of the motor need to be measured and stored in the memory on the Main Board.	If this adjustment is not made, the estimation of the motor temperature cannot be made properly and may cause the following symptoms. <input type="checkbox"/> Even though there is no problem with the motor temperature, the printer pauses during printing because it judges that the motor is in high-temperature state. <input type="checkbox"/> Despite the motor is in a high-temperature state, a lower motor temperature is estimated and the printer does not stop. This may cause the printer to malfunction.	Repair mode	√			<a href="#">p. 370</a>
	ATC Motor Measurement & Auto Adjustment	The ATC Motor is designed to stop when the amount of heat generation (motor temperature) during motor operation reaches a predetermined limit. The amount of heat generation is estimated based on the electrical characteristics of the motor, which vary by motor and power supply of the printer. Therefore, to get the motor control to work properly, the electrical characteristics values of the motor need to be measured and stored in the memory on the Main Board.	If this adjustment is not made, the estimation of the motor temperature cannot be made properly and may cause the following symptoms. <input type="checkbox"/> Even though there is no problem with the motor temperature, the printer pauses during printing because it judges that the motor is in high-temperature state. <input type="checkbox"/> Despite the motor is in a high-temperature state, a lower motor temperature is estimated and the printer does not stop. This may cause the printer to malfunction.	Repair mode	√			<a href="#">p. 371</a>
	ATC Motor Replacement Date & Time Setting	Writes the date of replacement of the ATC Motor into the printer.	Correct history is not recorded.	Repair mode	√			<a href="#">p. 372</a>
	PF Scale Replacement Date & Time Setting	Writes the date of replacement of the PF Scale into the printer.	Correct history is not recorded.	Repair mode	√			<a href="#">p. 373</a>
	ASF Unit Replacement Date & Time Setting	Writes the date of replacement of the ASF Unit into the printer.	Correct history is not recorded.	Repair mode	√			<a href="#">p. 374</a>

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Board related parts/units	RTC Input	Input RTC.	A maintenance error (RTC) will occur.	Inspection mode / Repair mode	√			<a href="#">p. 376</a>
	MAC Address Check & Input	Read and check the MAC address of the printer. Write a new MAC address as needed.	If the address is not input or a wrong address is set, a network connection trouble occurs.	Inspection mode	√	Network cable		<a href="#">p. 377</a>
	Serial Number & USB-ID Check & Input	<input type="checkbox"/> Check the serial number and the USB ID currently set to the printer. Write the correct information as needed. <input type="checkbox"/> Sets the USB ID automatically.	<input type="checkbox"/> If the serial number is not input or a wrong number is set, it makes service management (such as the print/NVRAM) harder. <input type="checkbox"/> USB recognition error occurs.	Inspection mode/ Repair mode	√			<a href="#">p. 379</a>
	NVRAM Data Backup & Restore	Make a backup of data stored in the NVRAM or restore the data from a backup.	NVRAM data cannot be obtained. NVRAM data of the old Main Board cannot be written in the new Main Board.	Inspection mode/ Repair mode	√			<a href="#">p. 297</a>
	Main Board Initial Setting	Make initial settings of the Main Board.	Does not work correctly.	Inspection mode	√			<a href="#">p. 382</a>
	Main Board Replacement Date & Time Setting	Writes the date of replacement of the Main Board into the NVRAM.	Correct history is not recorded.	Repair mode	√			<a href="#">p. 384</a>
	Power Supply Board Replacement Date & Time Setting	Writes the date of replacement of the Power Supply Board into the NVRAM.	Correct history is not recorded.	Repair mode	√			<a href="#">p. 385</a>
	Counter Reset	Resets the life counter corresponding the replaced part.	If a new part is used without resetting the counter, the counter reaches the end of service life earlier than the real life, and then a service call error goes off and the printer stops.	Inspection mode/ Repair mode	√			<a href="#">p. 343, p. 344, p. 351, p. 375</a>

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Others	Panel Check	Check if the Control Panel functions normally.	---	Inspection mode	---			<a href="#">p. 386</a>
	Print Head Ground Resistance Check	Measures the ground resistance of the Print Head with Ohmmeter to check if the Print Head is grounded without any problem.	If not grounded properly, the Print Head may be broken.	---	---	Ohmmeter		<a href="#">p. 388</a>
	Reset for Password of Administrator	Resets the password required when entering the administrator mode of the printer.	---	Repair mode	√			<a href="#">p. 389</a>
	Initial Password Check & Input (EMEA only)	Sets initial password when initialized the Main Board after replacing it.	---	Repair mode	√			<a href="#">p. 390</a>
Maintenance	Sensor Check	Displays the state of the sensor.	---	Repair mode	√			<a href="#">p. 391</a>

#### 4.1.4 List of Tools/Software/Consumables for Adjustments

The tables below show the tools required for adjusting this printer.

Hardware tools

Jig Name	Part Number	Target Adjustment	Remarks
Sonic Tensimeter U-507	1294120	<input type="checkbox"/> CR Belt Tension Check & Adjustment <input type="checkbox"/> PF Belt Tension Check & Adjustment	
Thickness Guage	---	PG Check & Adjustment	
Scale loupe	---	<input type="checkbox"/> Head Inclination Check & Adjustment (CR direction) <input type="checkbox"/> Head Slant Check & Adjustment (PF direction)	
Ruler	---	<input type="checkbox"/> T&B&S Check & Adjustment <input type="checkbox"/> 1st Dot Position Adjustment <input type="checkbox"/> Cut Position Check & Adjustment	
Ohmmeter	---	Print Head Ground Resistance Check	
Network cable	---	MAC Address Check & Input	

Software tools

Software Name	Part Number	Explanation	Remarks
Service Program	---	Used for almost all of the required adjustments.	Use the latest program.
Firmware Updater	---	F/W Install	---

Consumables

Consumable Name	Part Number	Explanation	Remarks
Singleweight Matte Paper 24 inch/ 36 inch	---	Used for almost all of the required adjustments. (For more details, see <a href="#">4.1.2 Adjustment Items and the Order by Repaired Part</a> )	Make sure to use the media of maximum width for each printer.
Archival Matte Paper/Enhanced Matte Paper A4	---	Used for almost all of the required adjustments. (For more details, see <a href="#">4.1.2 Adjustment Items and the Order by Repaired Part</a> )	---
Ink cartridge	---	Used for almost all of the required adjustments.	---
Maintenance Box	---	Used for almost all of the required adjustments.	---

## 4.1.5 Service Program Basic Operations

This section describes the basic operations of the Service Program.

### System Requirements

- OS: Windows 7, 8/8.1, 10
- Interface: USB, Network



**The network can be used only for MAC Address Check & Input**

### Startup

1. Click “LFP SC-T31-51-34-54 Service Program Ver. X.X.X” in [Start] of Windows.
2. Select the model to adjust, and go on to the main menu.



Figure 4-1. Startup screen

Description for each menu

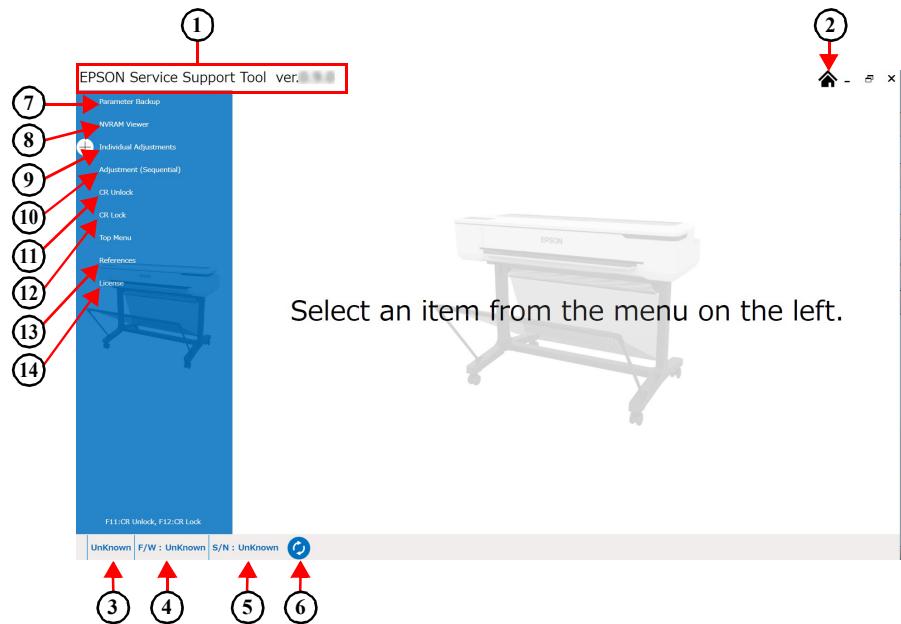


Table 4-3. Description for each menu

No.	Name	Explanation
1	Program name and version	Displays name and version of the program.
2	Home button	Return to home screen
3	MODE	Displays the current communication state between the printer and PC.
4	F/W	Displays the current Firmware version of the printer.
5	S/N	Displays the serial number of the connected printer.
6	Update button	Updates the information by connecting to the printer again.
7	Parameter Backup	Backup the printer information (NVRAM)
8	NV-RAM Viewer	Starts NVRAM Viewer tool.
9	Individual Adjustments	Every adjustment can be performed individually.
10	Adjustment (Sequential)	Proper adjustment flow is made by selecting the replaced parts. Follow the flow and perform adjustment.
11	CR Unlock	Releases CR Lock
12	CR Lock	Locks the carriage.
13	References	Display panel menu map and block diagram of electric circuit components/.
14	License	Displays license related information.

## 4.2 NV-RAM BACKUP / NVRAM Viewer

Parameters stored in the NVRAM on the Main Board are read/stored and written onto the other NVRAM on the Main Board using this menu. Also, the read parameter information is displayed on the computer screen. (NVRAM Viewer)

### 4.2.1 Parameter Backup procedure

1. Turn the printer ON. (Normal mode, repair mode, inspection mode)
2. Start the service program.
3. Select **Parameter Backup** in the menu.
4. Parameter backup starts by clicking [**Backup**]. Saving dialog opens when backup finishes, so select destination, name the file and save it.

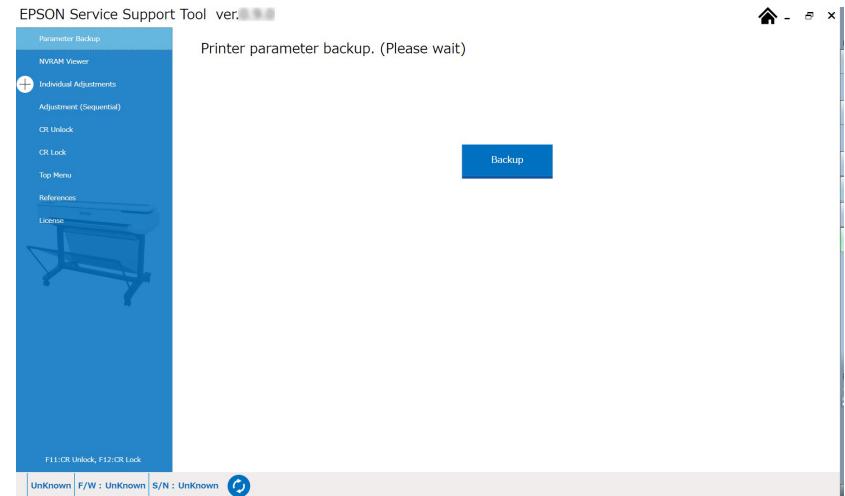


Figure 4-2. [Parameter Backup] screen

## 4.2.2 NVRAM Viewer Basic Operation

The following functions are provided.

Item	Explanation
Life Parts Operation History	Displays operation state of life parts.
IC Replacement History	Displays history of ink cartridge replacement.
Utilization	Displays operation state of the printer.
Error History	Displays error history.
Basic Information	Displays basic information of the printer.
Parts Replacement History	Displays registered Parts Replacement History.

### PROCEDURE

1. Start NVRAM Viewer.
2. Click **[File Open]** button and select NVRAM data.
3. Select the tab to switch the screen.
4. After displayed the information, information is saved in Excel file by clicking **[Excel Export]** button of the file tab.

### DESCRIPTION

#### File

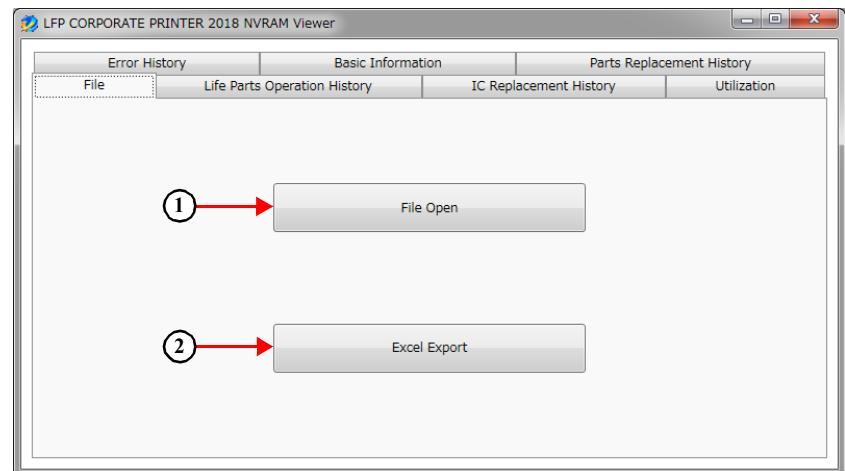


Figure 4-3. [File] screen

1	<b>[File Open]</b> button	Displays file selecting dialog. Able to select backup file of NVRAM (filename extension: bin) to display with NVRAM Viewer.
2	<b>[Excel Export]</b> button	All data that can be displayed with NVRAM Viewer is saved as the Excel file.

Life Parts Operation History

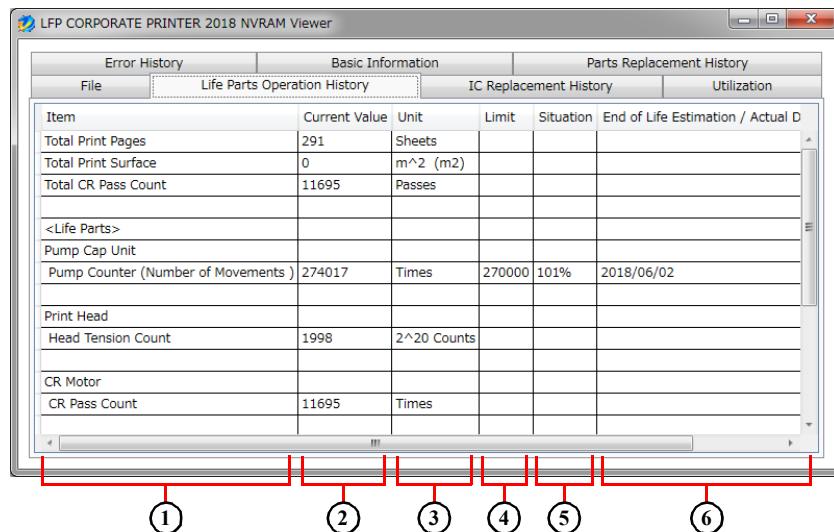


Figure 4-4. [Life Parts Operation History] Screen

1	Items	---
2	Current Value	Life count for each part or unit.
3	Unit	Unit of the counter
4	Limit	Displays the life limit of the part if it has.
5	Situation	Displays the percentage of Current Value (2) considering the Limit (4) as 100%.
6	End of Life Estimation / Actual Date (YY/MM/DD)	The estimated or actual date when the parts or unit reaches the end of its service life.

IC Replacement History

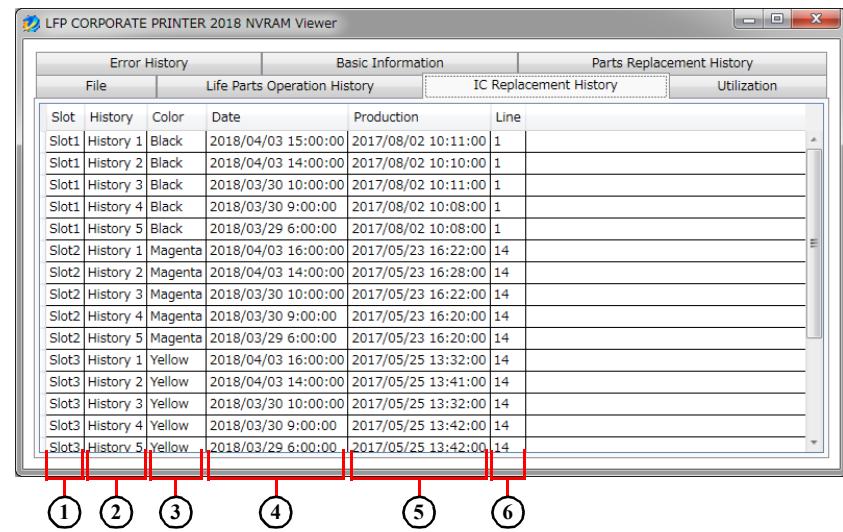


Figure 4-5. [IC Replacement History] Screen

1	Slot	Slot name
2	History	Ink cartridge replacement history
3	Color	Replaced ink color
4	Date	Ink cartridge replacement date
5	Production	Ink cartridge manufacturing date
6	Line	---

Utilization

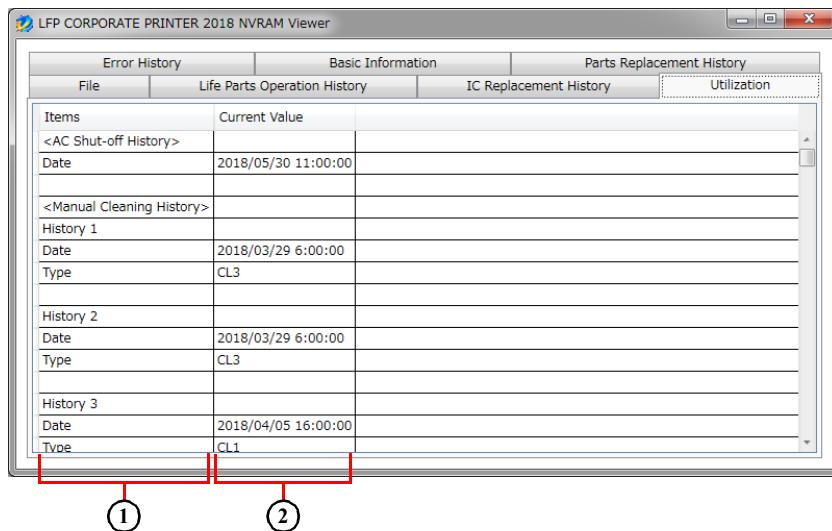


Figure 4-6. [Utilization] Screen

1	Item	---
2	Current Value	Displays the current value per item.

Error History

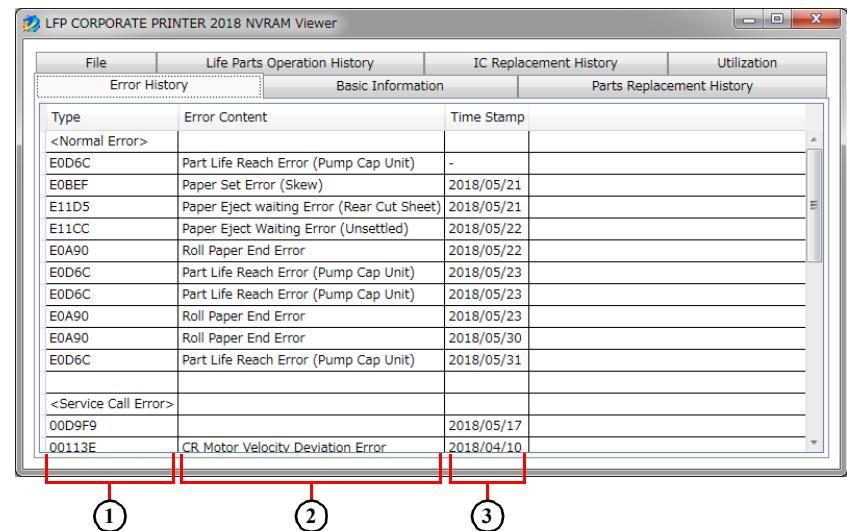


Figure 4-7. [Error History] screen

1	Type	Error code
2	Error Contents	Error contents
3	Time Stamp	Date and time of when error occurred.

Basic Information

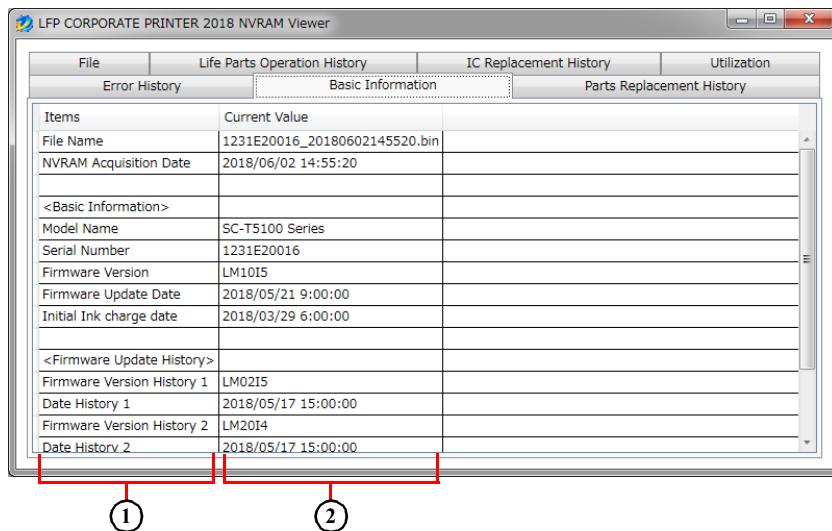


Figure 4-8. [Basic Information] screen

1	Items	---
2	Current Value	The current value of the item.

Parts Replacement History

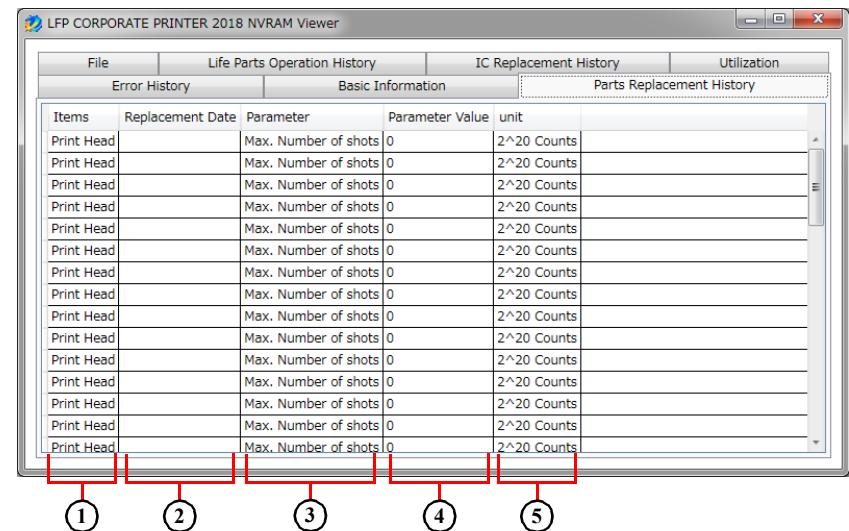


Figure 4-9. [Parts Replacement History] screen

1	Items	---
2	Replacement Date	Replaced date
3	Parameter	Parameter name
4	Parameter Value	Parameter value
5	Unit	Parameter unit

**INFORMATION SAVED TO EXCEL FILES** Life Parts Operation History**Table 4-4. Life Parts Operation History**

Item		Description	
Total Print Pages		Sheets	Total pages the printer has printed
Total Print Surface		m <sup>2</sup>	Total printed area.
Total CR Pass Count		Passes	Total CR Passes
<Life Parts>			
Pump Cap Unit	Pump Counter (Number of Movements)	Times	Operation history (the following information is displayed for each of the items.) <ul style="list-style-type: none"> <li><input type="checkbox"/> Current Value</li> <li><input type="checkbox"/> Limit</li> <li><input type="checkbox"/> Situation</li> <li><input type="checkbox"/> End of Life Estimation / Actual Date (YY/MM/DD)</li> </ul>
Print Head	Head Tension Count	2 <sup>20</sup> Counts	
CR Motor	CR Pass Count	Times	
PF Motor	Number of Turns	Rotation	
ASF Unit	Sheet Feed Count	Sheets	
Ink Tank Upper Porous Pad	Ink Reset (Number of Execute)	Times	
Ink Tube Assy	CR Pass Count	Passes	
User After Life Limit Reached Selection Count		Times	Frequency that user selected longevity continuance with panel.

 IC Replacement History**Table 4-5. IC Replacement History**

Item		Description
Black		Displays the following information of the last five replacements of ink cartridges.
Magenta		<input type="checkbox"/> Date
Yellow		<input type="checkbox"/> Production
Cyan		<input type="checkbox"/> Line

 Utilization**Table 4-6. Utilization**

Item	Description
AC Shut-off History	Date & Time
Manual Cleaning History	Date & Time
	Type
	Date & Time
	Type
	CL1s (Times)
	CL2s (Times)
	CL3s (Times)
	CL4s (Times)
	CL1s (Times)
	CL2s (Times)
NVT Auto Cleaning History	CL3s (Times)
	CL4s (Times)
	Replacement CL1s (Times)
	Replacement CL2s (Times)
	Replacement CL3s (Times)
	CL1s (Times)
	CL2s (Times)
	CL3s (Times)
	CL4s (Times)
	Replacement CL1s (Times)
Cleanings Count (Can be reset)	Replacement CL2s (Times)
	Replacement CL3s (Times)
	CL1s (Times)
	CL2s (Times)
	CL3s (Times)
	CL4s (Times)
	Replacement CL1s (Times)
	Replacement CL2s (Times)
	Replacement CL3s (Times)
	CL1s (Times)
Cumulative Cleaning Count (No reset)	CL2s (Times)
	CL3s (Times)
	CL4s (Times)
	Replacement CL1s (Times)
	Replacement CL2s (Times)
	Replacement CL3s (Times)
	CL1s (Times)
	CL2s (Times)
	CL3s (Times)
	CL4s (Times)

**Table 4-6. Utilization**

Item		Description
Temperature	Head temperature when started printing	Temperature related information
	Max. temperature	
	Max. temperature date & time	
	Min. temperature	
	Min. temperature date & time	
Print Pages per Head Temperature	-11 °C or less	Printed pages per head temperature.
	-10 to 0 °C	
	1 to 10 °C	
	11 to 15 °C	
	16 to 25 °C	
	26 to 35 °C	
	35 °C or more	
Storage history	User ink eject date & time	Performed history of each item.
	User ink eject temperature	
	User ink refill date & time	
NVT Out of Operation Temperature Range Executions History	Date & Time	
	temperature	
Nozzle Compensation Function Activation History	Date & Time	
	Line	
Maintenance Box Replacement History	Total number of Maintenance Box replacement (Home)	Replacement history of each item.
	Date & Time	
Cutter History	Cut Counter	
	Cutter Blade Replacement History	
	Cutter Blade Replacement History	

**Table 4-6. Utilization**

Item		Description
Amount of Ink Consumed (Epson Genuine)	Black (50 ml)	Usage history related to ink cartridge.
	Cyan (50 ml)	
	Magenta (50 ml)	
	Yellow (50 ml)	
Amount of Ink Consumed (Non-Genuine)	Black (50 ml)	
	Cyan (50 ml)	
	Magenta (50 ml)	
	Yellow (50 ml)	
Amount of Ink Consumed (Epson Genuine) (SC-T3100X Series/SC-T3100D Series/SC-F500 Series only)	Black (140 ml)	Usage history related to ink bottle.
	Cyan (140 ml)	
	Magenta /Fluorescent pink (140 ml)	
	Yellow/Fluorescent yellow (140 ml)	

Error History

**Table 4-7. Error History**

Type	Description
Normal Errors	Displays the most recent ten errors and their time stamps.
Service Calls	Displays the most recent 25 service call errors and their time stamps.
Number of Normal Errors	Number of each Normal Errors
Number of Service Calls	Number of each Service Calls

Basic Information

**Table 4-8. Basic Information**

Item	Description
File Name	Displays the name of NVRAM file
NVRAM Acquisition Date	Displays acquisition date and time of NVRAM
<Basic Information>	
Model Name	Product name
Serial Number	Product number
Firmware Version	The version of the firmware installed on the printer.
Firmware Update Date	Displays F/W install date
Initial Ink charge date	Displays the date and time when the initial ink charge was done.
<Firmware Update History>	
Firmware Version History	Firmware update history
Date History	
<Panel Settings>	
Settings	Displays the settings made by the control panel menus.

Parts Replacement History

**Table 4-9. Parts Replacement History**

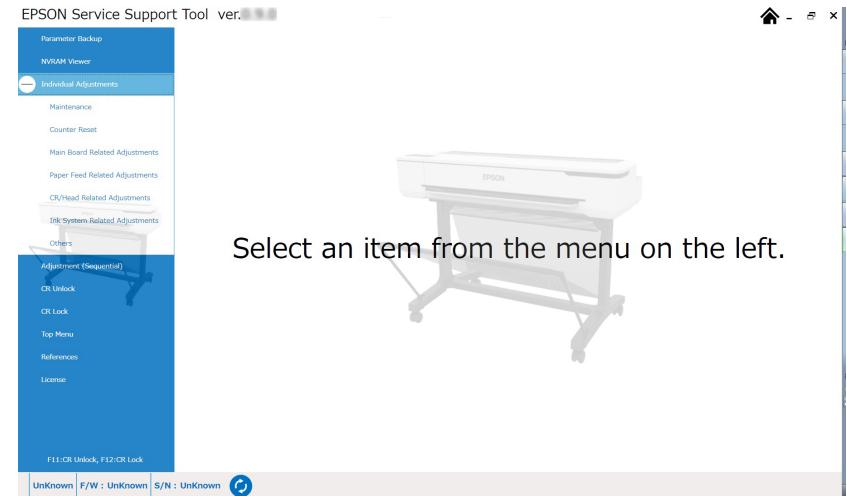
Item	Description
Print Head	
Pump Cap Unit	
PF Motor	
CR Motor	
ATC Motor	
CR Scale	Operation history (the following information is displayed for each of the items.)
PF Scale	<ul style="list-style-type: none"> <li>• Replacement Date (YY/MM/DD)</li> <li>• Parameter</li> <li>• Parameter Value</li> </ul>
ASF Unit	
PIS	
Main Board	
Power Supply Board	

## 4.3 Individual Adjustments

This mode executes the adjustment required for the repair individually.

### PROCEDURE

1. Click [Individual Adjustments] from the main menu.
2. Select the category, and select the adjustment from the adjustment items shown on the right side of the screen.
3. Follow the instructions on the screen to execute the adjustment.



Select an item from the menu on the left.

Figure 4-10. Individual Adjustments

## 4.4 Adjustment (Sequential)

Mode that generates necessary adjustment item by selecting the removed/replaced parts. Executes the adjustments in order. Able to select multiple parts.

### PROCEDURE

1. Click **Adjustment (Sequential)** from the main menu.
2. Select the name of the removed/replaced part.
3. Click the **[OK]** button.

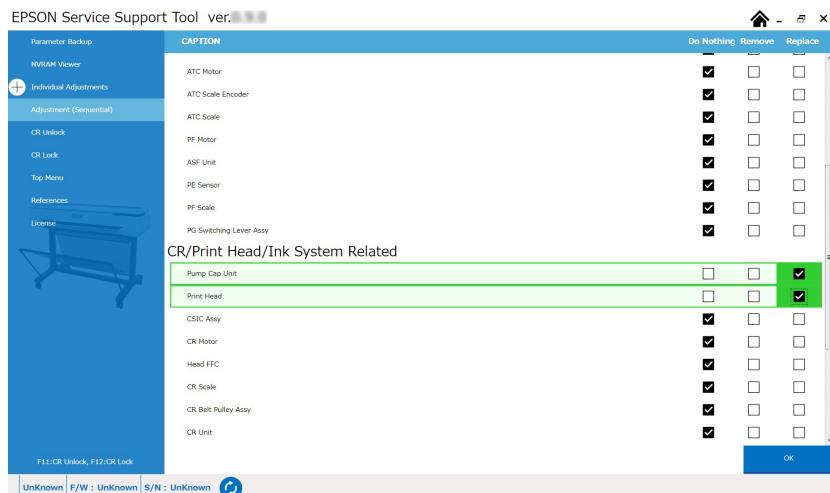


Figure 4-11. Adjustment (Sequential) (1)

4. Follow the instructions on the screen to execute the adjustment.
5. Click the **[OK]** button when the adjustment is finished. Color of the adjustment name changes. (Notifies the adjustment is finished)
6. Click **[next]** to proceed to the next adjustment.



- Click the **[prev]** button to return to the previous adjustment.
- The list of adjustment that should be performed is displayed by clicking the adjustment name.

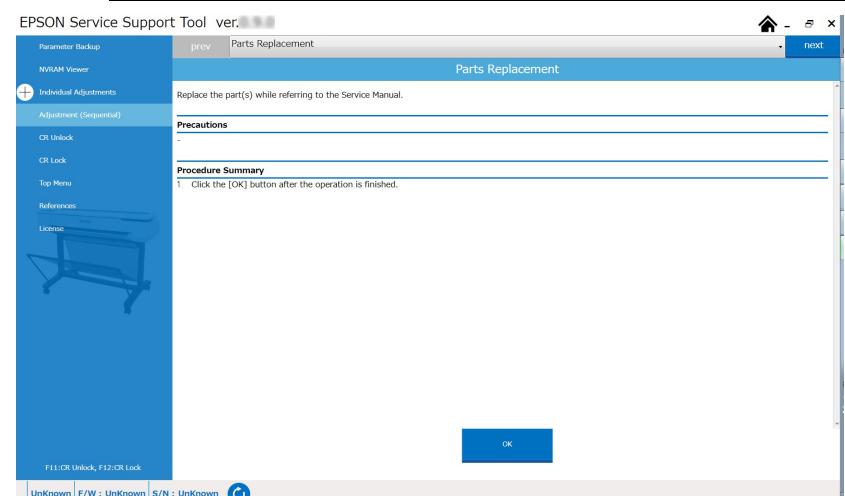


Figure 4-12. Adjustment (Sequential) (2)

## 4.5 Installing Firmware

The firmware of this printer is written in the Main Board. If the Main Board is replaced or the firmware needs to be updated, follow the procedure below to write the firmware to the Main Board.

### PROCEDURE

- Normal firmware update (Not replacing the Main Board)

  1. Connect the Printer and PC with a USB cable.
  2. Turn the printer ON in Normal mode.
  3. Start the Firmware updater (EPFWUPD.exe).
  4. When the Firmware updater started, click [Next].

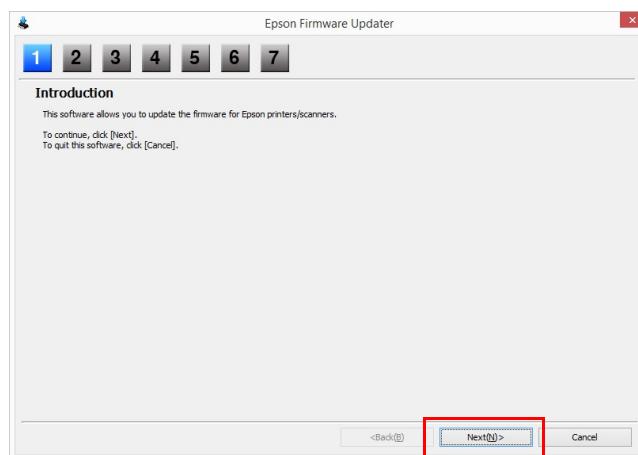


Figure 4-13. Firmware update (1)

5. Read license agreement, select **I agree**, and click [Next].

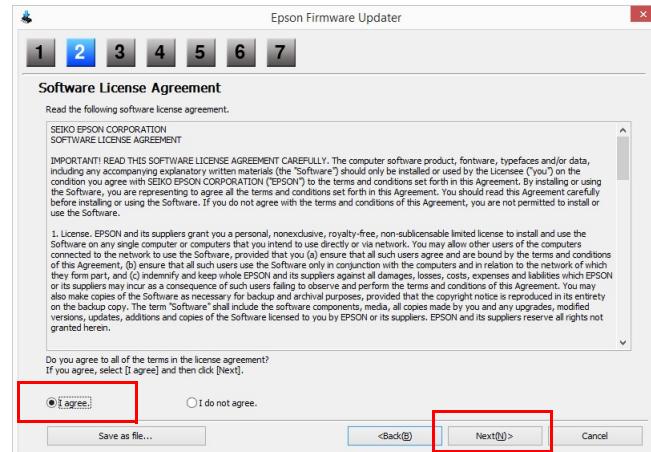


Figure 4-14. Firmware update (2)

6. Click [Browse], select the firmware data which you install.

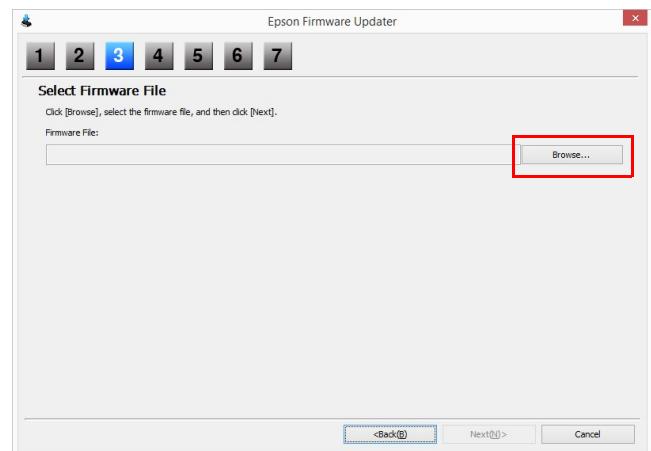


Figure 4-15. Firmware update (3)

*Continue to the next page.*

7. Since precaution is displayed by clicking [Next], click [Next] again.

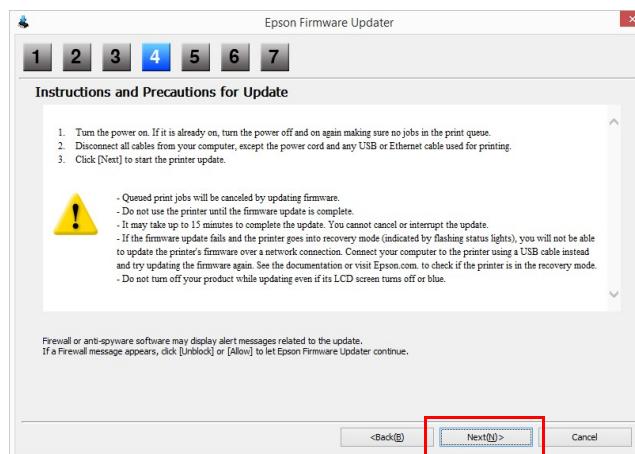


Figure 4-16. Firmware update (4)

8. The information of firmware updating and the printer connected currently is displayed. Check the check box, and click [Start] to start Firmware update.

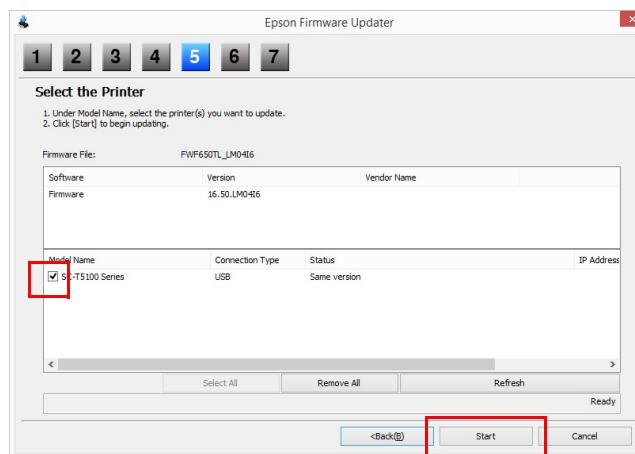


Figure 4-17. Firmware update (5)

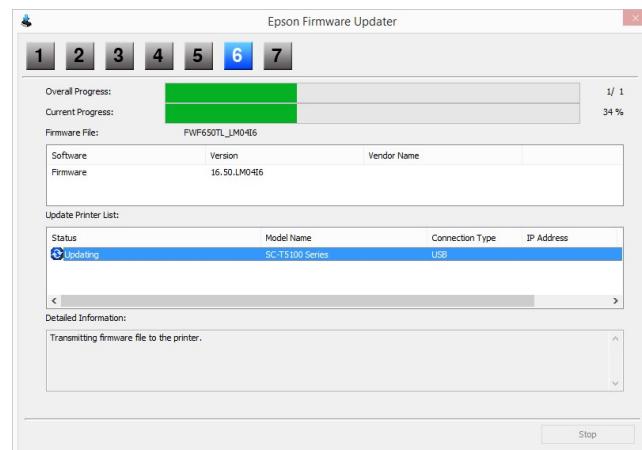


Figure 4-18. Firmware update (6)



**CAUTION**  
Make sure not to turn off the printer until updating is complete. Otherwise, the printer may not operate normally.

9. The printer automatically turns off and back on again when the update is finished.  
10. Click [Finish] of the firmware updater to finish.



downgrading firmware is not recommended, but it can be performed in firmware update mode.

*Continue to the next page.*

- Firmware update after replacing the Main Board
- 1. Remove the ink cartridge and Maintenance Box.
- 2. Connect the Printer and PC with a USB cable.
- 3. Turn the printer ON in Firmware update mode.  
Turn the power ON while pressing [**right side of the screen**], press and hold until the power LED lights. ([P. 56](#))
- 4. Start the firmware updater (EPFWUPD.exe).
- 5. Perform [Step 4](#) to [Step 8](#) of Normal firmware update (Not replacing the Main Board).



**Printer information is not displayed in the Firmware update mode.**



- Make sure not to turn off the printer until updating is complete. Otherwise, the printer may not operate normally.
- Printer update is not finished when “Finish” is displayed on the screen of firmware updater. When printer update is finished, “FINISHED” is displayed on the panel and the LED flashes regularly.

- 6. When update is finished, turn the printer off, and click [**Finish**] on the updater.

## 4.6 Image Print

### THINGS TO PREPARE

---

### ESTIMATE TIME

---

### EXECUTION MODE

Normal mode

### STANDARD VALUE

---

### PROCEDURE

1. Turn the printer ON in normal mode.
2. Start the service program and select **Individual Adjustments -> Others -> Image Print**.
3. Click **[File Reference]** and select arbitrary image file (.prn).
4. Click **[Print]** button to start printing.

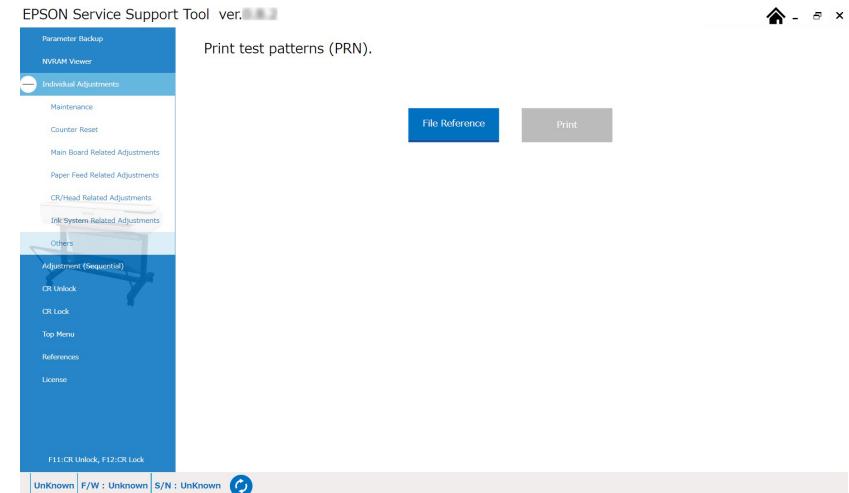


Figure 4-19. [Image Print] screen

## 4.7 References

This function allows you to view the following information (PDF files).

- Control panel menus in the Normal mode
- Control panel menus in the Inspection Mode
- Wired Diagram

### PROCEDURE

1. Select [References] from the main menu.
2. Select **Panel Menu** or **Wired Diagram**.

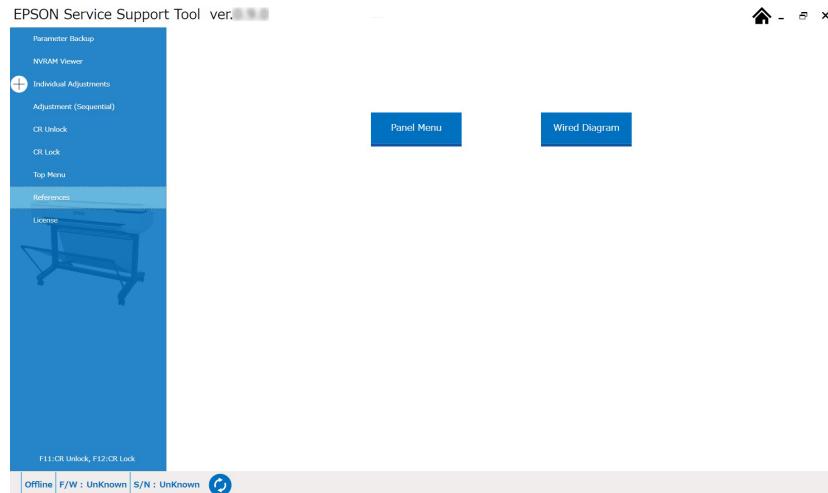


Figure 4-20. [References] screen

## 4.8 CR/Head Related Adjustments

### 4.8.1 Head ID Check & Input

#### THINGS TO PREPARE

--

#### ESTIMATE TIME

Approximately one minute

#### EXECUTION MODE

Repair mode/Inspection mode

#### STANDARD VALUE

--

#### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
  - Inspection mode  
Turn the power ON while pressing **[left side of the screen]**, keep pressing until the mode select menu is displayed. (P. 55).
2. Click **[Input]** to write the head ID, and then the printer is turned off automatically.  
(The written head ID can be checked by clicking **[Check]**.)

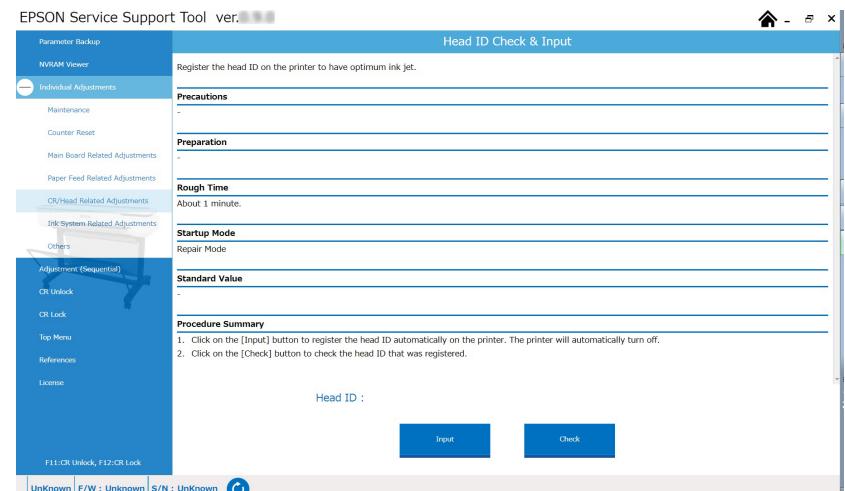


Figure 4-21. [Head ID Check & Input] screen

## 4.8.2 PG Check & Adjustment

### THINGS TO PREPARE

Thickness Guage

### ESTIMATE TIME

Approximately three minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

$1.60 \pm 0.05$  mm (1.55 through, 1.65 stop)

### PROCEDURE



**Make sure to perform PG Check & Adjustment after Head Slant Check & Adjustment (PF direction) is finished normally.**

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [**center of the screen**], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. When any paper is loaded, remove it.
3. Start the service program and select **PG Check & Adjustment**.
4. Click [**CR Unlock**] to unlock the CR Unit.
5. Turn OFF the printer.
6. Remove the following parts in advance.
  - Top Cover (P. 158)

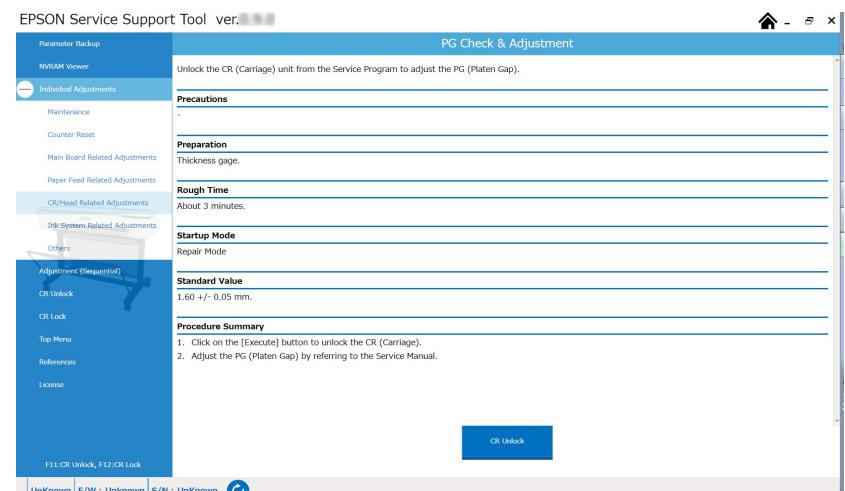


Figure 4-22. [PG Check & Adjustment] screen

*Continue to the next page.*

7. Refer to [Figure 4-23](#), check if the PG is set to the typical value (PG1.6).



**Make sure to perform check/adjustment in the typical value. When PG is not set to the typical value, turn the printer off and back on. PG returns to the typical value by turning the printer off and on again.**

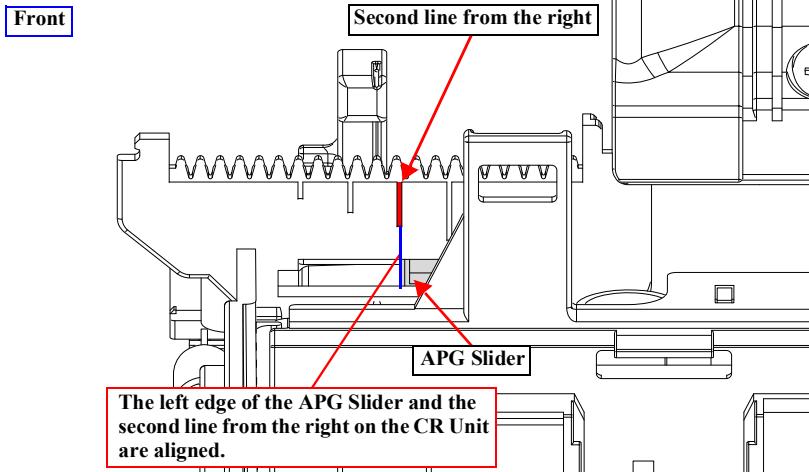


Figure 4-23. Check PG value

8. Set the thickness gauge referring to [Figure 4-24](#), and then pull the CR Belt to move the CR Unit over the thickness gauge slowly.



**Make sure to move the CR Unit slowly. When you notice the gauge hits the Print Head slightly, do not move the CR Unit any forward.**

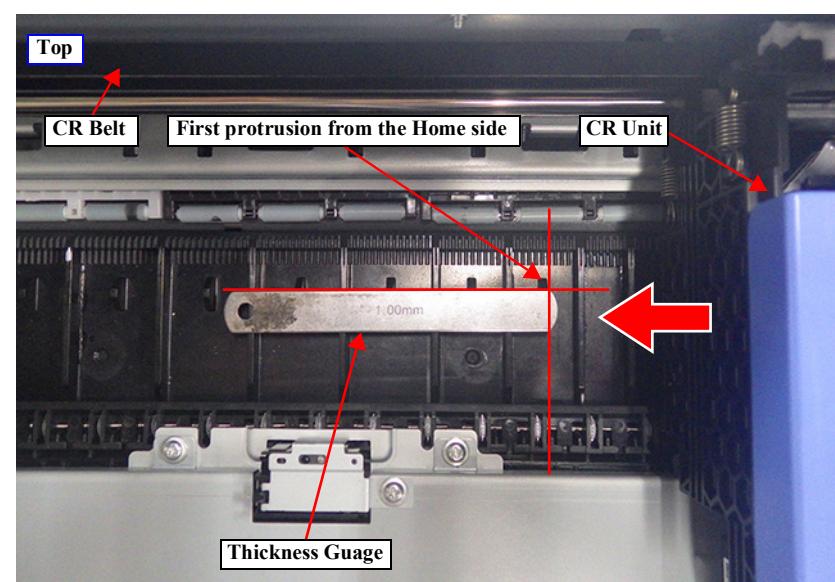


Figure 4-24. PG adjustment (1)

9. Check if PG is within the standard range.  
10. Remove the thickness guage and move the CR Unit to Full side.

*Continue to the next page.*

11. Set the thickness gauge in the position you set in referring [Step 8](#) to [Figure 4-25](#), and then pull the CR Belt to move the CR Unit over the thickness gauge slowly.



**Make sure to move the CR Unit slowly. When you notice the gauge hits the Print Head slightly, do not move the CR Unit any forward.**

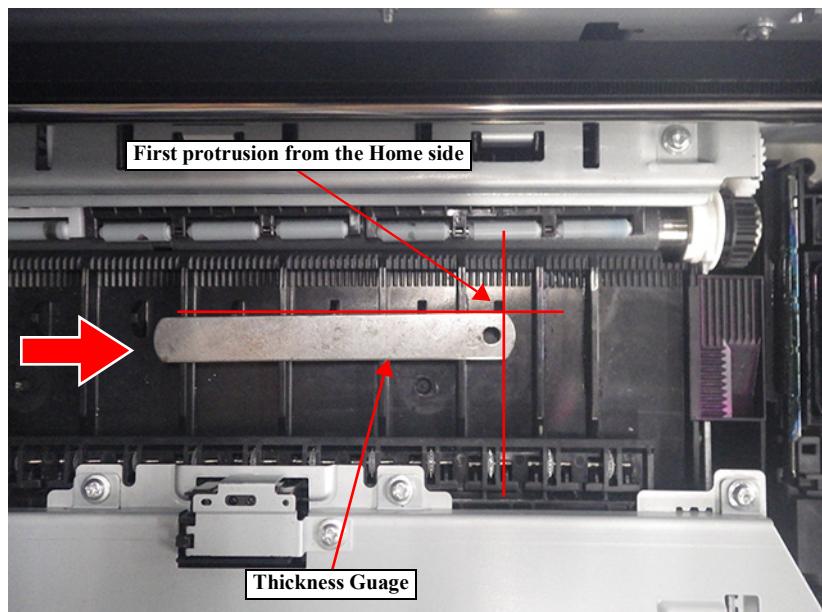


Figure 4-25. PG adjustment (2)

12. Check if PG is within the standard range.  
 13. When PG value of both left and right side are within the standard range, the adjustment is complete. If either of the two is out of the standard range, go to [Step 14](#).

#### <Adjustment>

14. Remove the Head FFC Cover Upper. ([P. 197](#))  
 15. Refer to [Figure 4-26](#), and move the two PG Adjustment Lever on both sides to adjust the PG.
  - When moving the lever to the left: PG is wider.
  - When moving the lever to the right: PG is narrower.



**Moving one notch of the PG adjustment lever changes the PG by approximately 0.04 to 0.05 mm.**

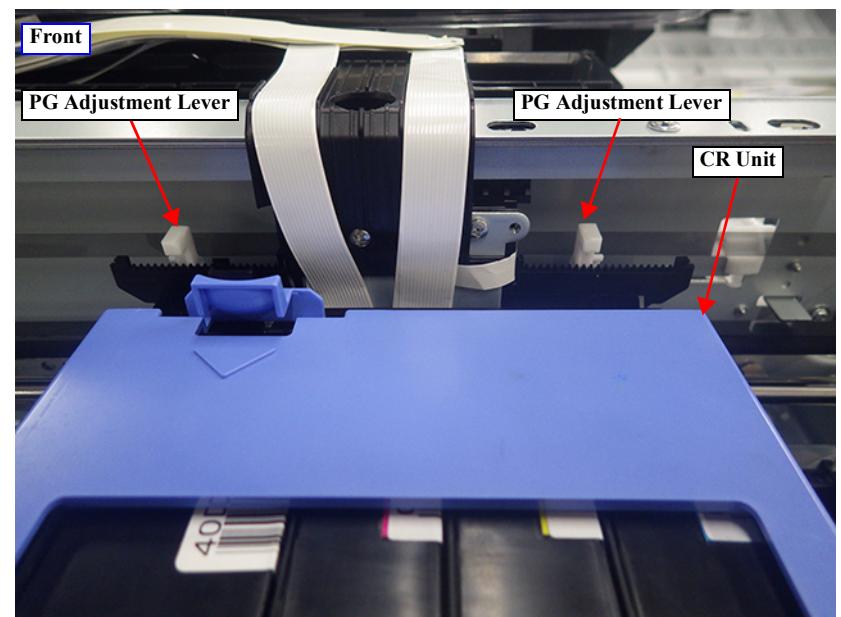


Figure 4-26. PG adjustment (3)

16. Return to [Step 8](#), and repeat the measurement and adjustment until the result falls within the standard range.

## 4.8.3 Head Inclination Check & Adjustment (CR direction)

### THINGS TO PREPARE

- Singleweight Matte Paper 24/36 inch
- Scale loupe

### ESTIMATE TIME

Approximately four minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Load the paper into the printer.
3. Start the service program and select **Head Inclination Check & Adjustment (CR direction)**.
4. Click the **[Print]** button. The adjustment pattern will be printed.

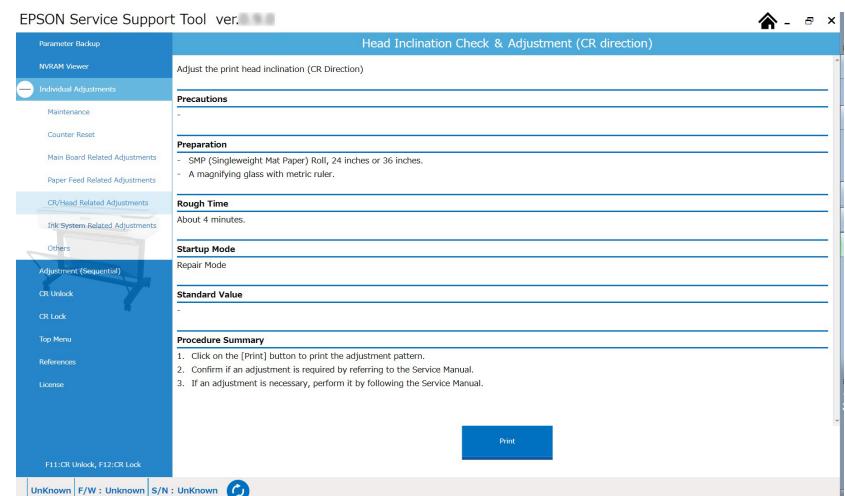


Figure 4-27. [Head Inclination Check & Adjustment (CR direction)] screen

*Continue to the next page.*

5. Check the printed pattern with scale loupe. Refer to the illustration below if adjustment is needed.

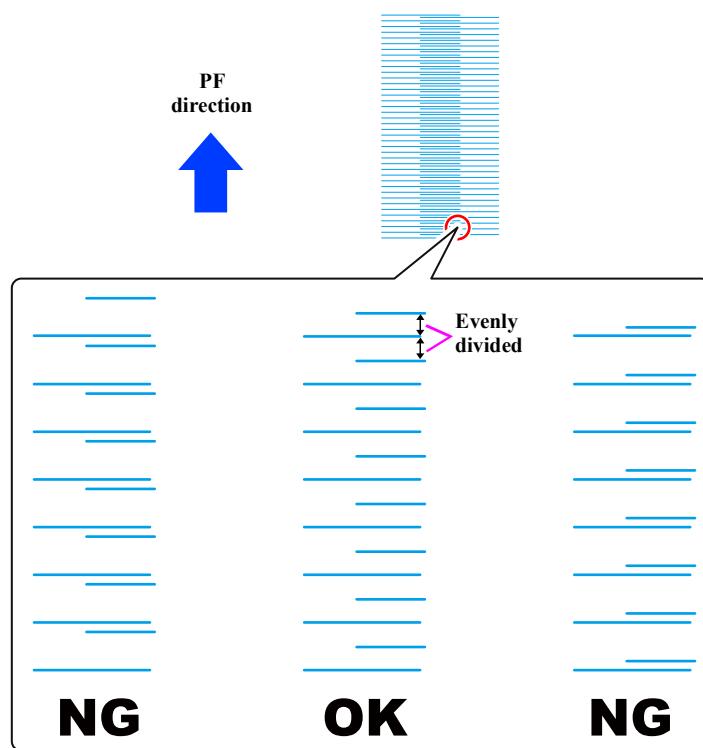


Figure 4-28. Adjustment Pattern

6. If the adjustment is not needed, finish the adjustment. If adjustment is needed, perform the following procedure.  
 7. Remove the following parts in advance.
- Top Cover (P. 158)

8. Unlock the CR Unit with the service program. (P. 146)



**When unlock the CR Unit with the service program, the CR Unit do not move automatically even if the printer during power ON. Be sure to unlock the CR Unit with the service program.**

9. Move the CR Unit as to align the right edge of both Head FFC Cover Upper/Lower and FFC Rail.

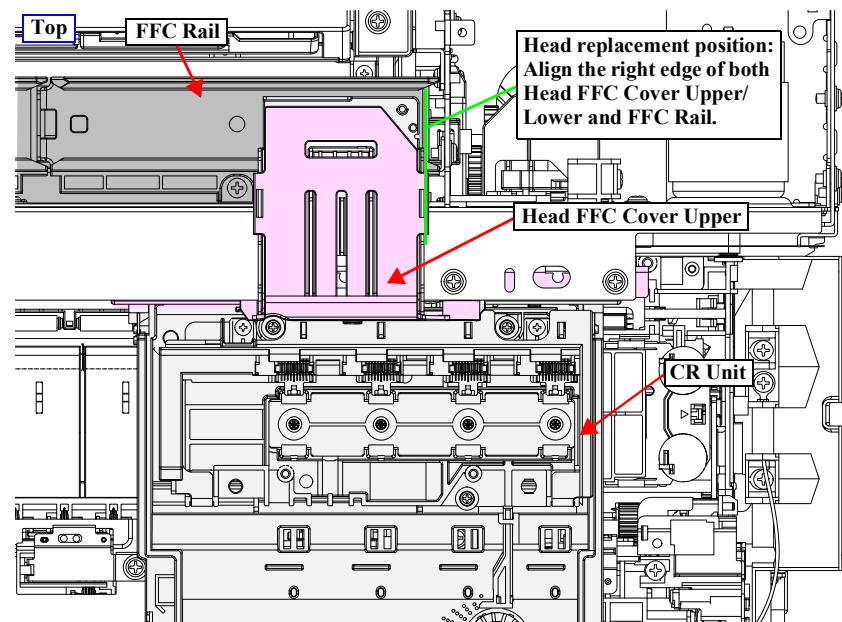


Figure 4-29. Head replacement position

Continue to the next page.

10. Remove the ink cartridge.
11. Loosen the three screws securing the Print Head Assy by rotating them 1 to 1.5 time.

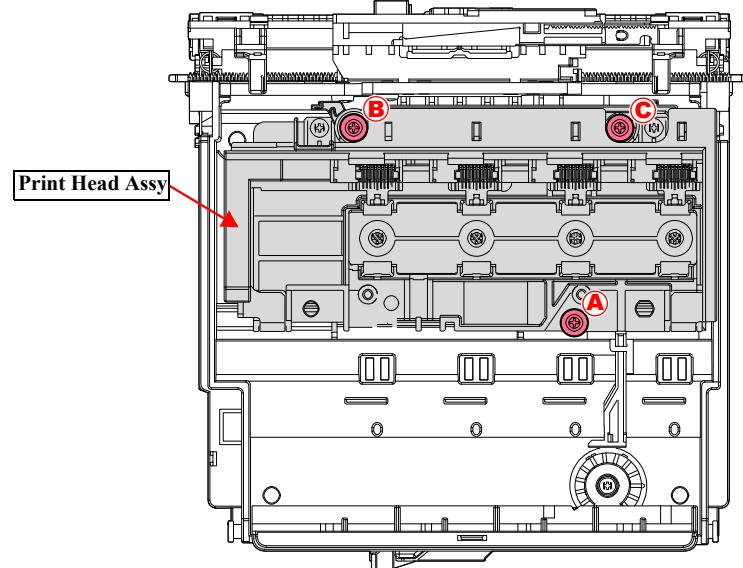
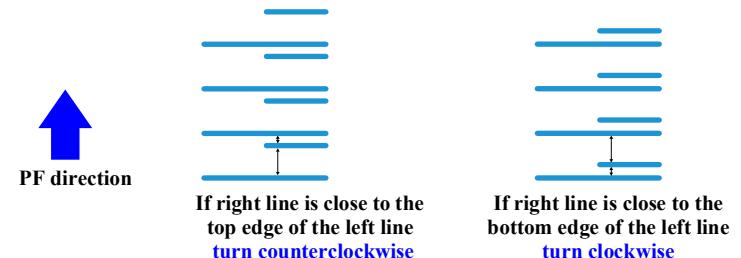


Figure 4-30. Print Head Assy securing screws

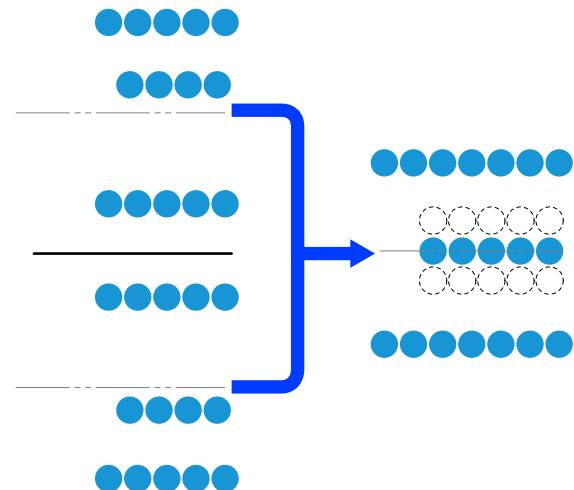
12. Refer to [Figure 4-31](#), and rotate the Adjustment Cam to adjust head inclination.



- When it is difficult to rotate the Adjustment Cam with your hand, use tweezer or the like.
- For which direction to turn the knob, see below.



- The lines move about one-dot's width when the knob is moved by ten notches.



*Continue to the next page.*

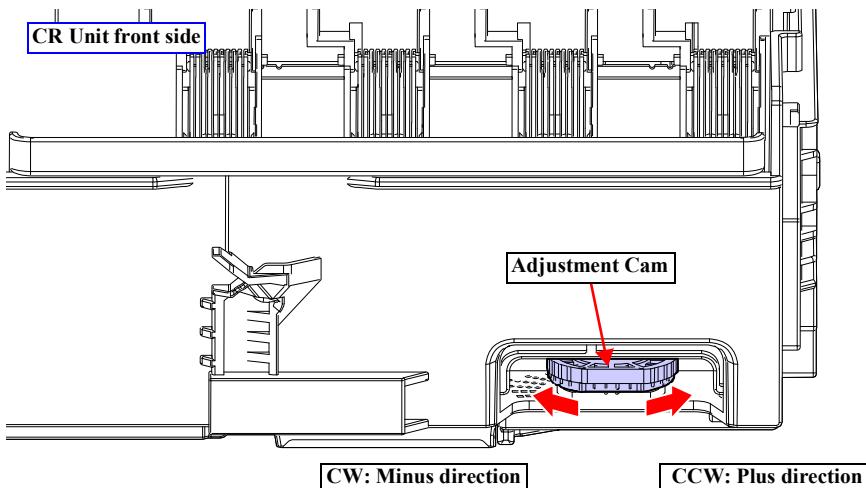


Figure 4-31. Inclination adjustment

13. Tighten the three screws securing the Print Head Assy



Tighten the screws in the order of A -> B -> C.

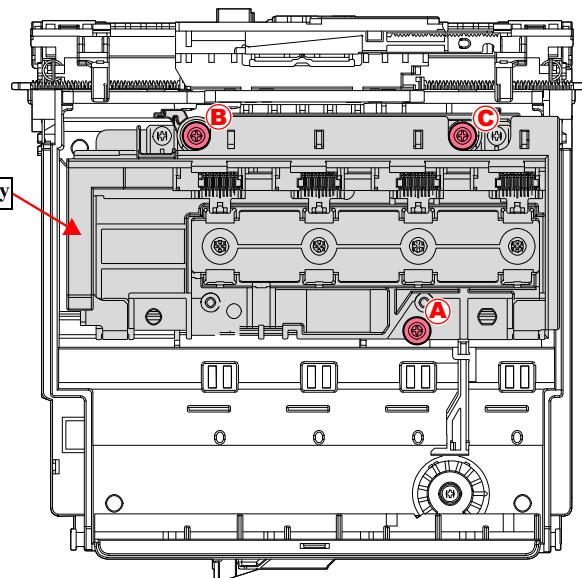


Figure 4-32. Securing screws of the Print Head Assy

14. Install the ink cartridge.
15. Lock the CR Unit.
16. Print the adjustment pattern to check the result. Repeat adjustment and check until the adjustment finishes.

## 4.8.4 Head Slant Check & Adjustment (PF direction)

### THINGS TO PREPARE

- Singleweight Matte Paper 24/36 inch
- Scale loupe

### ESTIMATE TIME

Approximately three minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Load the paper into the printer.
3. Start the service program and select **Head Slant Check & Adjustment (PF direction)**.
4. Click the **[Print]** button. The adjustment pattern will be printed.

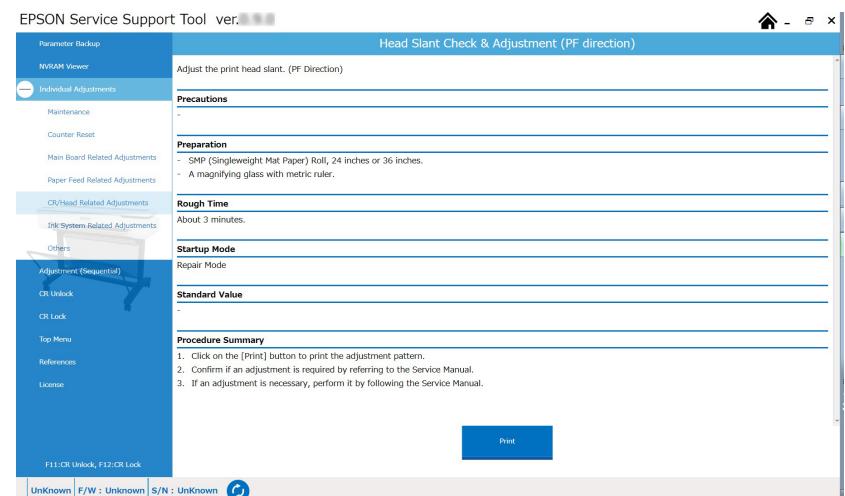


Figure 4-33. [Head Slant Check & Adjustment (PF direction)] screen

*Continue to the next page.*

5. Check the printed pattern with scale loupe. Refer to the illustration below if adjustment is needed.

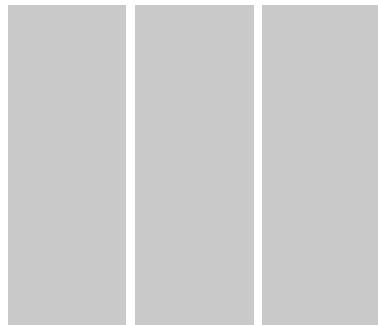


Figure 4-34. Adjustment pattern

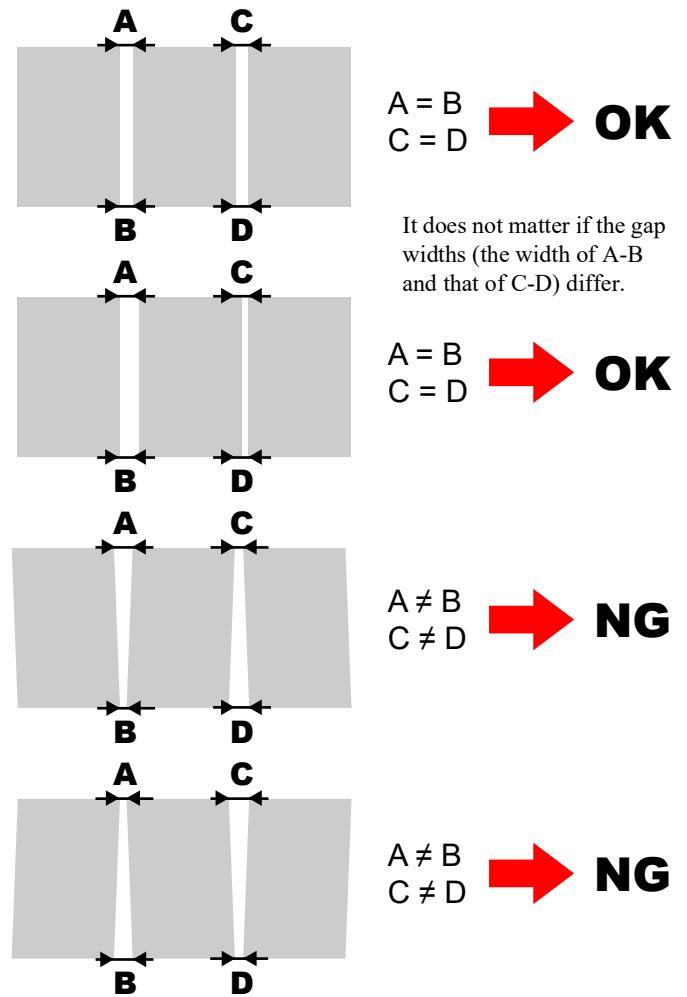


Figure 4-35. Judgment

Continue to the next page.

6. If the adjustment is not needed, finish the adjustment. If adjustment is needed, perform the following procedure.
7. Remove the following parts in advance.
  - Top Cover ([P. 158](#))
8. Unlock the CR Unit with the service program. ([P. 146](#))



**When unlock the CR Unit with the service program, the CR Unit do not move automatically even if the printer during power ON.  
Be sure to unlock the CR Unit with the service program.**

9. Refer to [Figure 4-36](#), and loosen the screw securing the Slant Adjustment Cam from rear side of the printer.

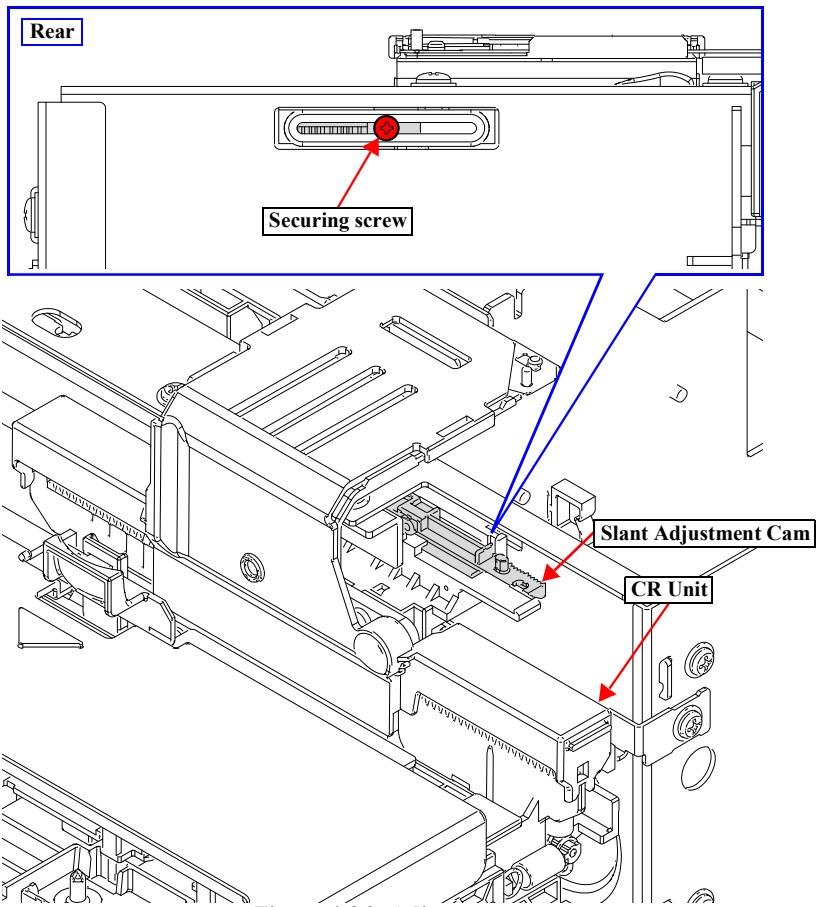
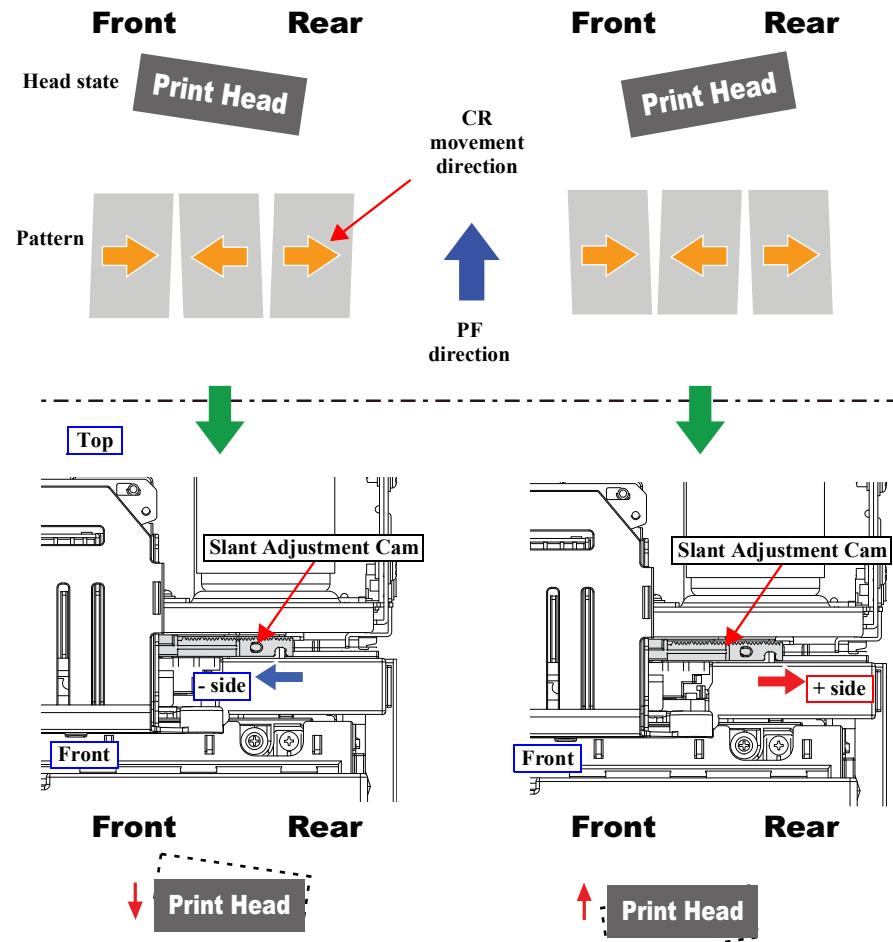


Figure 4-36. Adjustment

*Continue to the next page.*

10. Refer to [Figure 4-37](#), and slide the Slant Adjustment Cam to adjust the head slant.



**Figure 4-37. Adjustment**

11. Tighten the securing screw.
12. Lock the CR Unit.
13. Print the adjustment pattern from the service program again to check the result.  
Repeat adjustment and check until the adjustment finishes.

## 4.8.5 CR Belt Tension Check & Adjustment

### THINGS TO PREPARE

- Sonic Tension Meter U-507
- Something to flip the belt

### ESTIMATE TIME

Approximately two minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

11.0 to 18.3 N

### PROCEDURE

1. Remove the following parts in advance.
  - Top Cover ([P. 158](#))
2. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. ([P. 56](#))
3. When any paper is loaded, remove it.
4. Start the service program and select **CR Belt Tension Check & Adjustment**.
5. Click the **[Execute]** button.  
The CR Unit moves to perform aging. Then, the CR Unit moves to adjustment position.

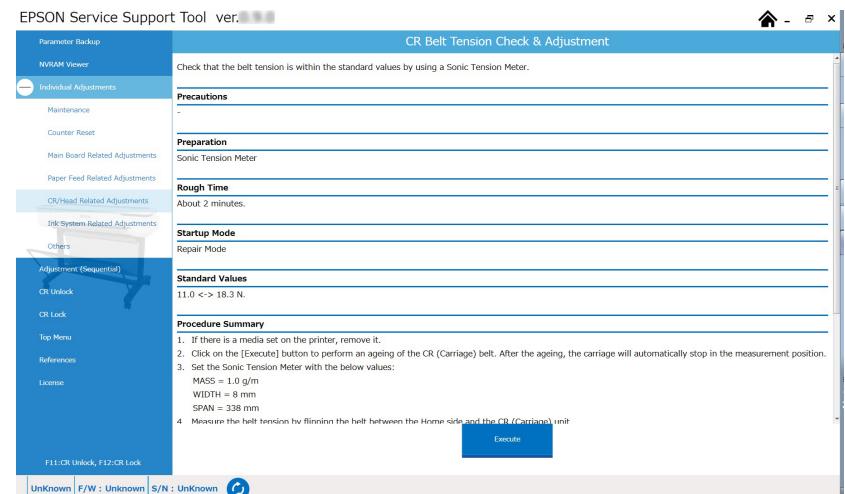


Figure 4-38. [CR Belt Tension Check & Adjustment] screen

Continue to the next page.

- Input the following values to the tensimeter

MASS: 1.0 g/m

WIDTH: 8.0 mm

SPAN: 338 mm

- Referring to [Figure 4-39](#), bring the microphone of the tensimeter to the center of the CR Unit and tip of the CR belt (home side).

**CHECK POINT**

Bring the microphone within 5 mm from the belt but do not let it touch the belt.

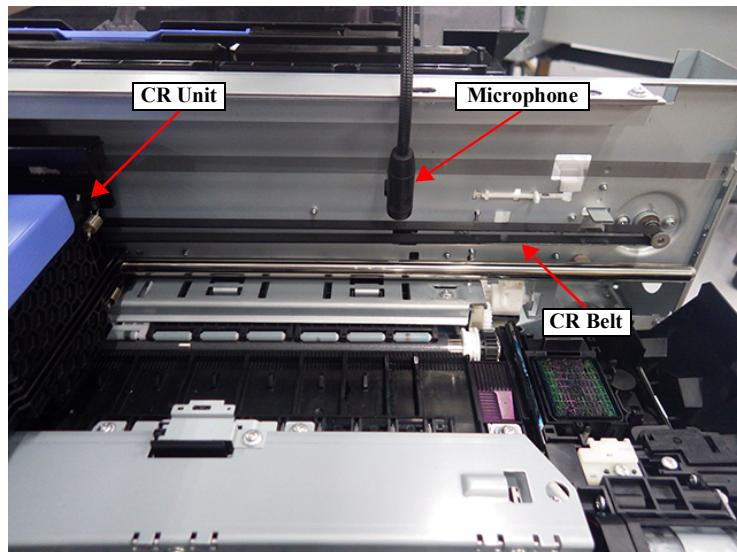


Figure 4-39. Measurement position

- Press [MEASURE] on the tensimeter and flip the belt with tweezers or a similar tool.



- Be sure to measure the tension of the belt on the upper side. If you measure the tension of the belt on the lower side, the measuring value may be inaccurate.
- Flip the belt as weak as the tensimeter can measure it.
- Be careful not to let the microphone touch the belt when flipping the belt.

- Measure the belt tension for three times, and check if the average is within the standards.

- Within the standards: Lock the CR Unit from the service program, and finish adjustment.
- Out of the standards: Go to step 10 and perform adjustment.

- Turn OFF the printer.

- Loosen the screw that secure the CR Belt Pulley Assy.

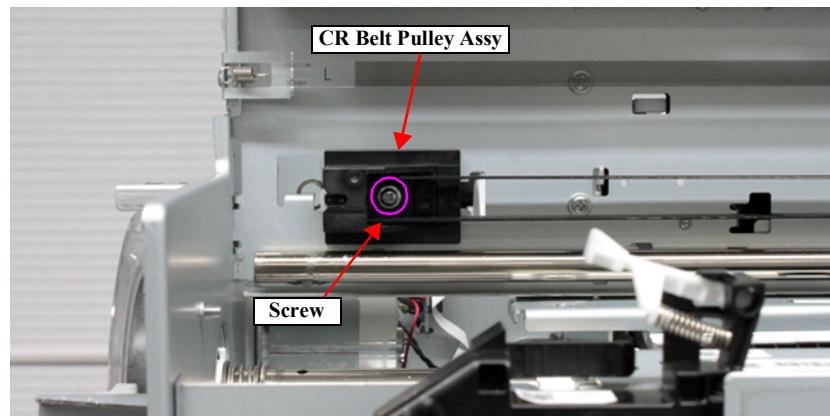


Figure 4-40. Adjustment (1)

12. Tighten the screw loosen in Step 11 while pushing the CR Belt Pulley Assy.

- Measured value is larger than the Standard Value: Push to the right direction.
- Measured value is smaller than the Standard Value: Push to the left direction.

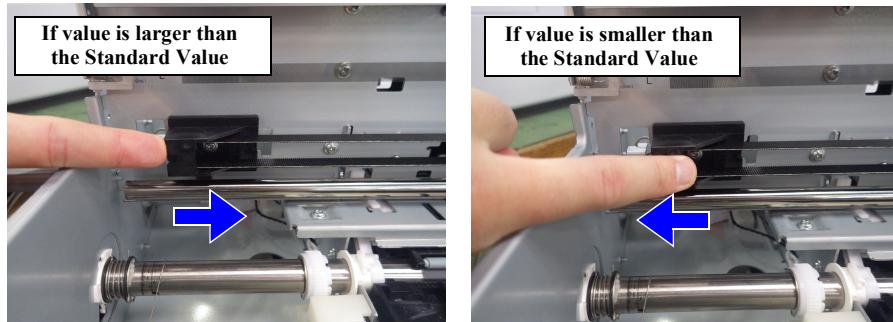


Figure 4-41. Adjustment (2)

13. Return to Step 2.

## 4.8.6 PG Switching Lever Position Adjustment

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **PG Switching Lever Position Adjustment**.
3. Click the **[Execute]** button to perform position adjustment automatically.  
When error occurred, Check the attachment state of PG Lever Assy. If any abnormality is found, remove and attach the PG Lever Assy again, and perform adjustment.

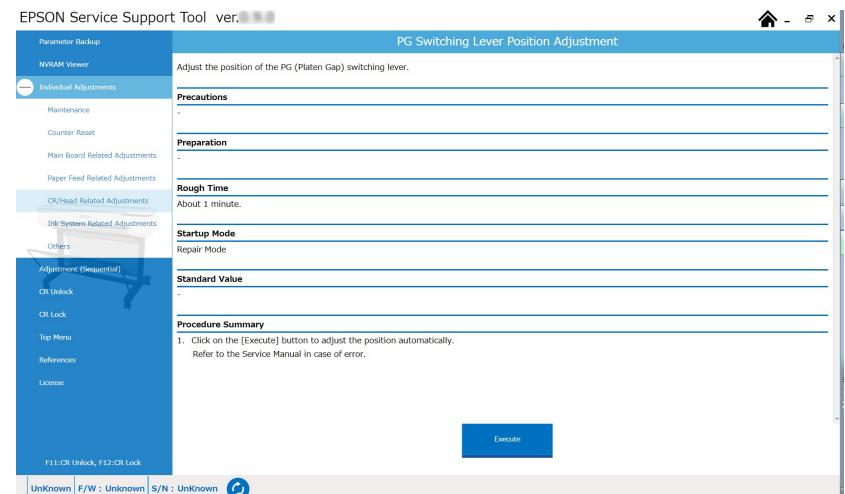


Figure 4-42. [PG Switching Lever Position Adjustment] screen

## 4.8.7 Uni-D Outward Adjustment (Home -> Full)

### THINGS TO PREPARE

Singleweight Matte Paper 24/36 inch

### ESTIMATE TIME

Approximately 18 minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

- Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [center of the screen], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
- Start the service program and select **Uni-D Outward Adjustment (Home -> Full)**.
- Click the [Print] button to print the adjustment pattern.



**Adjustment patterns are printed in the following order, but, in SC-T3100X Series/SC-T3100D Series/SC-F500 Series, VSD3 adjustment patterns are not printed.**

- PG1.6 VSD1
- PG1.6 VSD2
- PG1.6 VSD3
- PG2.1 VSD1
- PG2.1 VSD2
- PG2.1 VSD3

- Refer to [Figure 4-44](#) and [Figure 4-45](#), select the printed pattern with the most pale color, and input it in the service program.



In SC-T3100X Series/SC-T3100D Series/SC-F500 Series, VSD3 adjustment patterns are not printed. therefore, input "0" in [VSD3] on service program.

- After inputted the value to all column, click the [**Input**] button. Correction value will be written to the printer.



Even if you print the adjustment pattern after writing the correction value, the pattern will not change. (since the pattern is printed with the correction value zero each time)

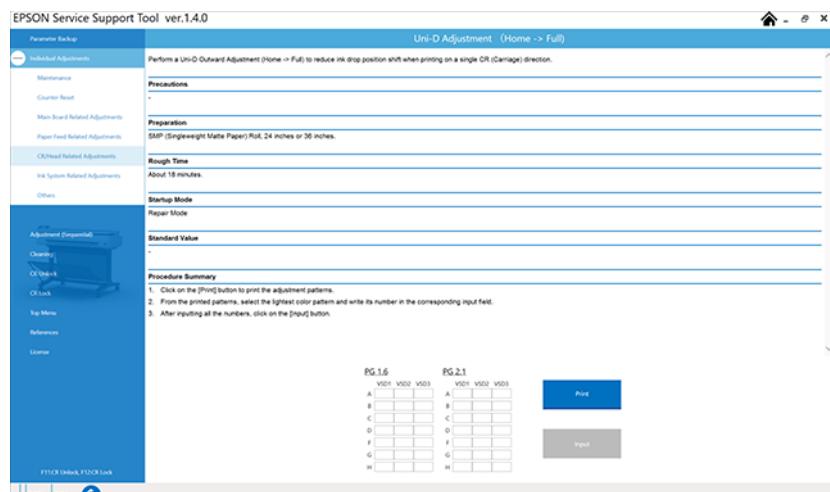


Figure 4-43. [Uni-D Outward Adjustment (Home -> Full)] screen

*Continue to the next page.*

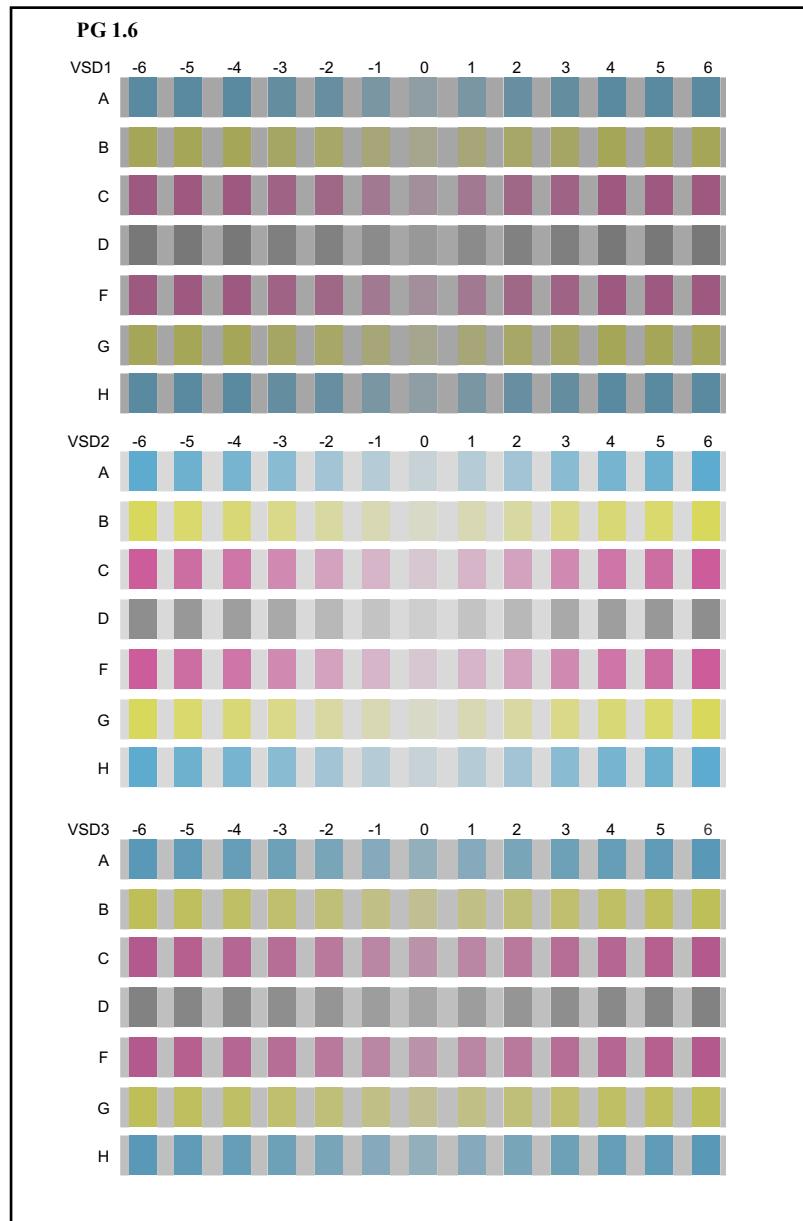


Figure 4-44. Adjustment pattern (1)

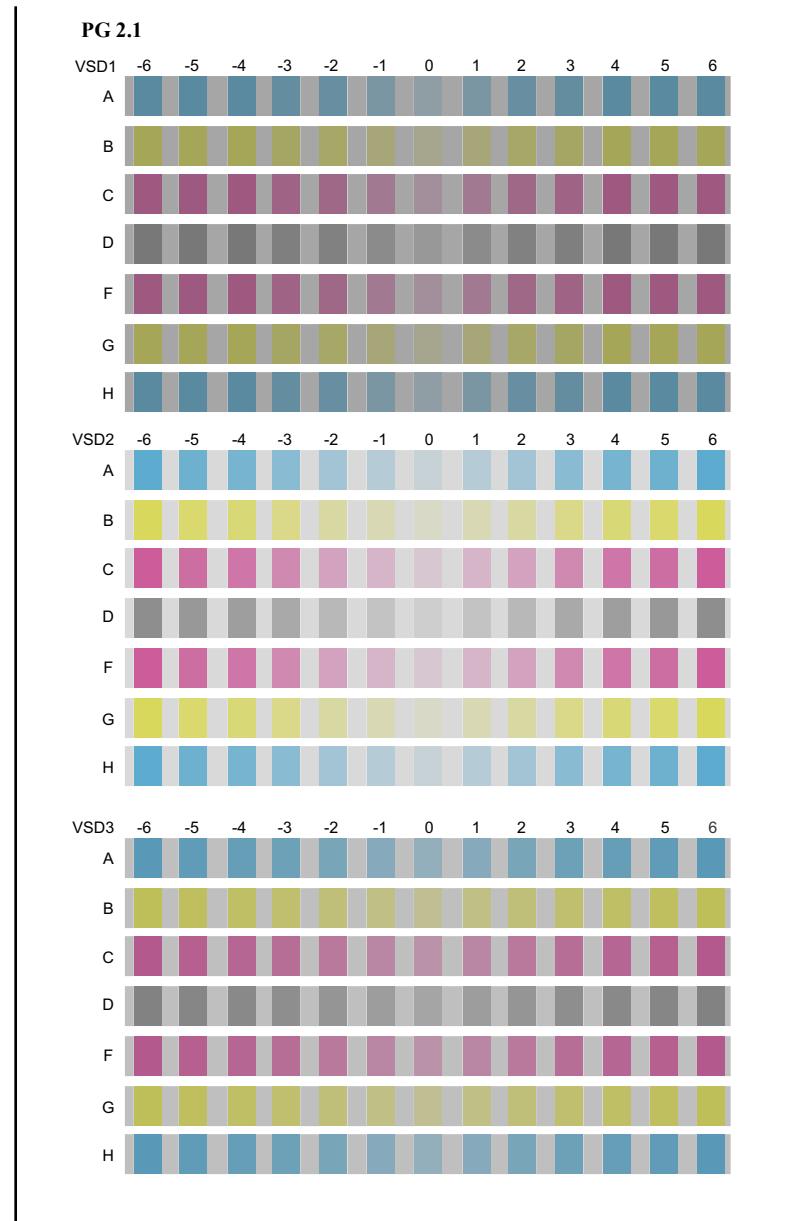


Figure 4-45. Adjustment pattern (2)

## 4.8.8 Uni-D Homeward Adjustment (Full -> Home)

### THINGS TO PREPARE

SMP 24 inch/36inch (Singleweight Matte Paper)

### ESTIMATE TIME

Approximately 20 minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

- Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [center of the screen], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
- Start the service program and select **Uni-D Homeward Adjustment (Full -> Home)**.
- Click the [Print] button to print the adjustment pattern.



**Adjustment patterns are printed in the following order, but, in SC-T3100X Series/SC-T3100D Series/SC-F500 Series, VSD3 adjustment patterns are not printed.**

- PG1.6 VSD1
- PG1.6 VSD2
- PG1.6 VSD3
- PG2.1 VSD1
- PG2.1 VSD2
- PG2.1 VSD3

- Refer to [Figure 4-47](#) and [Figure 4-48](#), select the printed pattern with the most pale color, and input it in the service program.



In SC-T3100X Series/SC-T3100D Series/SC-F500 Series, VSD3 adjustment patterns are not printed. therefore, input "0" in [VSD3] on service program.

- After inputted the value to all column, click the [**Input**] button. Correction value will be written to the printer.



Even if you print the adjustment pattern after writing the correction value, the pattern will not change. (since the pattern is printed with the correction value zero each time)

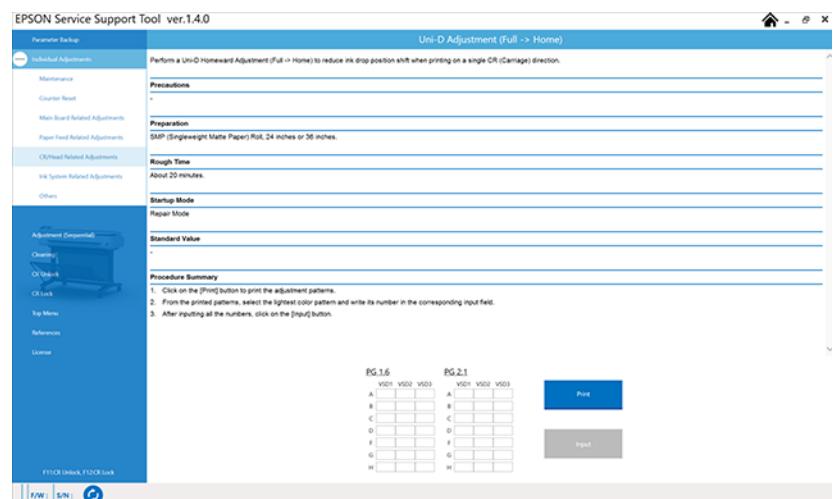


Figure 4-46. [Uni-D Homeward Adjustment (Full -> Home)] screen

Continue to the next page.

PG 1.6

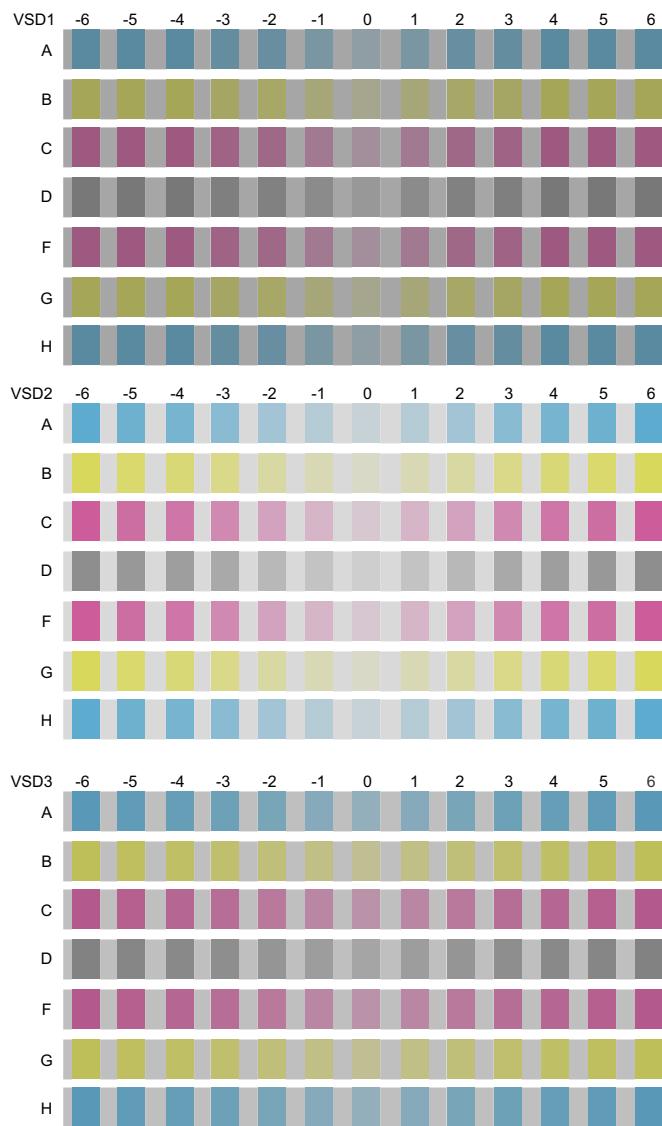


Figure 4-47. Adjustment pattern (1)

PG 2.1

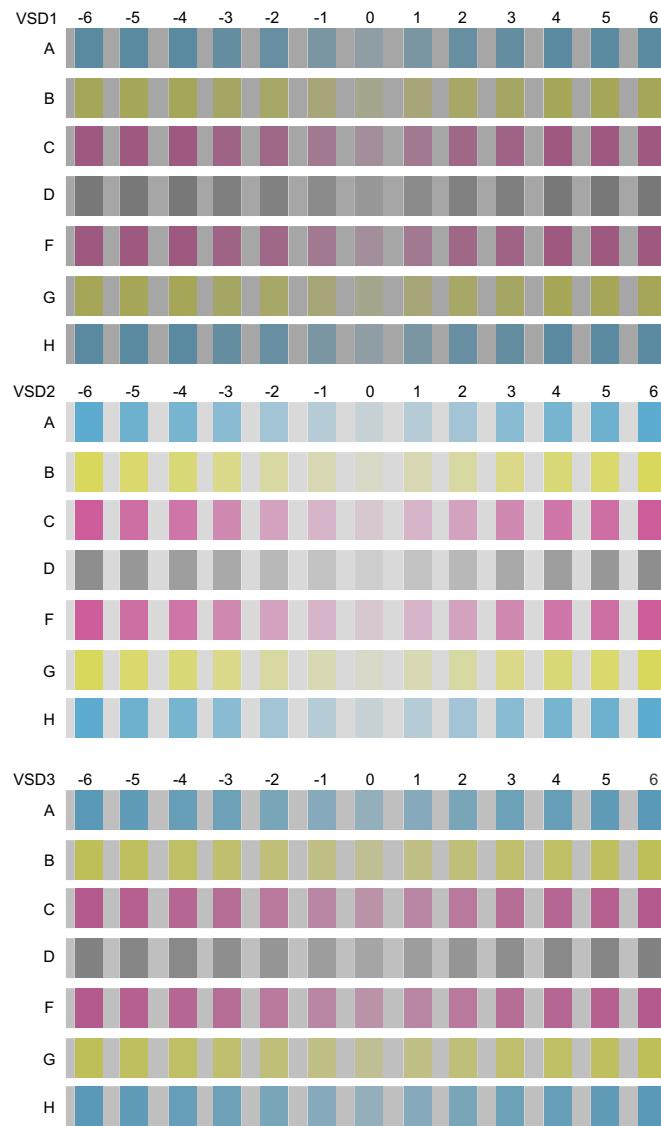


Figure 4-48. Adjustment pattern (2)

## 4.8.9 Bi-D Adjustment

### THINGS TO PREPARE

Singleweight Matte Paper 24/36 inch

### ESTIMATE TIME

Approximately six minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

- Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [center of the screen], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
- Start the service program and select **Bi-D Adjustment**.
- Click the **[Print]** button to print the adjustment pattern.  
The moire pattern and the ruled line pattern will be printed.



In SC-T3100X Series/SC-T3100D Series/SC-F500 Series, VSD3 adjustment patterns of ruled line pattern are not printed.

- Select the proper adjustment value.

- Moire**

Check the pattern in middle row referring to [Figure 4-50](#).

Select the number of the pattern with least white streaks in the upper row, and

input it in **[PG1.6 VSD2]** of the service program.

Select the number of the pattern with least white streaks in the lower row, and input it in **[PG2.1 VSD2]** of the service program.

- Ruled line**

Select the number of the pattern with the most straight line referring to [Figure 4-51](#), and input it in the input box of the service program.



In SC-T3100X Series/SC-T3100D Series/SC-F500 Series, VSD3 adjustment patterns are not printed. therefore, input "0" in **[VSD3]** on service program.

- When finished inputting in all input box, click the **[Input]** button. The correction value is written in the printer.

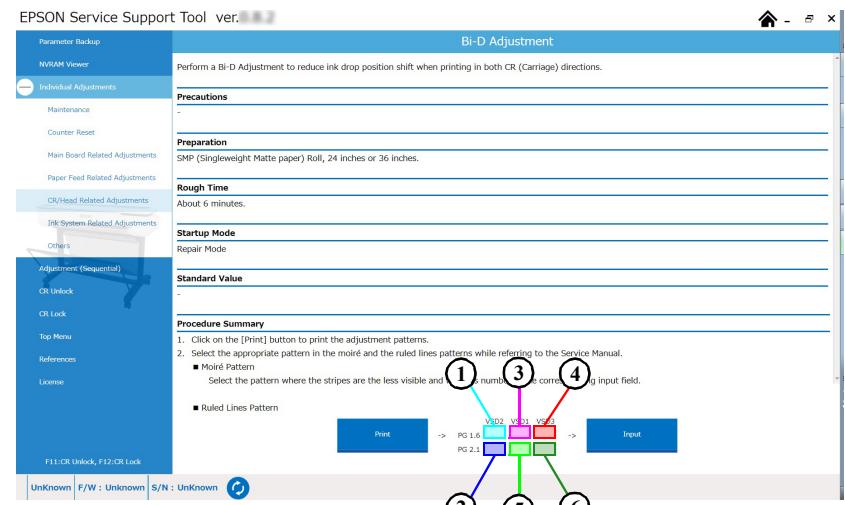


Figure 4-49. **[Bi-D Adjustment]** screen

Continue to the next page.

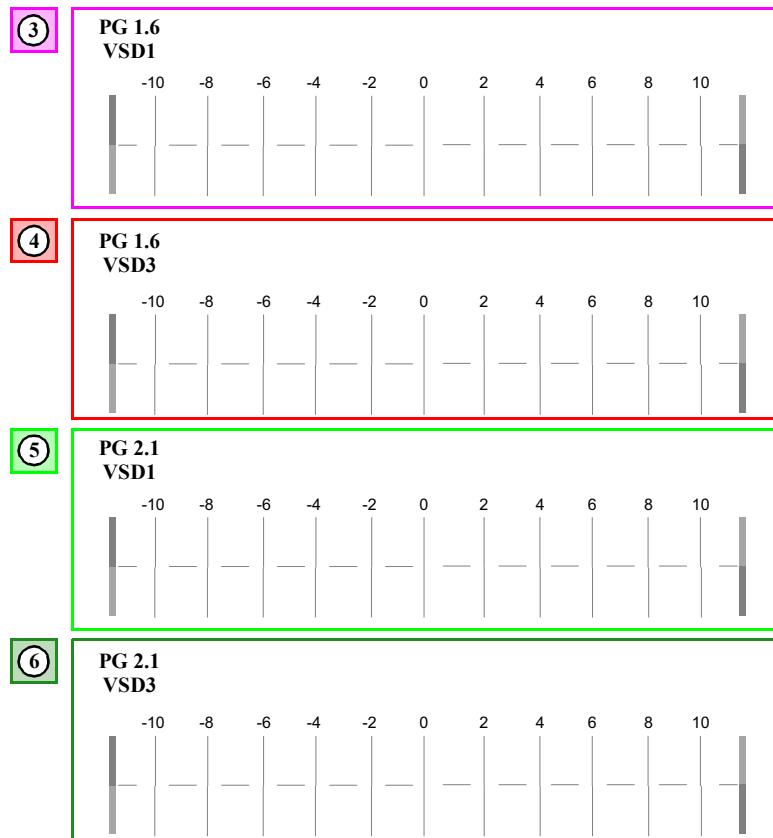
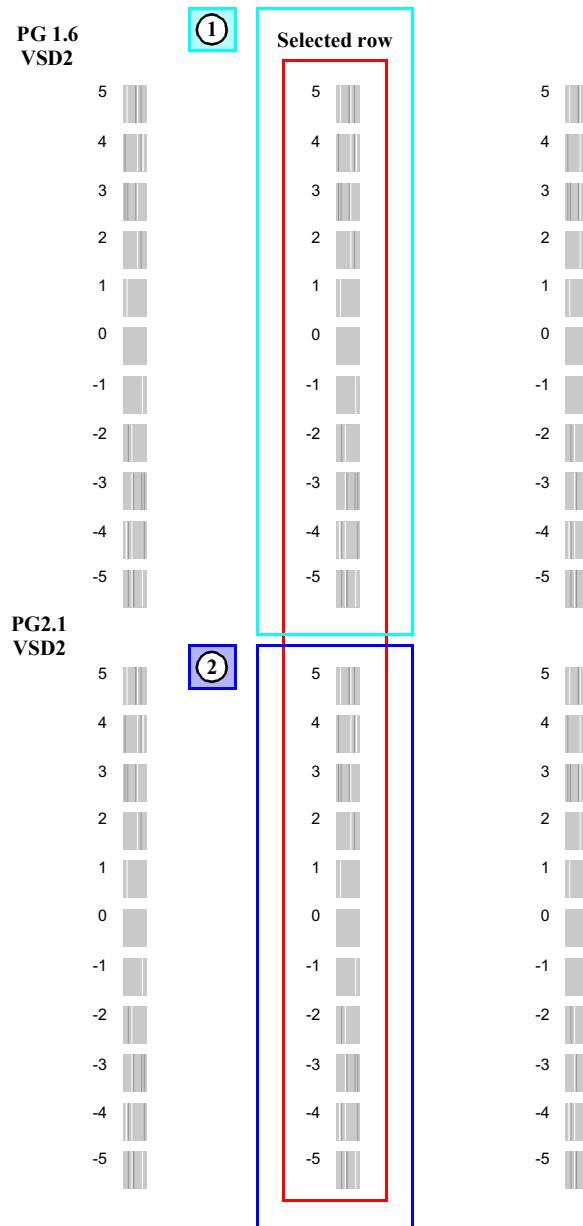


Figure 4-51. Adjustment pattern (Ruled line)



Be careful not to make a mistake in the input position of each number.

Figure 4-50. Adjustment pattern (Moire)

## 4.8.10 Nozzle Verification Technology Noise Check

### THINGS TO PREPARE

Singleweight Matte Paper 24/36 inch

### ESTIMATE TIME

Approximately two minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **Nozzle Verification Technology Noise Check**.
3. Click the **[Execute]** button to perform the noise check. The check is carried out automatically.

4. When the check is finished and **Success** appears, click the **[OK]** button. If **Fail** appears, confirm the head FFC is connected properly (no mal-connection or slant connection, etc.). If not improved yet, replace the head FFC or Print Head with a new one.

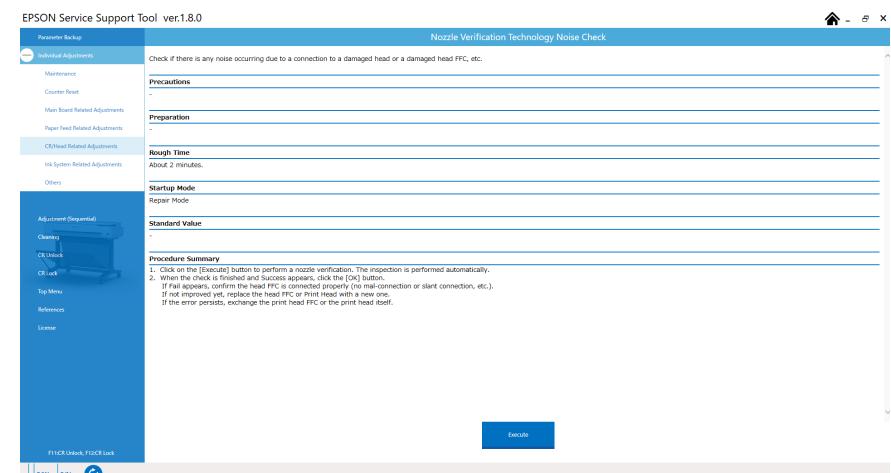


Figure 4-52. [Nozzle Verification Technology Noise Check] screen

## 4.8.11 Nozzle Verification Technology Rank Sort

### THINGS TO PREPARE

Singleweight Matte Paper 24/36 inch

### ESTIMATE TIME

Approximately two minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

- Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [center of the screen], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
- Start the service program and select **Nozzle Verification Technology Rank Sort**.
- Click the **[Print]** button to print the alignment check pattern.



**Make sure to print the nozzle check pattern and confirm there is no nozzle clogging. If there is any, an error occurs.**

- Examine the patterns for any missing segments, broken lines, or misaligned lines. If any of the above symptoms is observed, run the cleaning and print the pattern again to see if the problem is solved.

- Click the **[Execute]** button to perform the rank sort. The sort is carried out automatically.
- When the rank sort is finished and **Success** appears, click the **[OK]** button. If **Fail** appears, print the alignment pattern again and confirm there is no nozzle clogging, and perform this adjustment again.

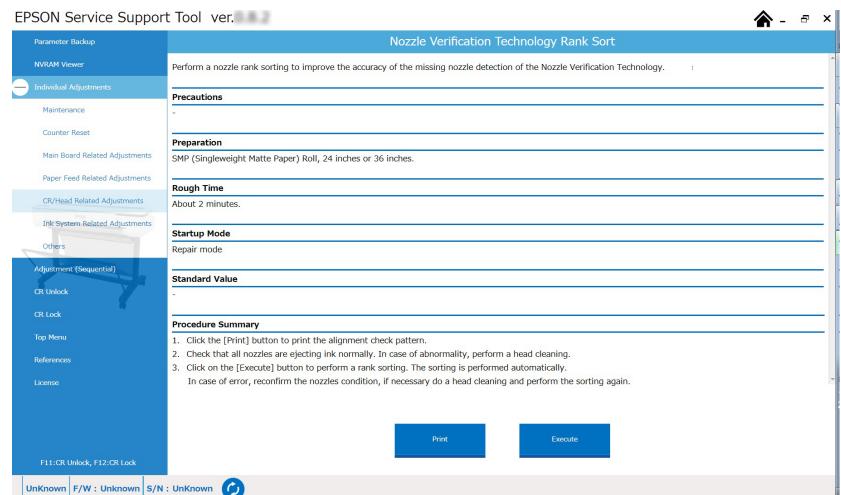


Figure 4-53. [Nozzle Verification Technology Rank Sort] screen

## 4.8.12 Nozzle Verification Technology Check

### THINGS TO PREPARE

Singleweight Matte Paper 24/36 inch

### ESTIMATE TIME

Approximately two minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

- Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [center of the screen], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
- Start the service program and select **Nozzle Verification Technology Check**.
- Click the **[Print]** button to print the alignment check pattern.
- Click the **[Execute]** button to display the result of the Nozzle Verification Technology Check.



- Number displayed on the screen is nozzle number, not number of the missing nozzles. Count the displayed nozzle number to calculate the number of missing nozzles.
- Correspondence between the nozzle row and color are as follows.

Nozzle row	Color	Nozzle row	Color
A	C	E	Mk
B	Y	F	M
C	M	G	Y
D	Mk	H	C

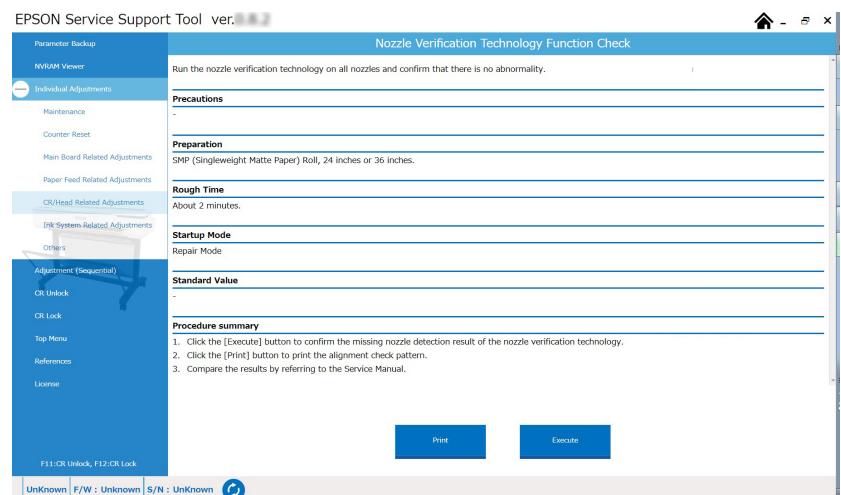


Figure 4-54. [Nozzle Verification Technology Check] screen

Continue to the next page.

5. Correspond according to the displayed result.

■ **Success** is displayed.

Check there is no missing nozzle in the printed alignment check pattern.

-> No missing nozzle: Finish the check.

-> Any missing nozzle: Go to [Step 6](#).

■ **[Nozzle missing detection]** is displayed.

Check that the number of missing nozzle of each row displayed and the number of missing nozzle of each row of printed alignment check pattern match.

- Number matches

Finish the check.

- Number does not match

Go to [Step 6](#).

6. Perform Cleaning, and perform this check again. If the number does not match again, Perform Nozzle Verification Technology Noise Check and Nozzle Verification Technology Rank Sort in this order, and perform this check again. If not improved, replace the Print Head.

## 4.8.13 CR Scale Check

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [**center of the screen**], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. ([P. 56](#))
2. Start the service program and select **CR Scale Check**.
3. When any paper is loaded, remove it.
4. Click the [**Execute**] button to check the CR Scale has no abnormality such as damage and is able to read properly automatically.
  - When **Finished** appears: Click the [**OK**] button to finish the check.
  - When **Fail** appears: Go to [Step 5](#).
5. Since the CR Scale may is not scanned correctly, clean the scale using ethanol. After cleaning, perform [step 4](#) again to check.  
If the scale still cannot be read properly, replace the CR Scale since it may be damaged.  
Otherwise, replace the Sub C Board (CR encoder) and check again.

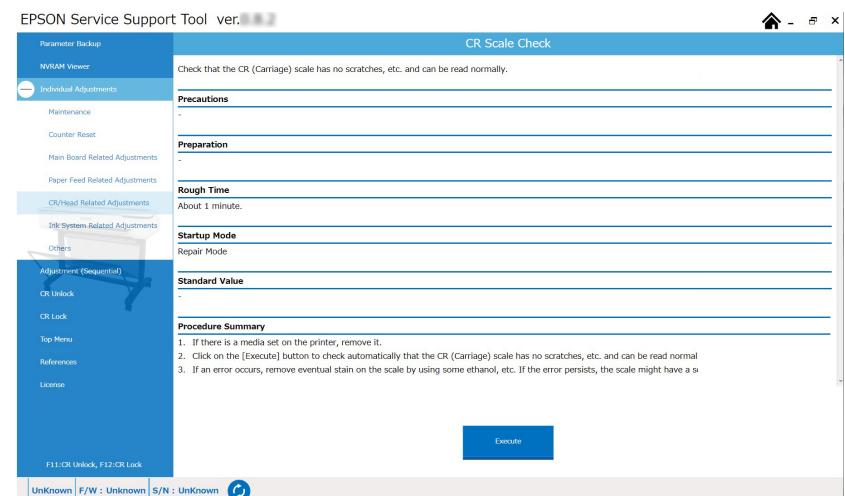


Figure 4-55. [CR Scale Check] screen

## 4.8.14 Head Alignment Check

### THINGS TO PREPARE

Singleweight Matte Paper 24/36 inch

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

1. Turn ON the printer in repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **Head Alignment Check**.
3. Click the **[Print]** button.  
Alignment pattern is printed.
4. Check the nozzle state from the alignment check pattern. If any abnormality is found, perform the Head Cleaning.

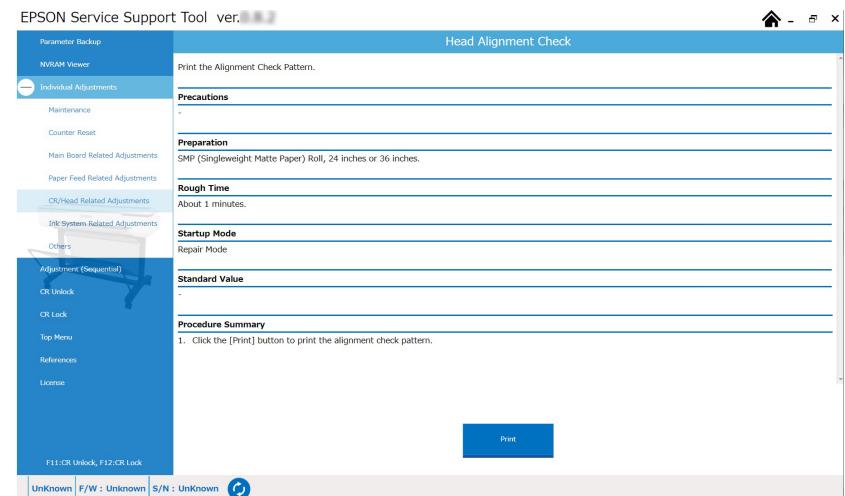


Figure 4-56. [Head Alignment Check] screen

## 4.8.15 CR Active Dumper Adjustment

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately two minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **CR Active Dumper Adjustment**.
3. Click the **[Execute]** button.  
The correction value is calculated automatically and the obtained value is written in the printer.  
When **Fail** appears, perform the adjustment again.

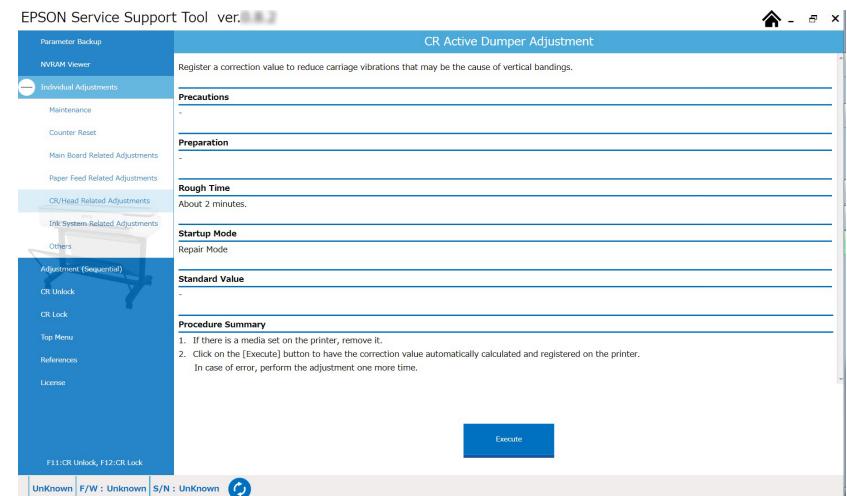


Figure 4-57. [CR Active Dumper Adjustment] screen

## 4.8.16 CR Motor Measurement & Auto Adjustment

### THINGS TO PREPARE

---

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [**center of the screen**], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **CR Motor Measurement & Auto Adjustment**.
3. When any paper is loaded, remove it.
4. Click the [**Execute**] button.  
The correction value is calculated automatically and the obtained value is written in the printer.



**Do not touch the printer during measurement. Otherwise, the adjustment may fail.**

5. When **Fail** appears, perform the adjustment again. If not improved, replace the CR Motor.

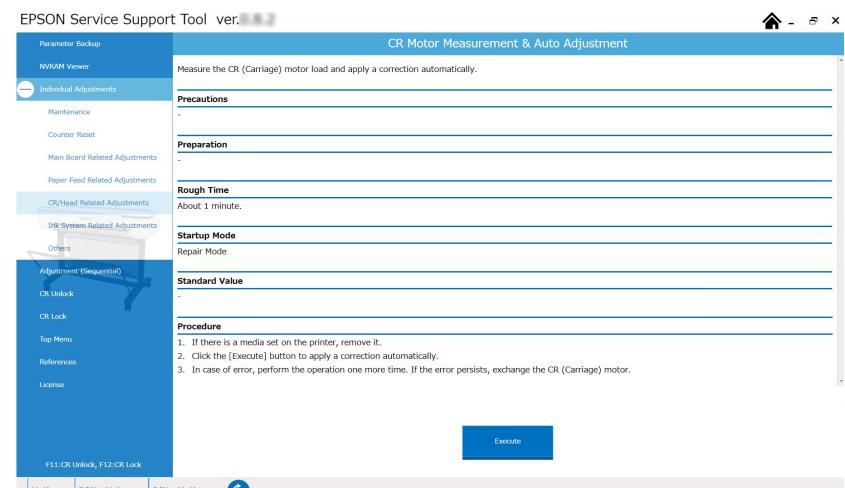


Figure 4-58. [CR Motor Measurement & Auto Adjustment] screen

## 4.8.17 CR Scale Replacement Date & Time Setting

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **CR Scale Replacement Date & Time Setting**.
3. Click the **[Execute]** button to save the replacement history in the printer.

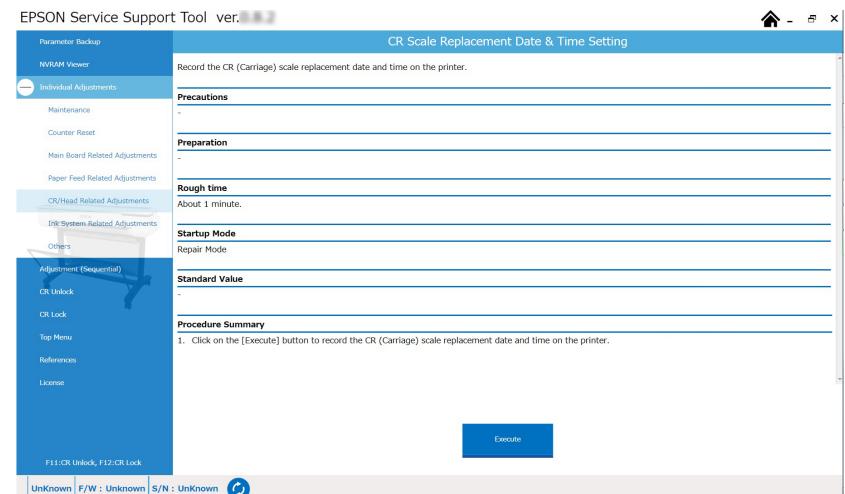


Figure 4-59. [CR Scale Replacement Date & Time Setting] screen

## 4.8.18 Print Head Counter Reset

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode/Inspection mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
  - Inspection mode  
Turn the power ON while pressing **[left side of the screen]**, keep pressing until the mode select menu is displayed. (P. 55).
2. Start the service program and select **Print Head Counter Reset**.
3. Click the **[Execute]** button to reset the counter.
4. Turn off and back on the printer in the repair mode.
5. With NVRAM Viewer, verify that the counter has been reset to “0”. (perform parameter backup)

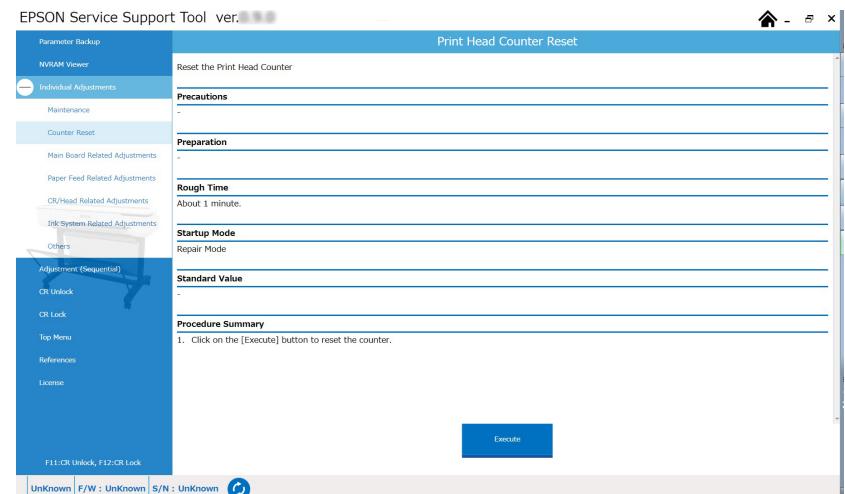


Figure 4-60. [Print Head Counter Reset] screen

## 4.8.19 CR Motor Counter Reset

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode/Inspection mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
  - Inspection mode  
Turn the power ON while pressing **[left side of the screen]**, keep pressing until the mode select menu is displayed. (P. 55).
2. Start the service program and select **CR Motor Counter Reset**.
3. Click the **[Execute]** button to reset the counter.
4. Turn off and back on the printer in the repair mode.
5. With NVRAM Viewer, verify that the counter has been reset to “0”. (perform parameter backup)

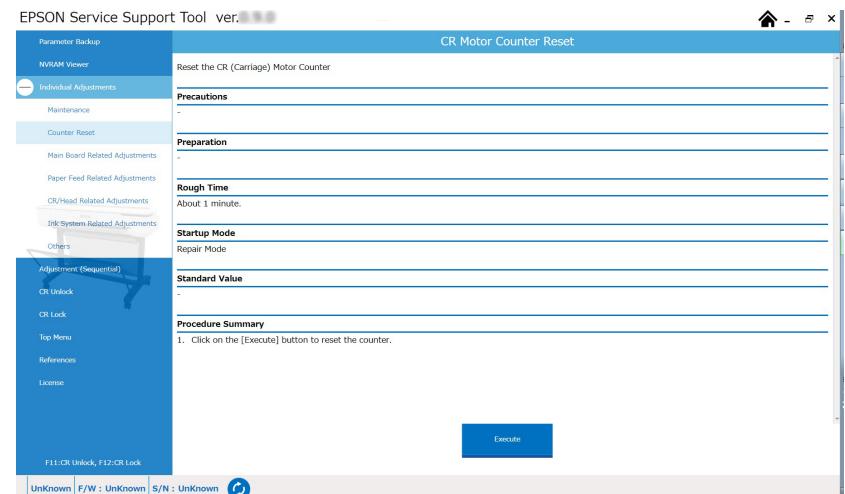


Figure 4-61. [CR Motor Counter Reset] screen

## 4.9 Ink Supply Related Adjustments

### 4.9.1 Pump Cap Unit Measurement & Auto Adjustment

#### THINGS TO PREPARE

--

#### ESTIMATE TIME

Approximately one minute

#### EXECUTION MODE

Repair mode

#### STANDARD VALUE

--

#### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [center of the screen], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **Pump Cap Unit Measurement & Auto Adjustment**.
3. Click the [Execute] button.  
The correction value is calculated automatically and the obtained value is written in the printer.



**Do not touch the printer during measurement. Otherwise, the adjustment may fail.**

4. When **Fail** appears, perform the adjustment again. If not improved, replace the Pump Cap Unit.

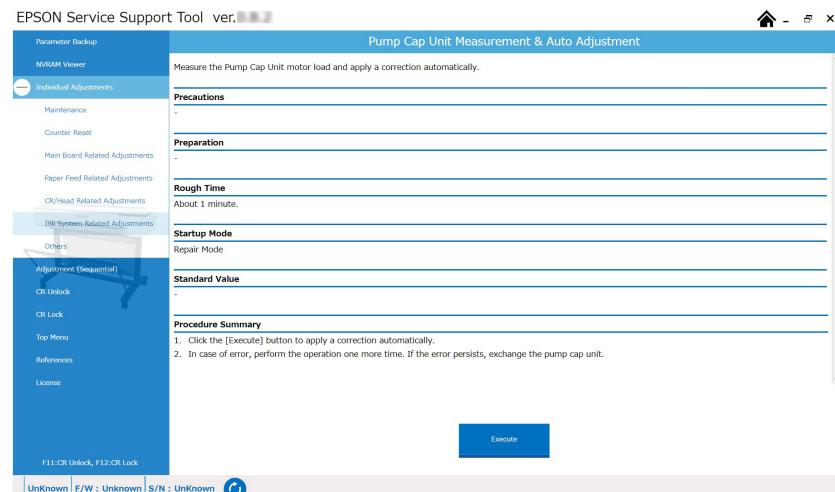


Figure 4-62. [Pump Cap Unit Measurement & Auto Adjustment] screen

## 4.9.2 Cleaning

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately three to four minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [**center of the screen**], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **Cleaning**.
3. Select the performing cleaning, and Click the [**Execute**] button.  
Selected cleaning is performed.

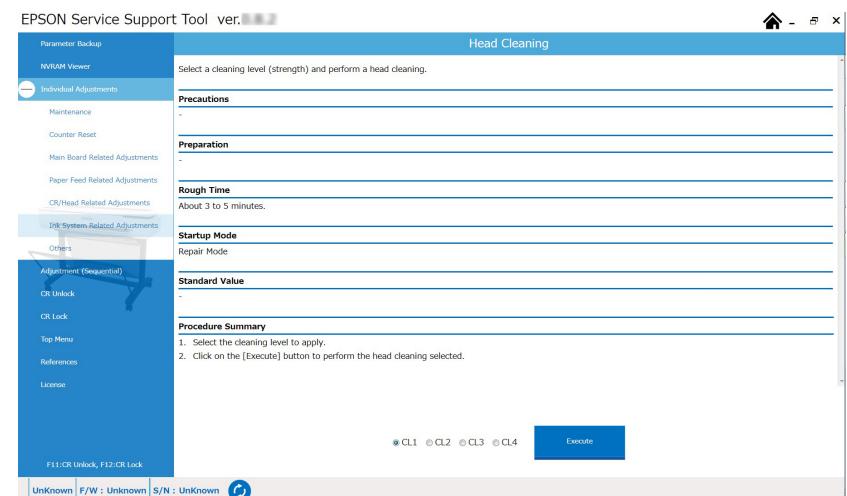


Figure 4-63. [Cleaning] screen

## 4.9.3 Initial Ink Charge

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately eight minutes  
 (SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series)

Approximately twenty minutes  
 (SC-T3100X Series/SC-T3100D Series/SC-F500 Series)

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
 Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **Initial Ink Charge**.
3. Click the **[Execute]** button to perform Initial Ink Charge.

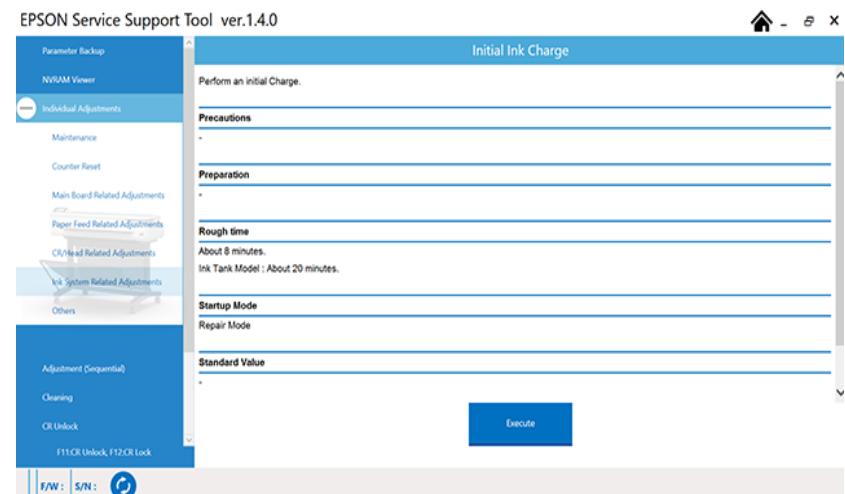


Figure 4-64. [Initial Ink Charge] screen

## 4.9.4 Ink Leak Flag Reset

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Inspection mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Inspection mode.  
Turn the power ON while pressing [left side of the screen], keep pressing until the mode select menu is displayed. (P. 55).
2. Start the service program and select **Ink Leak Flag Reset**.
3. Click the **[Execute]** button to reset the flag.



**When the ink leakage is detected, the history is saved in the printer.  
Unless reset the history in this adjustment, Ink Leak Error  
(0014BD) occurs.**

4. Turn OFF and back ON the printer, and check the service call does not occur.



Make sure to escalate the information to person in charge when the ink leakage occurred.

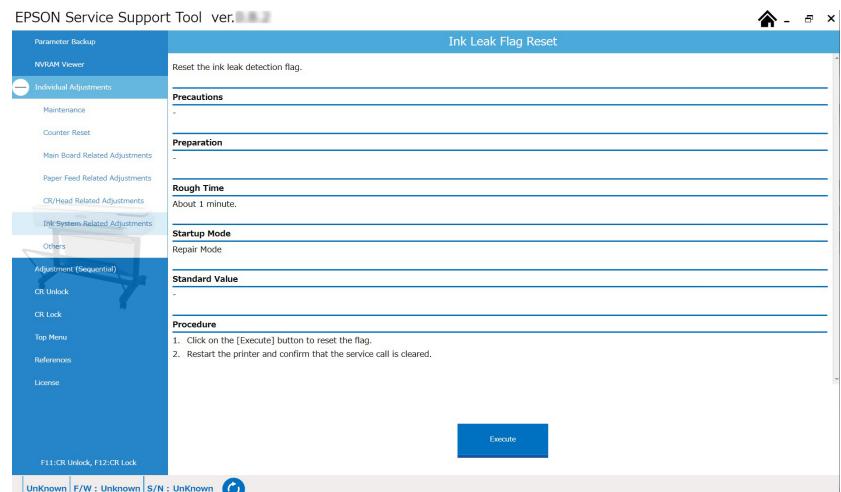


Figure 4-65. [Ink Leak Flag Reset] screen

## 4.9.5 Initial Ink Charge Flag ON/OFF

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Inspection mode

### STANDARD VALUE

--

### PROCEDURE



**Do not perform this adjustment in on-site repair work since this adjustment is for repair work in repairing hub only. This adjustment requires specified jig.**

1. Turn ON the printer in Inspection mode.  
Turn the power ON while pressing **[left side of the screen]**, keep pressing until the mode select menu is displayed. (P. 55)
2. Start the service program and select **Initial Ink Charge Flag ON/OFF**.
3. Click the **[Check]** button to check the current flag state.
4. Click the **[Execute]** button to switch the flag.

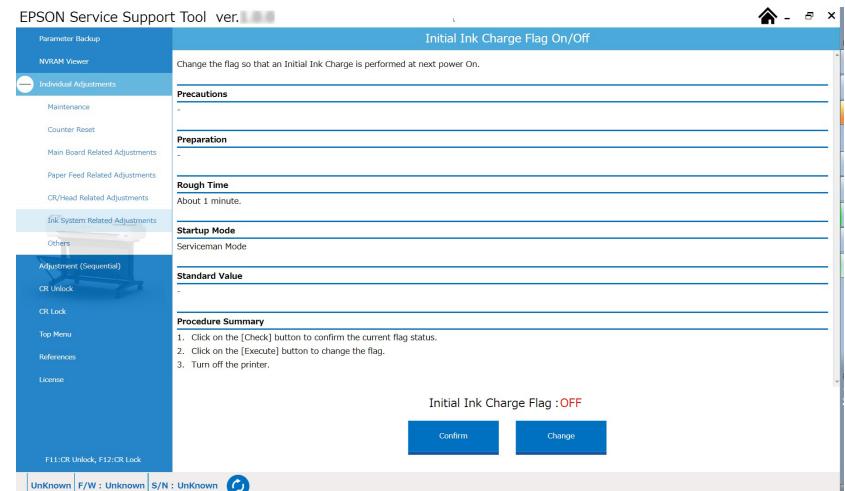


Figure 4-66. [Initial Ink Charge Flag ON/OFF] screen

## 4.9.6 PIS Replacement Date & Time Setting

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **PIS Replacement Date & Time Setting**.
3. Click the **[Execute]** button to save the replacement history in the printer.

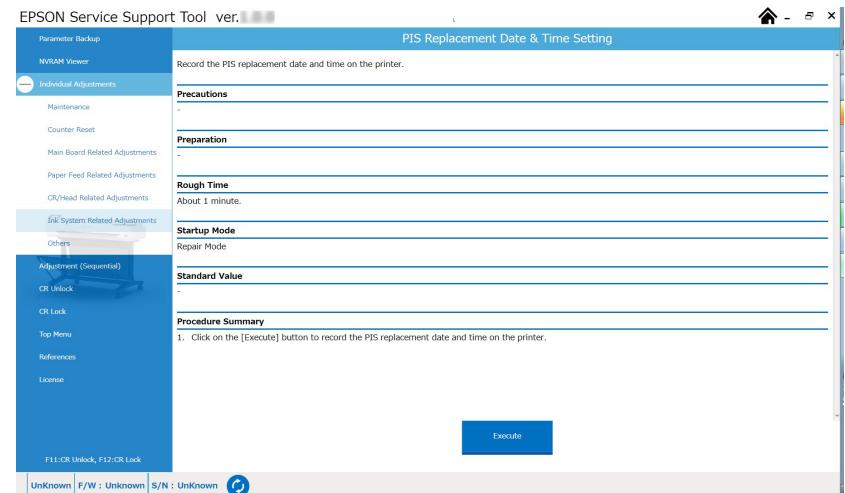


Figure 4-67. [PIS Replacement Date & Time Setting] screen

## 4.9.7 Pump Cap Counter Reset

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode/Inspection mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
  - Inspection mode  
Turn the power ON while pressing **[left side of the screen]**, keep pressing until the mode select menu is displayed. (P. 55).
2. Start the service program and select **Pump Cap Counter Reset**.
3. Click the **[Execute]** button to reset the counter.
4. Turn off and back on the printer in the repair mode.
5. With NVRAM Viewer, verify that the counter has been reset to “0”. (perform parameter backup)

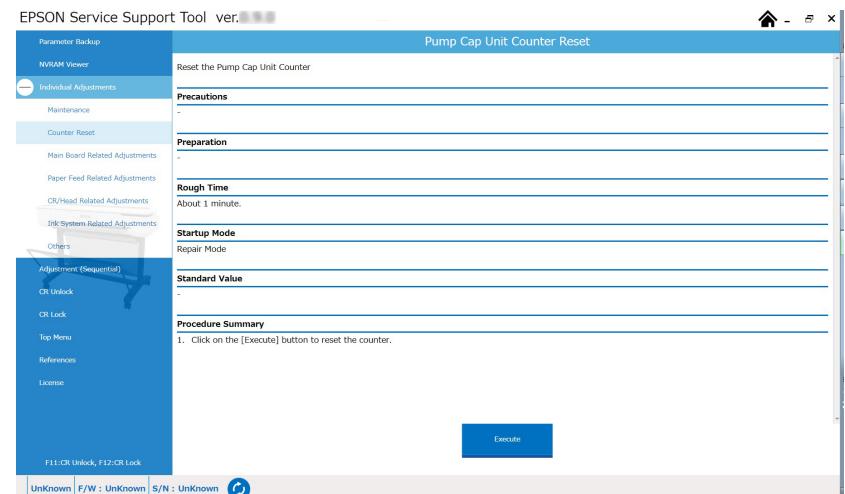


Figure 4-68. [Pump Cap Counter Reset] screen

## 4.9.8 Ink Tank Upper Porous Pad Counter Reset

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode/Inspection mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
  - Inspection mode  
Turn the power ON while pressing **[left side of the screen]**, keep pressing until the mode select menu is displayed. (P. 55).
2. Start the service program and select **Ink Tank Upper Porous Pad Counter Reset**.
3. Click the **[Execute]** button to reset the counter.
4. Turn off and back on the printer in the repair mode.
5. With NVRAM Viewer, verify that the counter has been reset to “0”. (perform parameter backup)

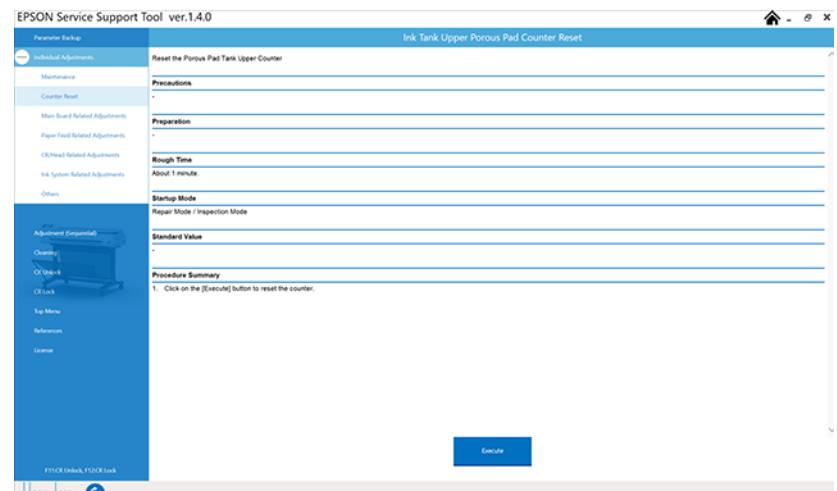


Figure 4-69. [Ink Tank Upper Porous Pad Counter Reset] screen

## 4.9.9 Ink Tube Assy Counter Reset

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode/Inspection mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
  - Inspection mode  
Turn the power ON while pressing **[left side of the screen]**, keep pressing until the mode select menu is displayed. (P. 55).
2. Start the service program and select **Ink Tube Assy Counter Reset**.
3. Click the **[Execute]** button to reset the counter.
4. Turn off and back on the printer in the repair mode.
5. With NVRAM Viewer, verify that the counter has been reset to “0”. (perform parameter backup)

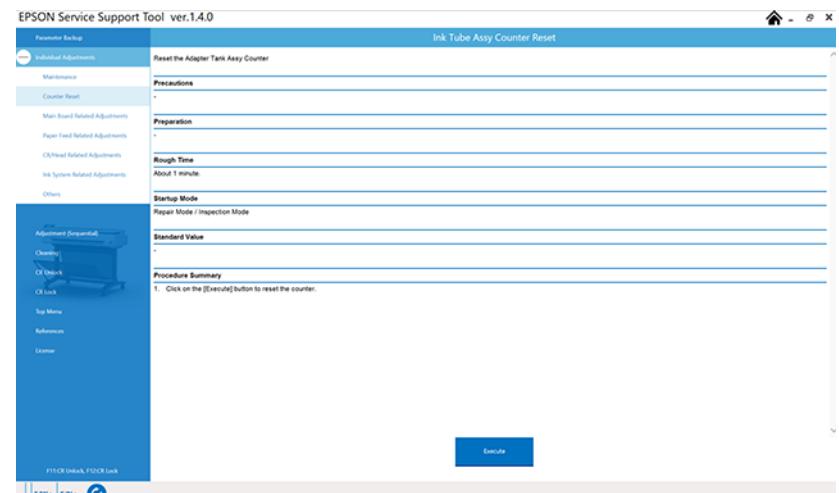


Figure 4-70. [Ink Tube Assy Counter Reset] screen

## 4.9.10 Power Ink Flushing

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately twenty minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **Power Ink Flushing**.
3. Click the **[Execute]** button to perform the Power Ink Flushing.
4. Click the **[Nozzle Check Print]** button to print the nozzle check pattern.

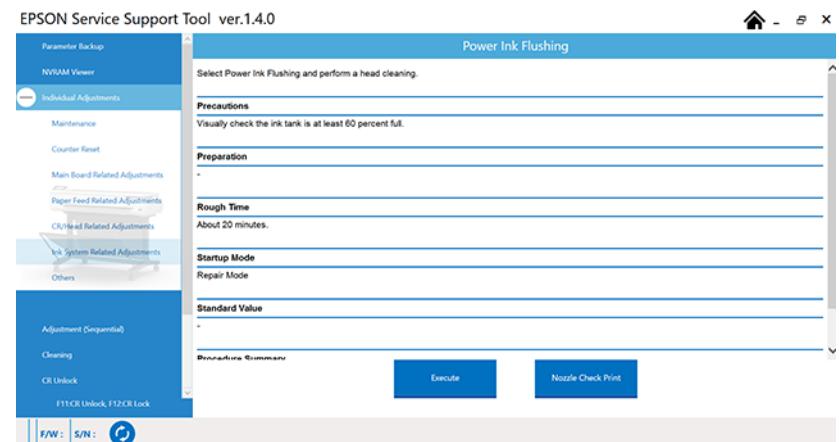


Figure 4-71. [Power Ink Flushing] screen

## 4.10 Media Feed Related Checks and Adjustments

### 4.10.1 PF Belt Tension Check & Adjustment

#### THINGS TO PREPARE

- Sonic Tension Meter U-507
- Something to flip the belt

#### ESTIMATE TIME

Approximately four minutes

#### EXECUTION MODE

Repair mode

#### STANDARD VALUE

6.0 to 15.0 N

#### PROCEDURE

1. Remove the following part in advance.
  - Top Cover ([P. 158](#))
2. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. ([P. 56](#))
3. When any paper is loaded, remove it.
4. Start the service program and select **PF Belt Tension Check & Adjustment**.
5. Click the **[Aging]** button.  
The PF roller is rotated to perform aging.

6. Input the following values to the tensimeter

MASS: 1.3 g/m

WIDTH: 6.0 mm

SPAN: 92 mm

7. Bring the microphone of the tensimeter close to the belt as shown below.



The distance between the microphone and the belt surface should be 5 mm or less, but do not let it touch the belt.

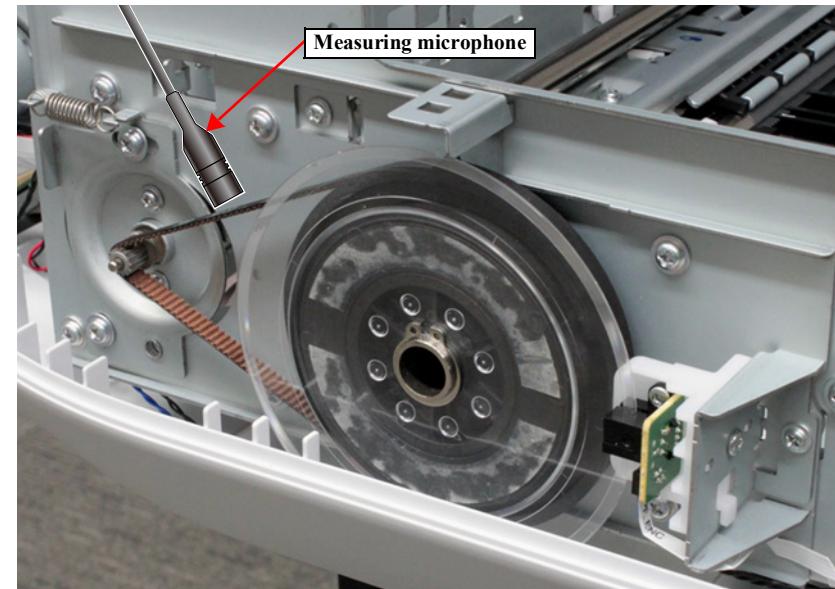


Figure 4-72. Measurement position

*Continue to the next page.*

8. Press [MEASURE] on the tensimeter, flip the belt with tweezers or a similar tool and measure the belt tension.



- Flip the timing belt as weak as the tensimeter can measure it.
- Be careful not to let the microphone touch the timing belt when flipping the belt.

9. Click the [Rotate] button.  
The PF roller is rotated 90 degrees.
10. Measure the belt tension again.
11. Repeat Step 9. to Step 10. two times, and measure the belt tension at four points.
12. Check if the average is within the standards.
  - Within the standards: Finish the adjustment.
  - Out of the standards: Go on to the next procedure.
13. Loosen the two screws securing the PF Motor Securing Plate.

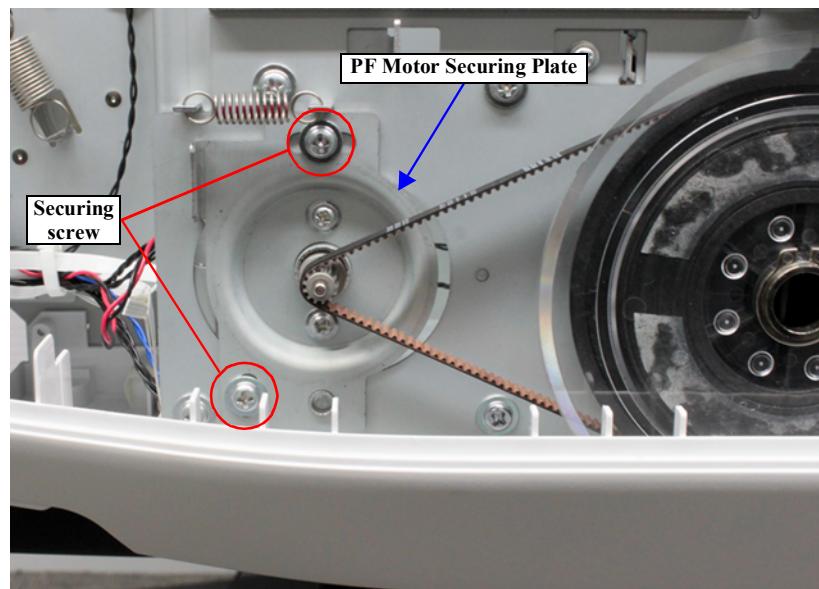


Figure 4-73. PF Belt tension adjustment

14. Change the belt tension according to the previous result, and tighten the screws.
15. Perform the adjustment from Step 8.

## 4.10.2 Paper Feed Adjustment (A area)

### THINGS TO PREPARE

Singleweight Matte Paper 24/36 inch

### ESTIMATE TIME

Approximately four minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [center of the screen], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **Paper Feed Adjustment (A area)**.

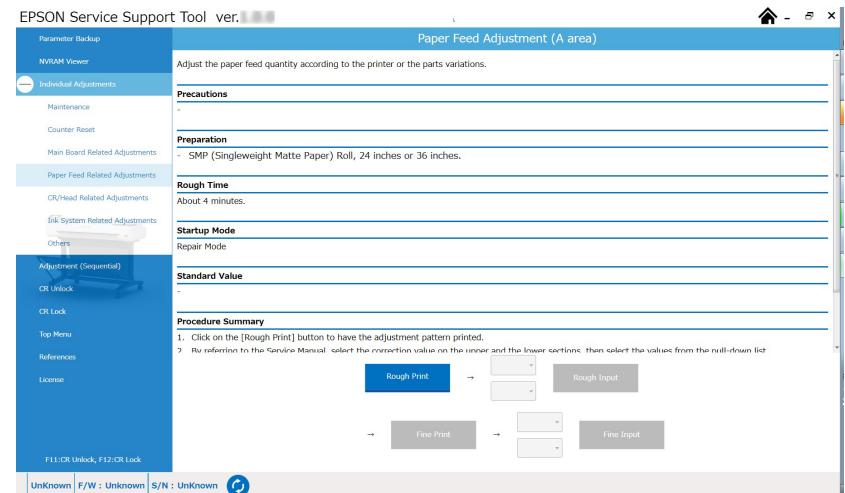


Figure 4-74. [Paper Feed Adjustment (A area)] screen

*Continue to the next page.*

3. Click the [Rough Print] button to print the rough adjustment pattern.
4. Refer to [Figure 4-75](#), and select the pattern that the white gap between each upper row and lower row is the narrowest.

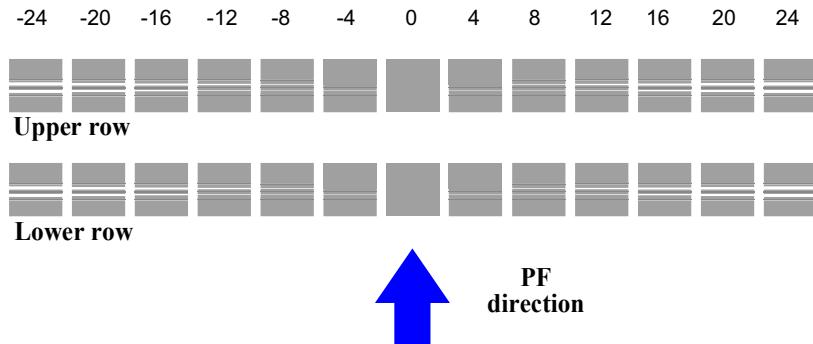


Figure 4-75. Adjustment pattern (rough adjustment)

5. Select correction value in the pull-down menu of the service program.
6. Click the [Rough Input] button to write the adjustment value.

7. Click the [Fine Print] button to print the fine adjustment pattern.
8. Refer to [Figure 4-76](#), and select the pattern that the white gap between each upper row and lower row is the narrowest.

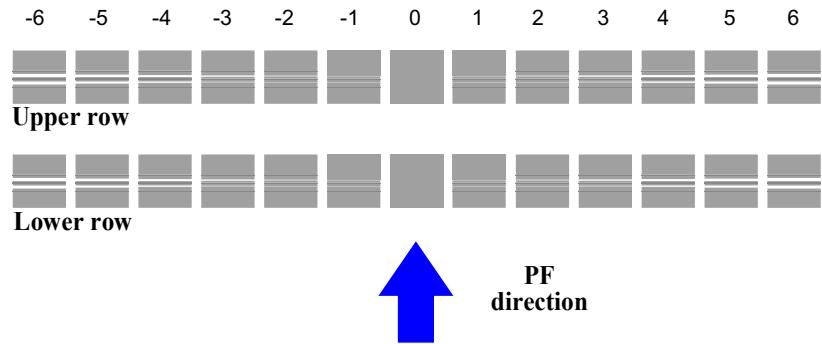


Figure 4-76. Adjustment pattern (fine adjustment)

9. Select correction value in the pull-down menu of the service program.
10. Click the [Fine Input] button to write the adjustment value.

## 4.10.3 Paper Feed Adjustment (B area)

### THINGS TO PREPARE

EPSON Enhanced (Archival) Matte Paper A4

### ESTIMATE TIME

Approximately 7 minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [center of the screen], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **Paper Feed Adjustment (B area)**.

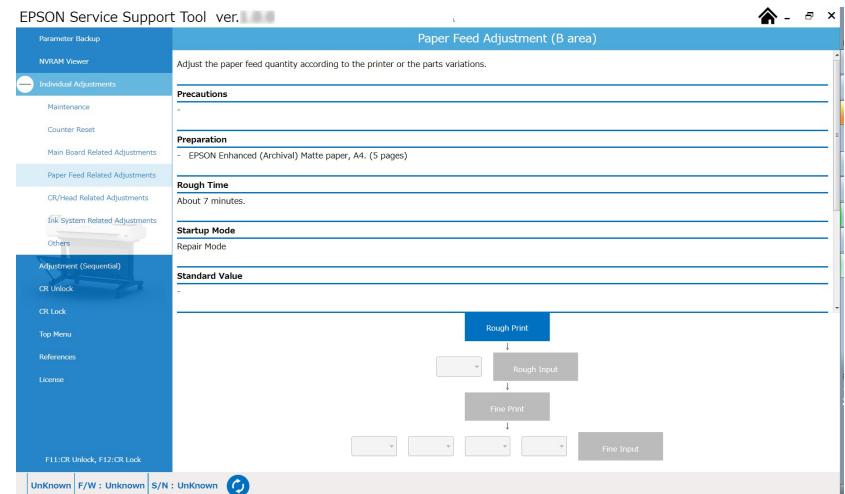


Figure 4-77. [Paper Feed Adjustment (B area)] screen

*Continue to the next page.*

3. Set EPSON Enhanced (Archival) Matte Paper to ASF.
4. Click the [Rough Print] button to print the rough adjustment pattern.
5. Refer to [Figure 4-78](#), and select the pattern that the white gap is the narrowest.

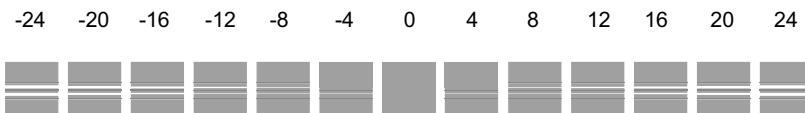


Figure 4-78. Adjustment pattern (rough adjustment)

6. Select correction value in the pull-down menu of the service program.
7. Click the [Rough Input] button to write the adjustment value.
8. Set EPSON Enhanced (Archival) Matte Paper to ASF.
9. Click the [Fine Print] button to print the fine adjustment pattern.
10. Refer to [Figure 4-79](#), and select the pattern that the white gap is the narrowest.

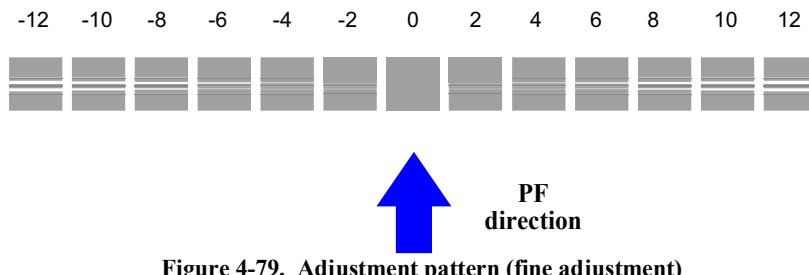


Figure 4-79. Adjustment pattern (fine adjustment)

11. Select correction value in the pull-down menu of the service program.



**CHECK POINT**  
There are four pull-down, but only one can be selected per one printing. Perform printing four times to select the proper correction value for each pull-down.

## 4.10.4 Cutter Home Position Adjustment

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Inspection mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn ON the printer in inspection mode.  
Turn the power ON while pressing [**left side of the screen**], keep pressing until the mode select menu is displayed. (P. 55)
2. Start the service program and select **Cutter Home Position Adjustment**.



**Make sure to perform in inspection mode. If not, service call “001137” occurs. When error occurred, Turn ON the printer in inspection mode and perform adjustment again.**

3. By clicking the [**Execute**] button, the CR Unit moves to the adjustment position on the Full side.
4. Open the cutter cover, and manually connect the Cutter Unit with the CR Unit.  
(Connection is complete if you hear them click)
5. Close the Cutter Cover, and click the [**OK**] button in the service program screen.

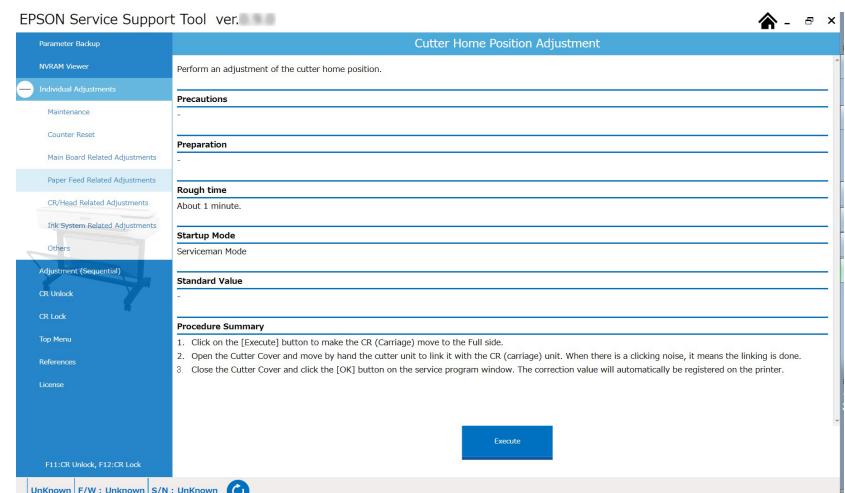


Figure 4-80. [Cutter Home Position Adjustment] screen

## 4.10.5 Cut Position Check & Adjustment

### THINGS TO PREPARE

- Singleweight Matte Paper 24/36 inch
- Ruler

### ESTIMATE TIME

Approximately two minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

Average Standard Value:  $15 \pm 0.3\text{mm}$

Differential value Standard Value: within 1 mm

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **Cut Position Check & Adjustment**.
3. Click the **[Print]** button to print the adjustment pattern.

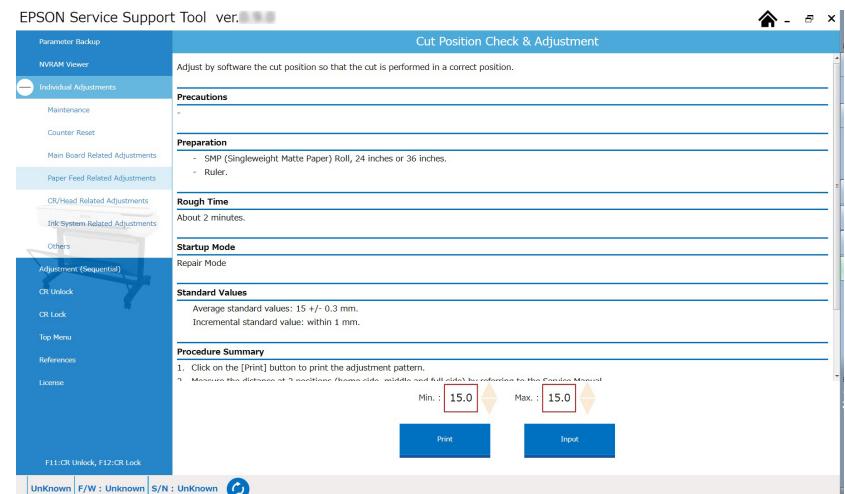
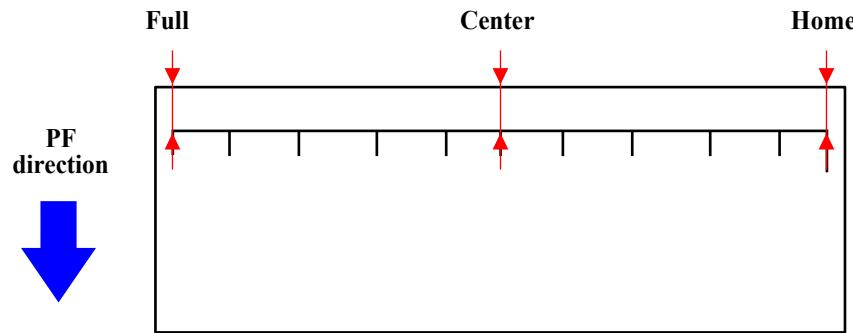


Figure 4-81. [Cut Position Check & Adjustment] screen

Continue to the next page.

4. Measure the distance of three points, Home, center, and Full shown in [Figure 4-82](#).
5. Check if the average of measured maximum value and minimum value is within the standard range.
6. Check if the differential value of measured maximum value and minimum value is within the standard range.
  - Both values are within the standard: Go to [Step 10](#)
  - Both values are out of standard: Go to [Step 7](#)



**Figure 4-82. Adjustment pattern**

7. Write the maximum value and the minimum value obtained in [Step 4](#) to the service program.
8. Click the **[Input]** button to write the correction value.
9. Perform [Step 3](#) to [Step 6](#).
10. Finish the adjustment.

## 4.10.6 PW Sensor Check & Adjustment

### THINGS TO PREPARE

EPSON Enhanced (Archival) Matte Paper A4

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **PW Sensor Check & Adjustment**.
3. Load paper from the manual insertion slot.
4. Click the **[Execute]** button to perform automatic check and adjustment.  
If the error occurred, perform this adjustment again. If the error occurred, remove and attach the PW Sensor, then perform this adjustment again. Even if not improved, replace the PW Sensor.

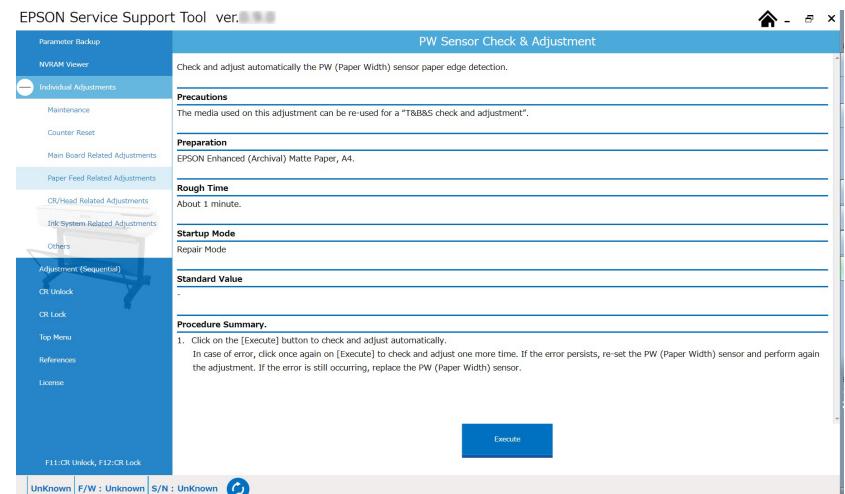


Figure 4-83. [PW Sensor Check & Adjustment] screen

## 4.10.7 T&B&S Check & Adjustment

### THINGS TO PREPARE

- EPSON Enhanced (Archival) Matte Paper A4  
(Load the paper used for PW Sensor Check & Adjustment.)
- Ruler

### ESTIMATE TIME

Approximately two minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

- Top (A): 10 +/- 0.4 mm
- Top (B): 10 +/- 0.4 mm
- Home: 10 +/- 0.4 mm
- Full: 10 +/- 0.4 mm
- Bottom: 14 +/- 0.4 mm

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [center of the screen], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **T&B&S Check & Adjustment**.
3. Load paper from the manual insertion slot.
4. Click the **[Print]** button to print the adjustment pattern.

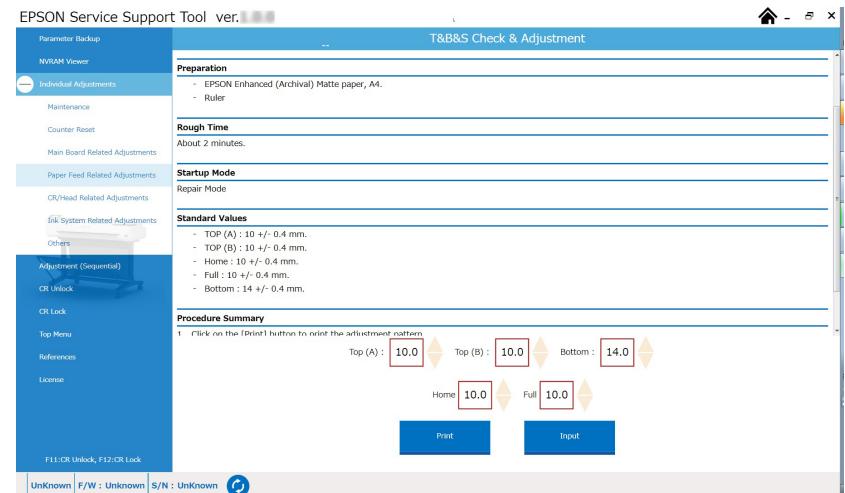


Figure 4-84. [T&B&S Check & Adjustment] screen

Continue to the next page.

5. Measure the distance for the positions shown in [Figure 4-85](#).
6. Check if the measured values are within the standard range.
  - Measured values are within the standard: Go to [Step 10](#).
  - Measured values are out of standard: Go to [Step 7](#).
7. If the measured values are out of standard, write all values to the service program.
8. Click the [**Input**] button to write the correction value.
9. Perform [Step 3](#). to [Step 6](#).
10. Finish the adjustment.

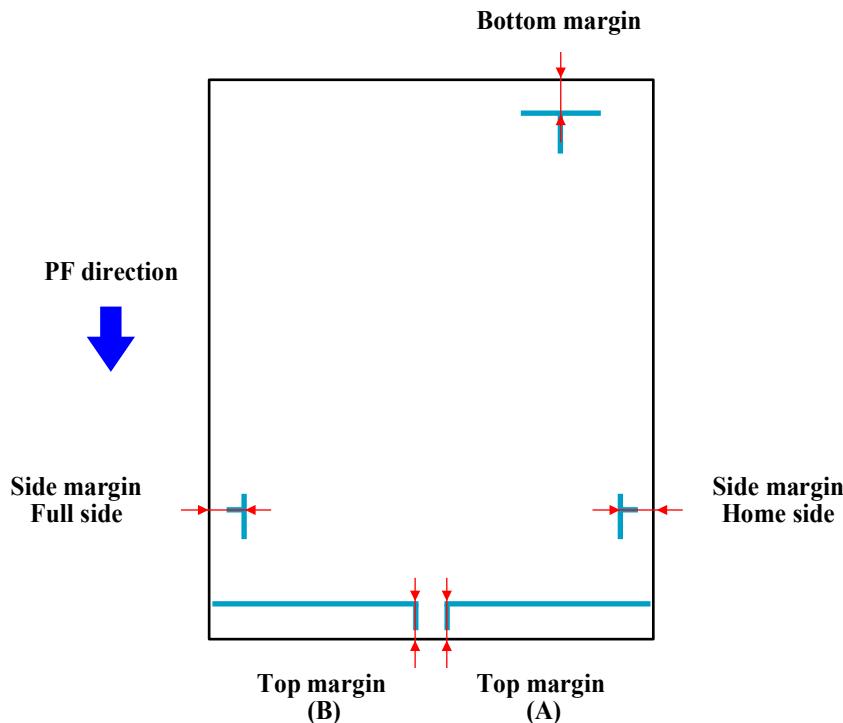


Figure 4-85. Adjustment pattern

## 4.10.8 1st Dot Position Adjustment

### THINGS TO PREPARE

- EPSON Enhanced (Archival) Matte Paper A4
- Ruler

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

$3 \pm 1$  mm

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **1st Dot Position Adjustment**.
3. Load paper into the ASF.
4. Click the **[Print]** button to print the adjustment pattern.

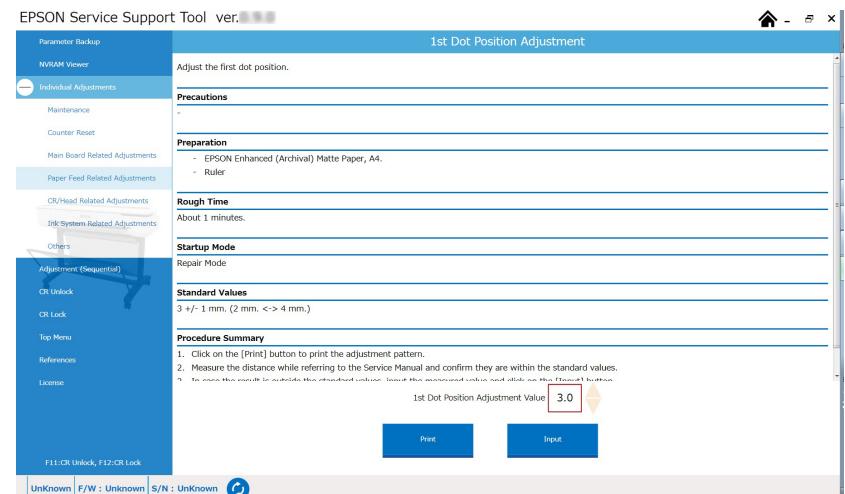
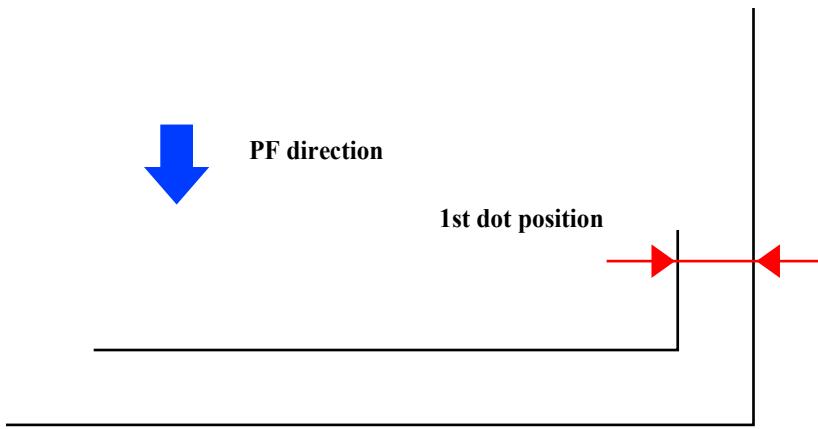


Figure 4-86. [1st Dot Position Adjustment] screen

Continue to the next page.

5. Measure the distance for the positions shown in [Figure 4-87](#).
6. Check if the measured values are within the standard range.
  - Measured values are within the standard: Go to [step 10](#)
  - Measured values are out of standard: Go to [step 7](#)



**Figure 4-87. Adjustment pattern**

7. If the measured values are out of standard, write the value to the service program.
8. Click the [Input] button to write the correction value.
9. Perform [step 3](#) to [step 6](#).
10. Finish the adjustment.

## 4.10.9 PF Scale Check

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [**center of the screen**], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. ([P. 56](#))
2. Start the service program and select **PF Scale Check**.
3. If any paper is loaded, remove it.
4. Click the [**Execute**] button to check the PF Scale has no abnormality such as damage and is able to read properly automatically.
  - When **Finished** appears: Click the [**OK**] button to finish the check.
  - When **Fail** appears: Go to [Step 5](#).
5. Since the PF Scale may is not scanned correctly, clean the scale using ethanol. After cleaning, perform [Step 4](#). again to check.  
If the scale still cannot be read properly, replace the PF Scale since it may be damaged.  
Otherwise, replace the PF Encoder and check again.

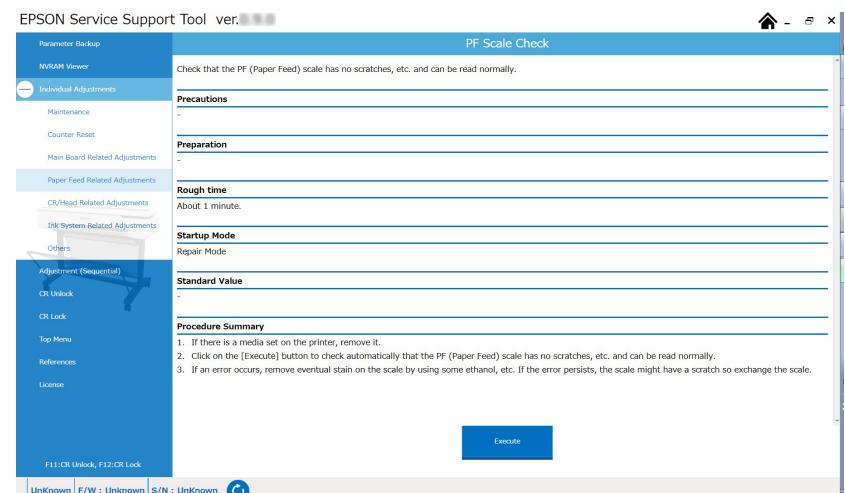


Figure 4-88. [PF Scale Check] screen

## 4.10.10 PF Motor Measurement & Auto Adjustment

### THINGS TO PREPARE

---

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing [center of the screen], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **PF Motor Measurement & Auto Adjustment**.
3. When any paper is loaded, remove it.
4. Click the **[Execute]** button.  
The correction value is calculated automatically and the obtained value is written in the printer.



**Do not touch the printer during measurement. Otherwise, the adjustment may fail.**

5. When **Fail** appears, perform the adjustment again. If not improved, replace the PF Motor.

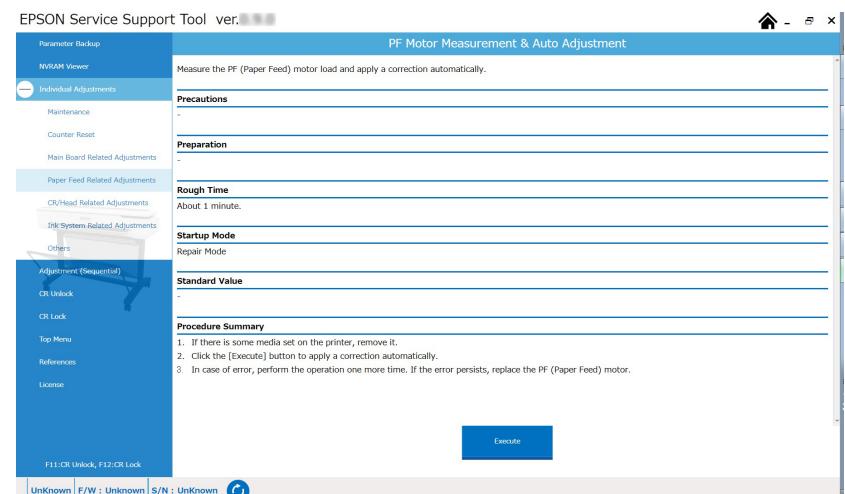


Figure 4-89. [PF Motor Measurement & Auto Adjustment] screen

## 4.10.11 ATC Motor Measurement & Auto Adjustment

### THINGS TO PREPARE

Singleweight Matte Paper 24/36 inch

### ESTIMATE TIME

Approximately two minutes

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **ATC Motor Measurement & Auto Adjustment**.
3. Secure the tip of the roll paper to prevent paper jam occurring while the measurement.
4. Set roll paper.
5. Click the **[Execute]** button to perform the measurement with roll paper set.



**Do not touch the printer during measurement. Otherwise, the adjustment may fail.**

6. When the message is displayed on the service program, remove the roll paper from the Spindle, set only Spindle, and click the **[OK]** button. Perform the measurement without roll paper.
7. If error occurred, perform the measurement again. If not improved, use a new roll paper and perform the measurement again. Even if not improved, replace the ATC Motor.

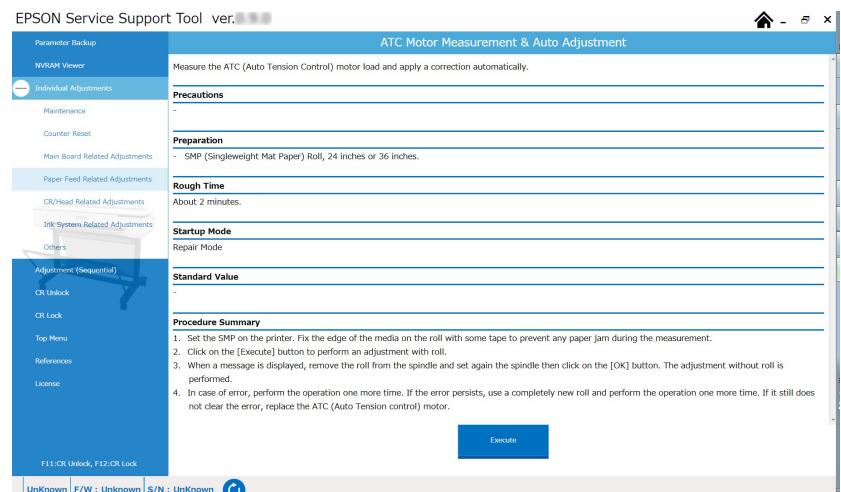


Figure 4-90. [ATC Motor Measurement & Auto Adjustment] screen

## 4.10.12 ATC Motor Replacement Date & Time Setting

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **ATC Motor Replacement Date & Time Setting**.
3. Click the **[Execute]** button to save the replacement history in the printer.

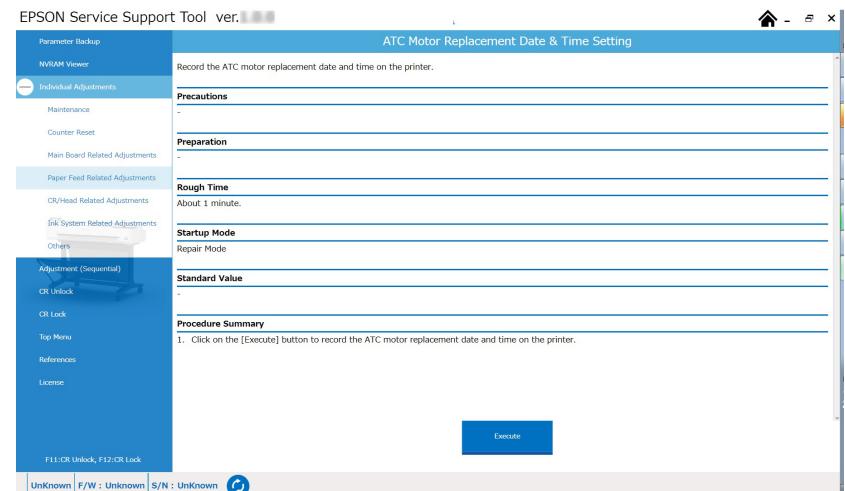


Figure 4-91. [ATC Motor Replacement Date & Time Setting] screen

## 4.10.13 PF Scale Replacement Date & Time Setting

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **PF Scale Replacement Date & Time Setting**.
3. Click the **[Execute]** button to save the replacement history in the printer.

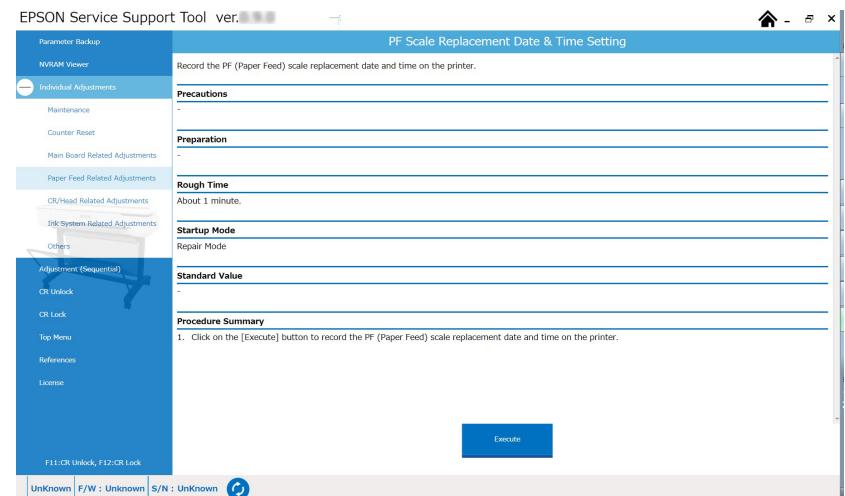


Figure 4-92. [PF Scale Replacement Date & Time Setting] screen

## 4.10.14 ASF Unit Counter Reset

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode/Inspection mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
  - Inspection mode  
Turn the power ON while pressing **[left side of the screen]**, keep pressing until the mode select menu is displayed. (P. 55).
2. Start the service program and select **ASF Unit Counter Reset**.
3. Click the **[Execute]** button to reset the counter.
4. Turn off and back on the printer in the repair mode.
5. With NVRAM Viewer, verify that the counter has been reset to “0”. (perform parameter backup)

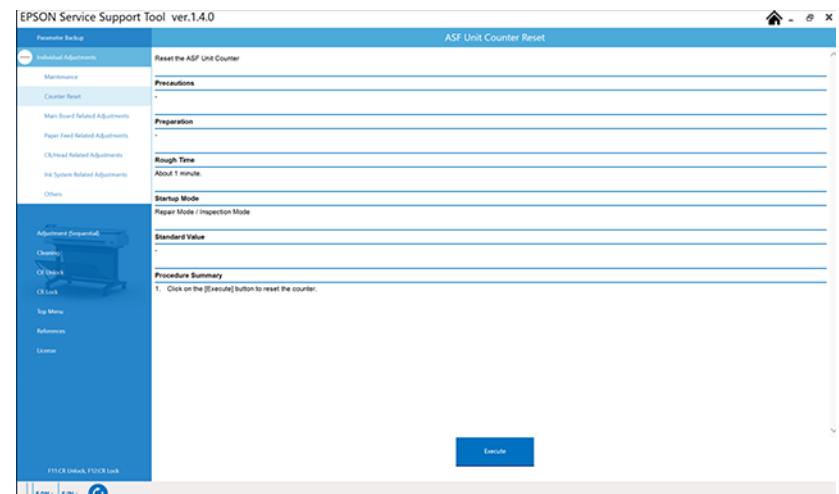


Figure 4-93. [ASF Unit Counter Reset] screen

## 4.10.15 PF Motor Counter Reset

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode/Inspection mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
  - Inspection mode  
Turn the power ON while pressing **[left side of the screen]**, keep pressing until the mode select menu is displayed. (P. 55).
2. Start the service program and select **PF Motor Counter Reset**.
3. Click the **[Execute]** button to reset the counter.
4. Turn off and back on the printer in the repair mode.
5. With NVRAM Viewer, verify that the counter has been reset to “0”. (perform parameter backup)

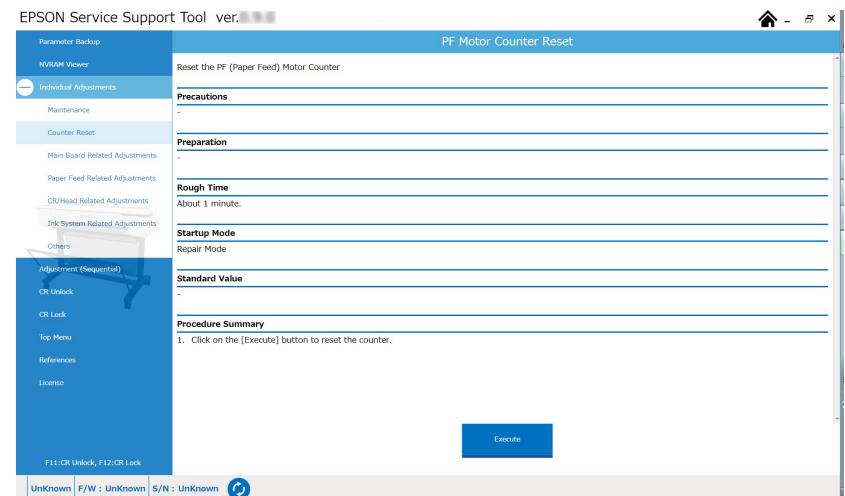


Figure 4-94. [PF Motor Counter Reset] screen

## 4.11 Boards Related Adjustments

### 4.11.1 RTC Input

#### THINGS TO PREPARE

--

#### ESTIMATE TIME

Approximately one minute

#### EXECUTION MODE

Repair mode/Inspection mode

#### STANDARD VALUE

--

#### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing [center of the screen], keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
  - Inspection mode  
Turn the power ON while pressing [left side of the screen], keep pressing until the mode select menu is displayed. (P. 55).
2. Start the service program and select **RTC Input**.
3. Click the [**Update**] button to display the time of PC on the service program.
4. Change date and time manually if necessary.
5. Click the [**Input**] button to set RTC.

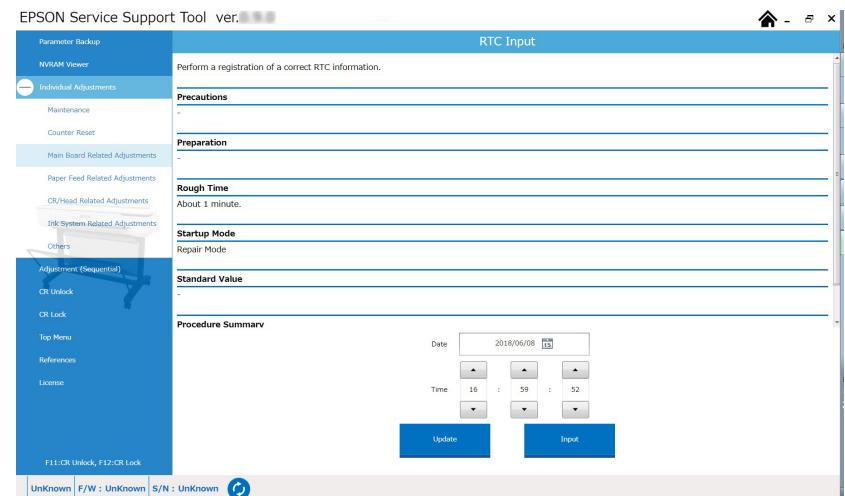


Figure 4-95. [RTC Input] screen

## 4.11.2 MAC Address Check & Input

### THINGS TO PREPARE

Network cable

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Inspection mode

### STANDARD VALUE

---

### PROCEDURE

1. Turn ON the printer in inspection mode.  
Turn the power ON while pressing [**left side of the screen**], keep pressing until the mode select menu is displayed. ([P. 55](#))
2. Start the service program and **MAC Address Check & Input**.

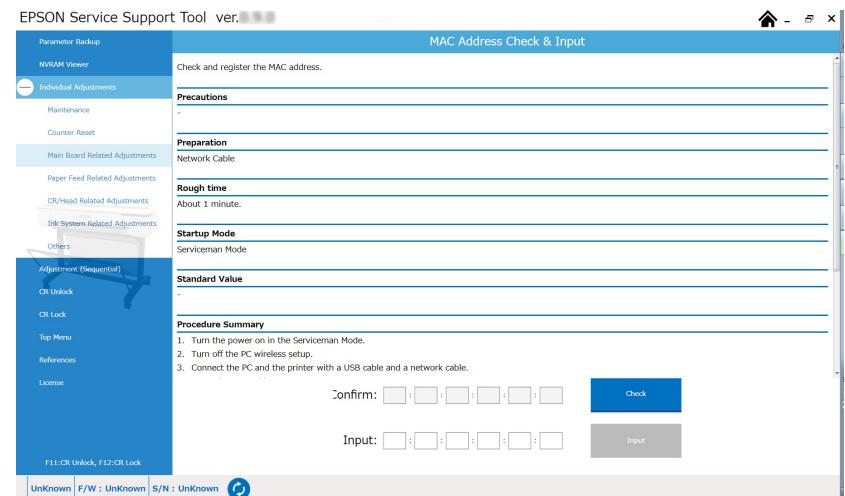


Figure 4-96. [MAC Address Check & Input] screen

*Continue to the next page.*

3. Turn off the wireless setting of the PC.
4. Connect the printer to the computer with the network cable and USB cable.
5. Refer to [Figure 4-97](#), and input the MAC address written on the label pasted on the printer.
6. Click the [Input] button to write the MAC address.
7. Click the [Check] button to check the Mac address displayed on the screen matches the inputted value.

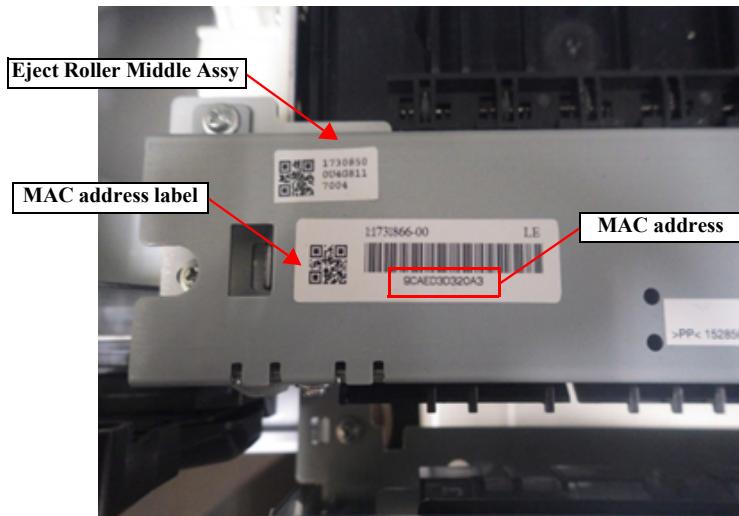


Figure 4-97. MAC address label

### 4.11.3 Serial Number & USB-ID Check & Input

#### THINGS TO PREPARE

--

#### ESTIMATE TIME

Approximately one minute

#### EXECUTION MODE

Repair mode/Inspection mode

#### STANDARD VALUE

--

#### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
  - Inspection mode  
Turn the power ON while pressing **[left side of the screen]**, keep pressing until the mode select menu is displayed. (P. 55).
2. Start the service program and **Serial Number & USB-ID Check & Input**.

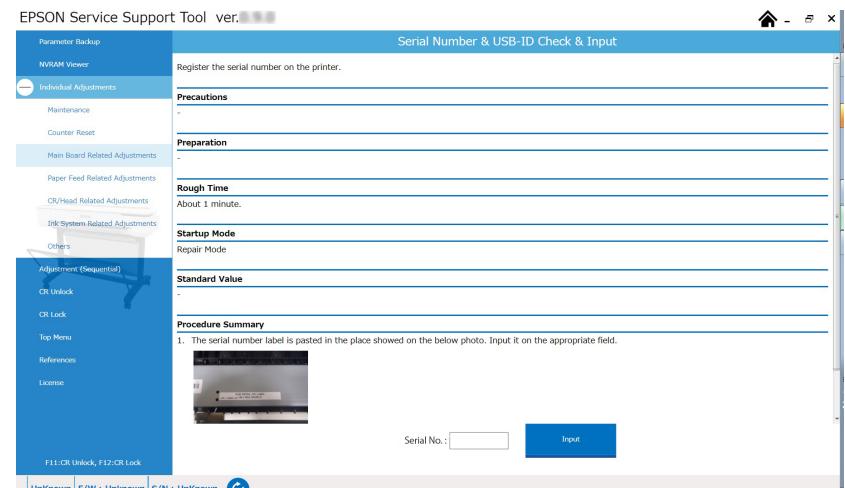


Figure 4-98. Serial Number & USB-ID Check & Input screen

*Continue to the next page.*

3. Refer to [Figure 4-98](#), and input the serial number written on the label pasted on the printer.
4. Click the **[Input]** button to write the serial number.
5. Check the serial number (S/N) displayed on the bottom left of the service program screen is inputted value.

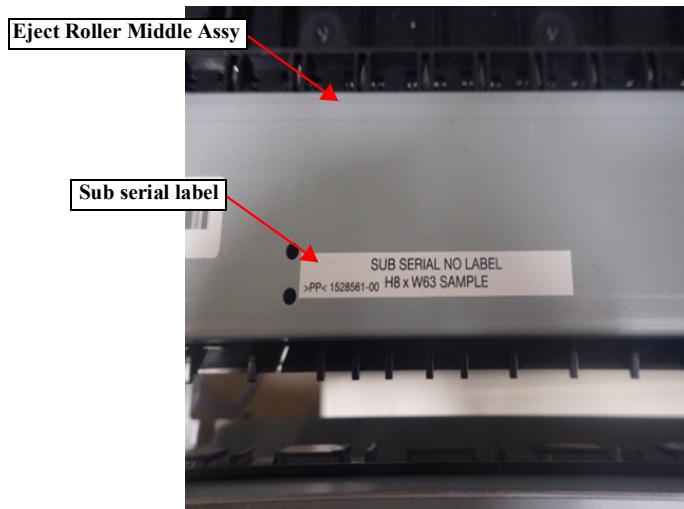


Figure 4-99. Sub serial label

## 4.11.4 NVRAM Backup/Restore

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode/Inspection mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode or Inspection mode.
  - Repair mode  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
  - Inspection mode  
Turn the power ON while pressing **[left side of the screen]**, keep pressing until the mode select menu is displayed. (P. 55).
2. Start the service program and **NVRAM Backup/Restore**.
3. Click **[Read]** to back up the NVRAM data.
4. Click **[Write]** to restore the NVRAM data.
5. Click **[File Reference]** to select the restoring NVRAM data, and select the file.

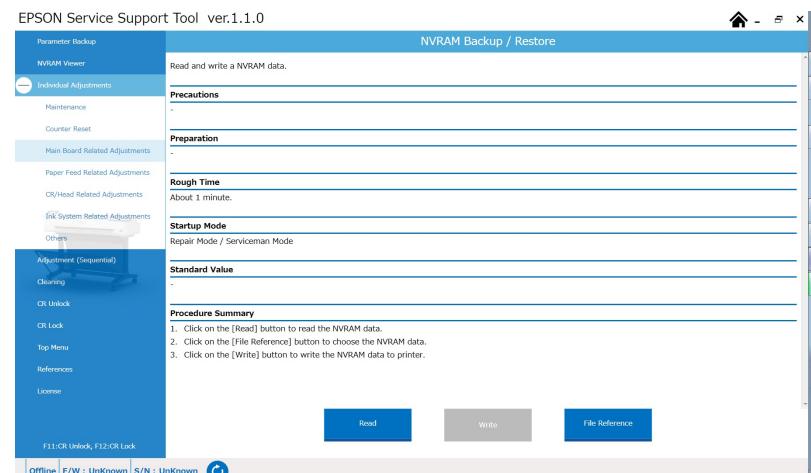


Figure 4-100. [NVRAM Backup/Restore] screen

## 4.11.5 Main Board Initial Setting

### THINGS TO PREPARE

---

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Inspection mode

### STANDARD VALUE

---

### PROCEDURE

- Turn ON the printer in inspection mode.  
Turn the power ON while pressing [**left side of the screen**], keep pressing until the mode select menu is displayed. (P. 55)
- Start the service program and **Main Board Initial Setting**.

- In case of standard ink model

- Click the [Execute] button.

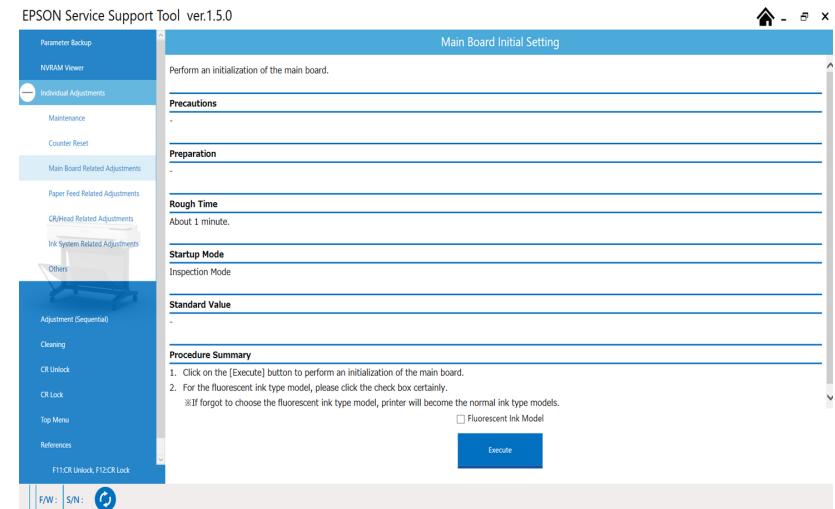


Figure 4-101. [Main Board Initial Setting] screen

- When a message saying “The main board will be initialized. Is it OK?” is displayed, click [OK] button to initialize the main board.

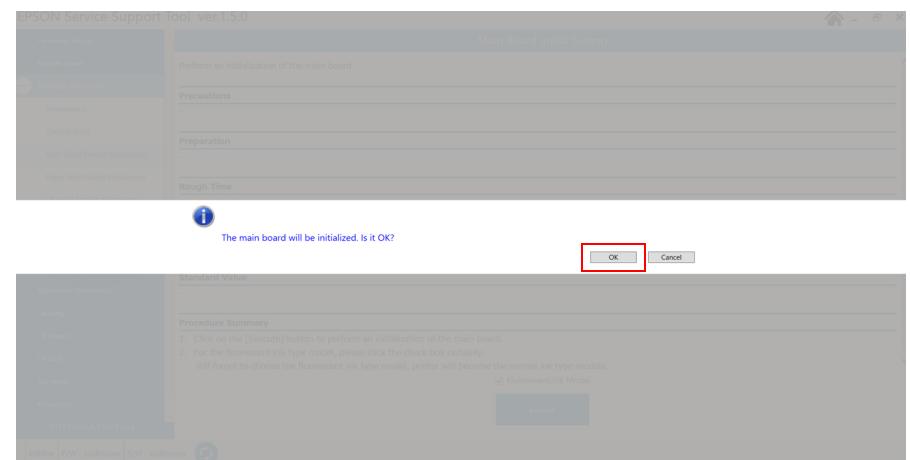


Figure 4-102. [Main Board Initial Setting] screen

- In case of fluorescent ink model

1. Check the [Fluorescent Ink Model].
2. Click the [Execute] button.

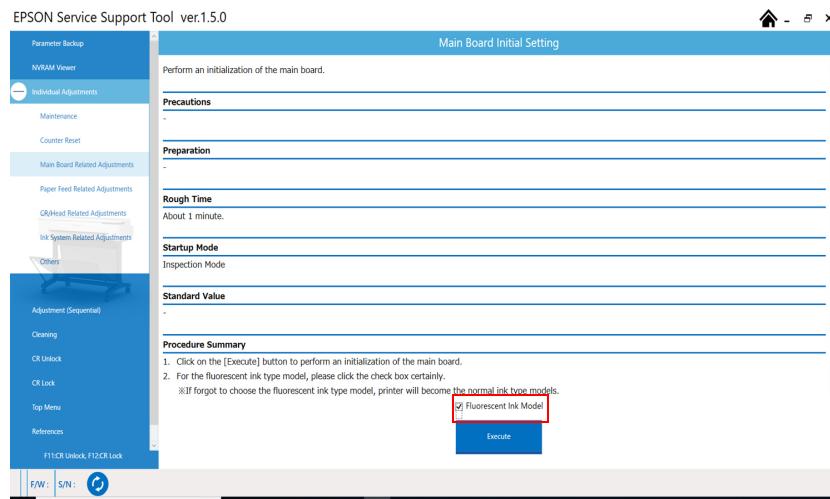


Figure 4-103. [Main Board Initial Setting] screen

3. When a message saying “The main board will be initialized. Is it OK?” is displayed, click the [OK] button.

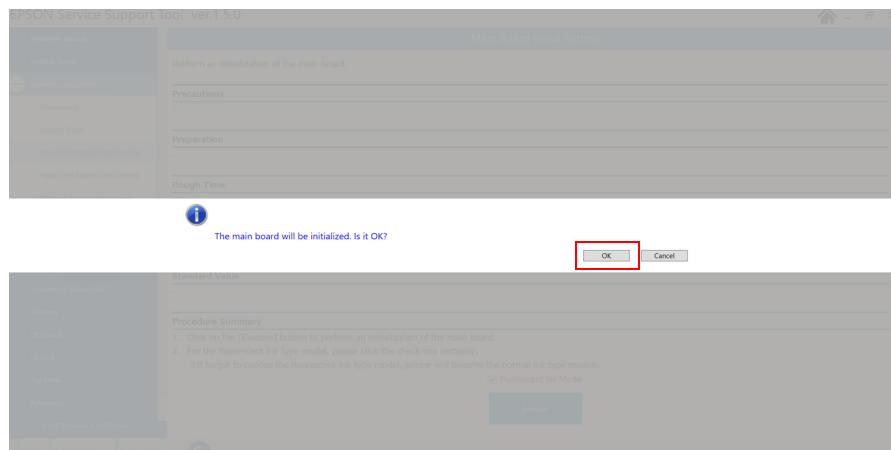


Figure 4-104. [Main Board Initial Setting] screen

4. When a message saying “Fluorescent Ink set will be available. Sure?” is displayed, click [OK] button to initialize the main board.

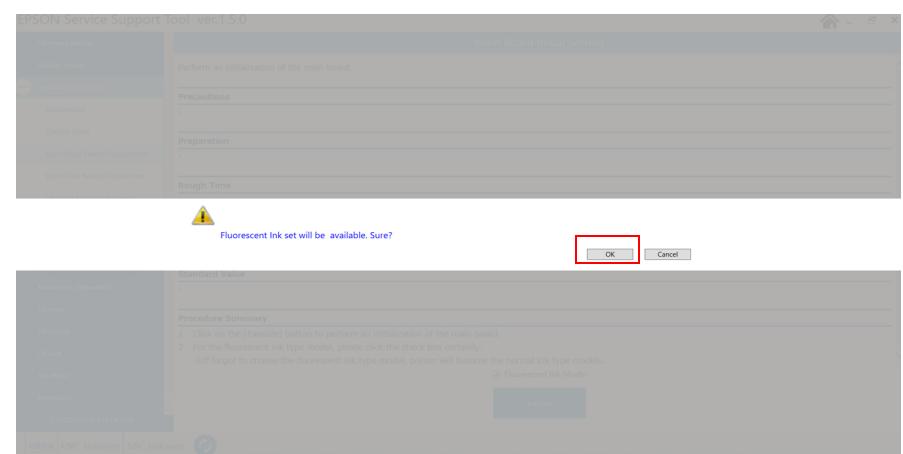


Figure 4-105. [Main Board Initial Setting] screen

## 4.11.6 Main Board Replacement Date & Time Setting

### THINGS TO PREPARE

--

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

--

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and **Main Board Replacement Date & Time Setting**.
3. Click the **[Execute]** button to save the replacement history.

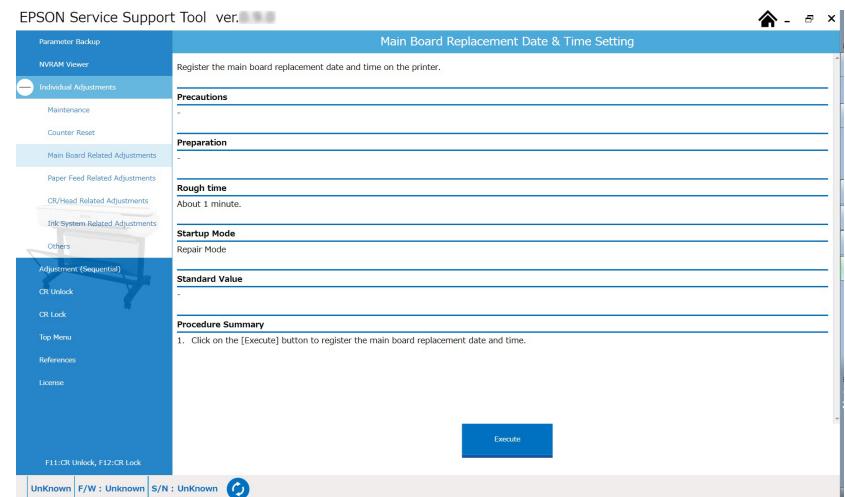


Figure 4-106. [Main Board Replacement Date & Time Setting] screen

## 4.11.7 Power Supply Board Replacement Date & Time Setting

### THINGS TO PREPARE

---

### ESTIMATE TIME

Approximately one minute

### EXECUTION MODE

Repair mode

### STANDARD VALUE

---

### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and **Power Supply Board Replacement Date & Time Setting**.
3. Click the **[Execute]** button to save the replacement history.

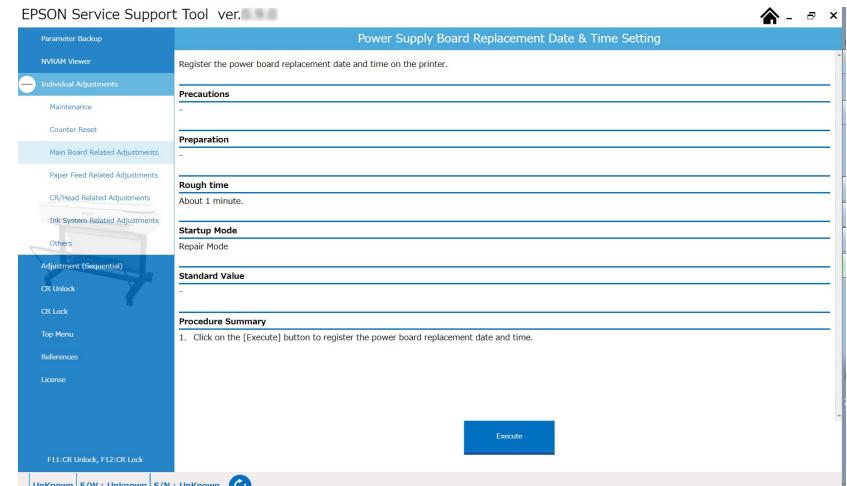


Figure 4-107. [Power Supply Board Replacement Date & Time Setting] screen

## 4.12 Others

### 4.12.1 Panel Check

#### THINGS TO PREPARE

--

#### ESTIMATE TIME

Approximately one minute

#### EXECUTION MODE

Inspection mode

#### STANDARD VALUE

--

#### PROCEDURE

1. Turn ON the printer in inspection mode.  
Turn the power ON while pressing [left side of the screen], keep pressing until the mode select menu is displayed. (P. 55)
2. Select **Inspection Menu**.  
Check the color of Inspection Menu is red, and press the center of the Touch Panel.



**Operation of the Touch Panel in the Inspection mode is as following.**

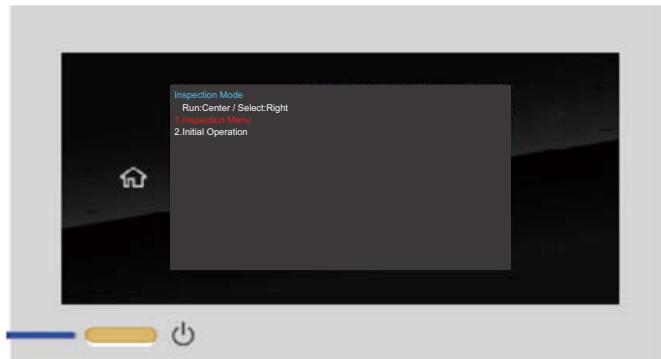
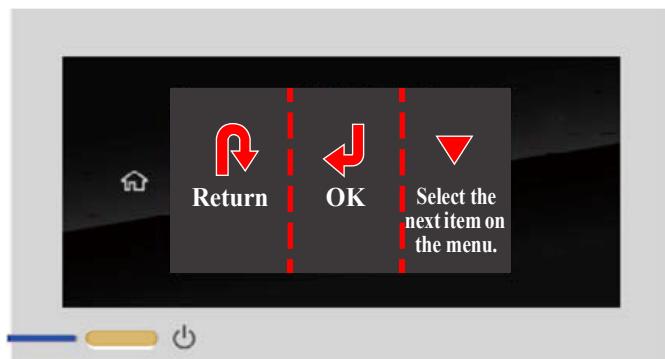


Figure 4-108. Panel Check (1)

*Continue to the next page.*

3. Press the right side of the Panel several times to select **Panel Display Check**, then press the center of the Touch Panel.

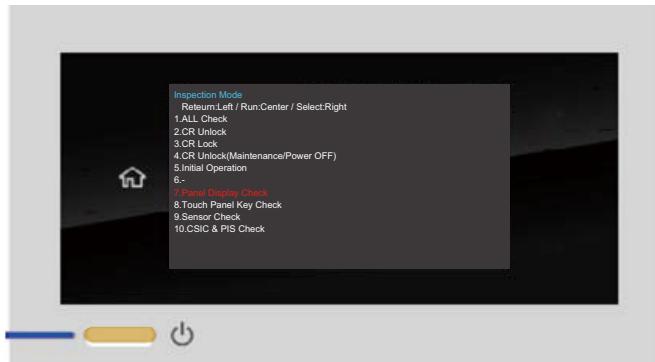


Figure 4-109. Panel Check (2)

4. Check the **Panel Display Check OK?** is displayed, then press the center of the Touch Panel.
5. Check the color name displayed on the screen and the actual color of the panel matches.
6. If so, press the center of the Touch Panel.  
Press in the order of White, Black, Red, Green, and Blue, and check the gray scale is displayed at last.
7. When **Complete!** is displayed, press the center of the Touch Panel to return to the menu.

## 4.12.2 Print Head Ground Resistance Check

### THINGS TO PREPARE

Ohmmeter

### ESTIMATE TIME

Approximately three minutes

### EXECUTION MODE

--

### STANDARD VALUE

A: 97 Ω or less

B: 100 Ω or less

### PROCEDURE

1. Remove the following parts in advance.
  - Top Cover ([P. 158](#))
  - Pump Cap Unit Cover ([P. 212](#))
2. Unlock the CR unit manually. ([P. 146](#))

3. Measure the resistance between the head edge and screw part shown below using ohmmeter.



- Make sure to perform when the printer is turned OFF. Also, make sure to unplug the AC Inlet.
- Do not hit the terminal of ohmmeter to the Print Head.

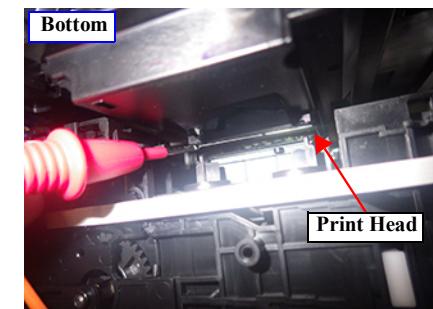
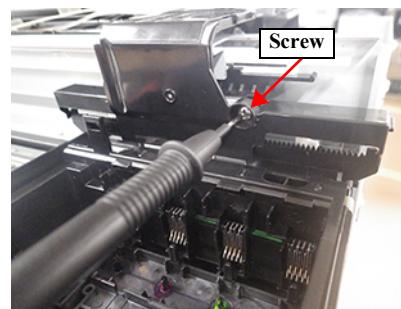


Figure 4-110. Measurement (1)

4. Check the resistance satisfies the standard Value A.
5. Use ohmmeter to measure the resistance between the head edge and screw part shown below.

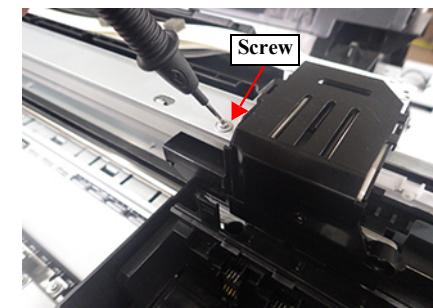
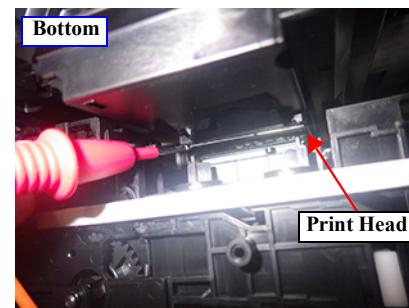


Figure 4-111. Measurement (2)

6. Check the resistance satisfies the standard Value B.
7. If the measured resistance is out of standard, remove and attach the Print Head, and measure the resistance again.

### 4.12.3 Reset for Password of Administrator

#### THINGS TO PREPARE

--

#### ESTIMATE TIME

Approximately one minute

#### EXECUTION MODE

Repair mode

#### STANDARD VALUE

--

#### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **Reset for Password of Administrator**.
3. Click the **[Execute]** button to reset the password of administrator.

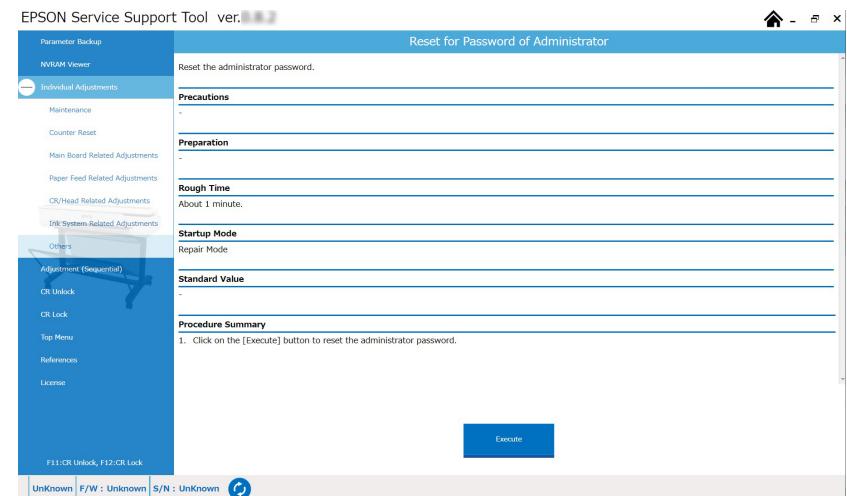


Figure 4-112. [Reset for Password of Administrator] screen

#### 4.12.4 Initial Password Check & Input (EMEA only)

CHECK POINT



Before this adjustment, check if the password label is attached to the product. (Shown by red frame in below photo)

If it is not attached, skip this adjustment.



##### EXECUTION MODE

Repair mode

##### PROCEDURE

1. Turn the printer ON in the repair mode.  
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.  
**(P. 27)**
2. Start the Service Program and select **Initial Password Check & Input (EMEA only)**.
3. Check the password label and enter the password written on the label in the input field.
4. Click the **[Input]** button and write the initial password to the printer. (If you get an error, check if the entered value is correct)

5. Click the **[Check]** button and confirm that the initial password value displayed on the screen is the same as the value on the password label attached to the product.

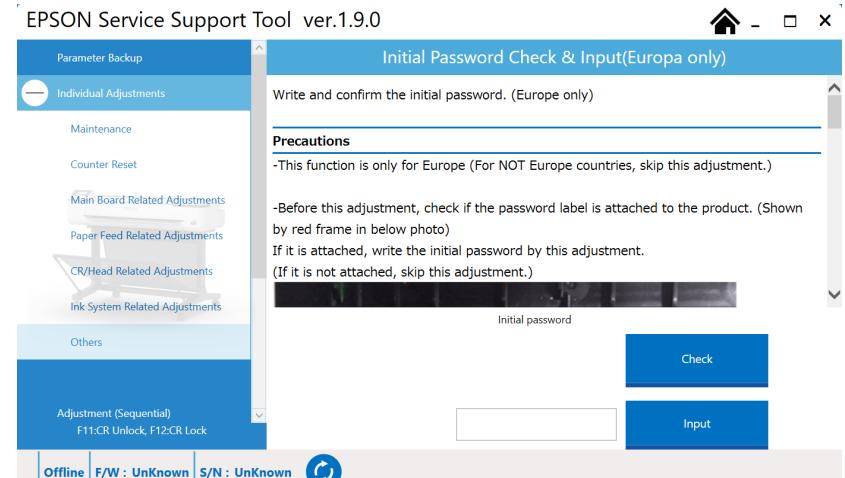


Figure 4-113. [Initial Password Check & Input (EMEA only)] Screen

## 4.13 Maintenance

### 4.13.1 Sensor Check

#### THINGS TO PREPARE

--

#### ESTIMATE TIME

Approximately one minute

#### EXECUTION MODE

Repair mode

#### STANDARD VALUE

--

#### PROCEDURE

1. Turn the printer ON in the Repair mode.  
Turn the power ON while pressing **[center of the screen]**, keep pressing until the mode select menu is displayed. Press the center of the Panel to start the Repair mode. (P. 56)
2. Start the service program and select **Sensor Check**.
3. Click the **[Execute]** button to display the status of each sensor.

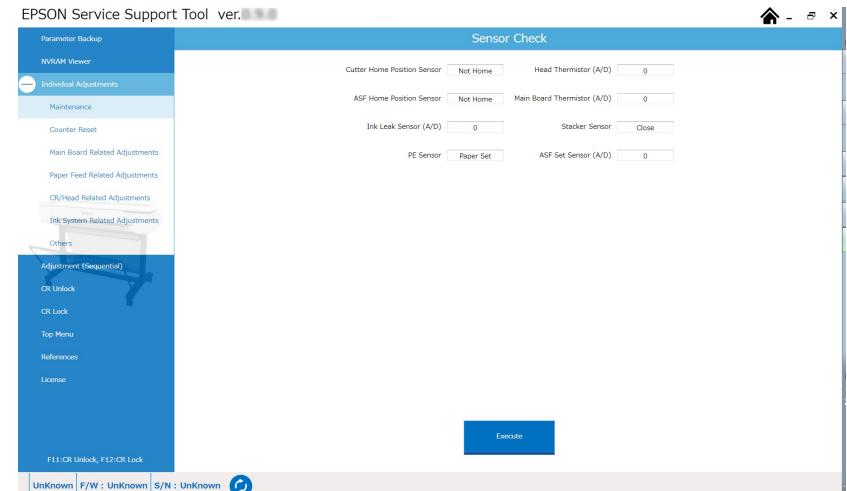


Figure 4-114. [Sensor Check] screen

CHAPTER

5

## MAINTENANCE

## 5.1 Overview

This chapter provides information on how to maintain the printer in its optimum operating condition.

Basically, servicing on the printer should be performed on-site. Be sure to strictly observe the following precautions when servicing to avoid an accident or injury causing the user trouble.



- The power switch is installed on the secondary side of the power circuit, so power is always supplied to the power supply circuit even when the switch is OFF unless the power cord is unplugged from the wall power outlet. Unless otherwise stated (for printing or operation checks), be sure to unplug the power cord from the wall outlet before disassembling or assembling the printer to prevent electric shock and damage to the circuit.
- The Front Sensor provided for detecting open/close status of the Printer Cover also acts as a safety interlock switch. Never disable the switch function to prevent possible injury.
- A lithium battery is mounted on the Main Board (control circuit) for memory backup. Be sure to observe the following precautions when handling the Main Board.
  - Be careful not to short the electrode of the battery.
  - When replacing the battery, make sure to insert it in correct orientation.
  - Never heat the battery or plunge it into the flames.
  - Do not put the Main Board directly on conductive materials.
- Be extremely careful not to get the ink into your eye or let it come into contact with your skin. If it happens, wash out your eye or skin with water immediately. If any abnormality is found, contact a physician.



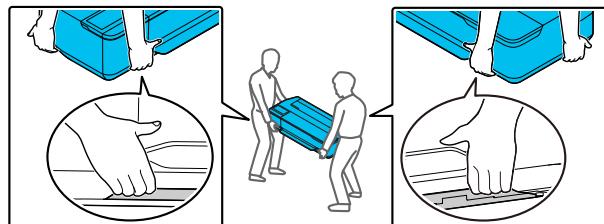
- Ensure sufficient work space for servicing.
- Locate the printer on a stable and flat surface.
- When using compressed air products; such as air duster, for cleaning during repair and maintenance, the use of such products containing flammable gas is prohibited.
- Be sure to spread a sheet of paper or cloth on the work space before removing any ink-path-related parts or components to keep the space from being soiled with leaked ink.
- Do not touch electrical circuit boards with bare hands as the elements on the board are so sensitive that they can be easily damaged by static electricity. If you have to handle the boards with bare hands, use static electricity discharge equipment such as anti-static wrist straps.
- When the printer has to be operated with the covers removed, take extra care not to get your fingers or clothes caught in moving parts such as the fan unit.
- When the printer needs to be repacked for transportation after being used, make sure to follow the steps below after turning the power OFF.
  - Check that the Print head is capped properly.
  - Leave the ink cartridges installed in the printer.
  - Repack the printer using the packaging box, cushioning materials and protective equipment indicated in the unpacking guide.

## 5.2 Moving/Transporting/Storing

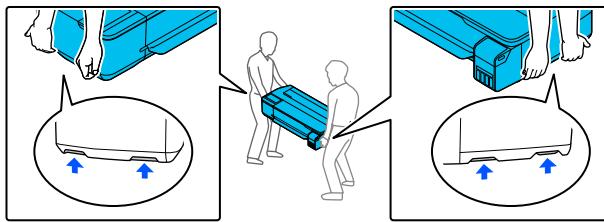
### 5.2.1 Moving



- Do not lift or carry the printer with one person. Make sure to lift or carry the printer with two people or more.
- When moving the printer, do not tilt it 10 degree or more in any directions. Otherwise, you may be injured by an accidental fall.
- When lifting the printer, work in a posture that does not damage your body, and hold the point shown below. Otherwise, printer may fall or you may get injured by catching your finger in between.
- SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series



- SC-T3100X Series/SC-T3100D Series/SC-F500 Series



- For model with Stand, follow the items below to prevent from tumbling.
  - Do not move the printer when the caster is locked.
  - Stay away from the rugged place.
  - Lock the caster after moving the printer.
- Make sure the ink cartridge is installed when transporting.



- Make sure to observe the following points when moving or transporting printers.

- SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series  
Make sure the ink cartridge is installed.
- SC-T3100X Series/SC-T3100D Series/SC-F500 Series  
Make sure the Ink Tank Cap is fully tightened after the Transportation Cap is installed.  
Use wooden pallets to transport printers.

1. Check the following items in advance.
  - Turn the power off, and remove all cables.
  - Remove paper.
  - Remove the Eject Stacker.
  - For SC-T2100/SC-T3100/SC-T5100 Series, close the Eject Basket and unlock the caster.
2. Transport the printer.
3. Turn the power on, perform nozzle check, and perform cleaning if necessary.

## 5.2.2 Transporting to/Storing in Environment of -10 °C or Less

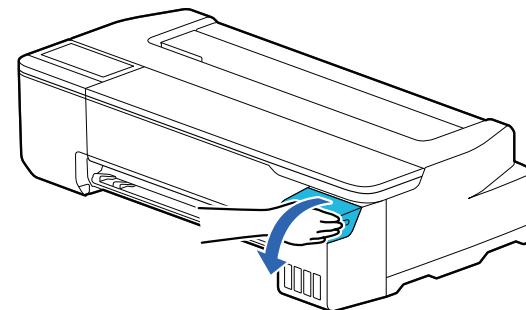
When transporting to/storing in the environment of -10 °C or less, ink ejection is required. Refer to the following and prepare the printer to transport/store in the environment of -10 °C or less.

1. Press **Settings - Maintenance - Discharging/Charging Ink** in this order from the home menu.
2. Press **Start**. The CR Unit moves to the ink cartridge replacing position.
3. Open the Top Cover and CR Cover to remove all ink cartridges.
4. Ink ejection starts when the CR Cover and Top Cover is closed.
5. When the message to set the ink cartridges is displayed on the Panel, open the Top Cover and CR Cover to set all ink cartridges removed in step 3.
6. Close the CR Cover and Top Cover. The printer automatically turns off.

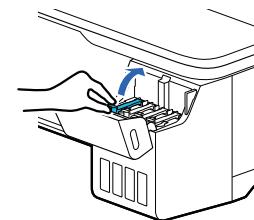
## 5.2.3 Moving and Transporting Ink Tank Models

SC-T3100X Series/SC-T3100D Series/SC-F500 Series has no ink discharge capability. As such, use the following procedure prior to moving or transporting the printer to remove the Transportation Cap and prevent ink leakage.

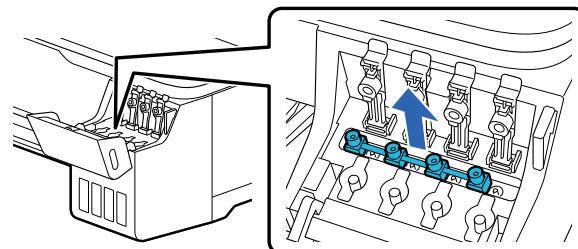
1. Open the Ink Tank Upper Cover.



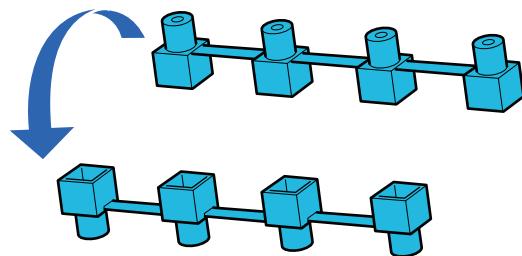
2. Open all Ink Tank Cap.



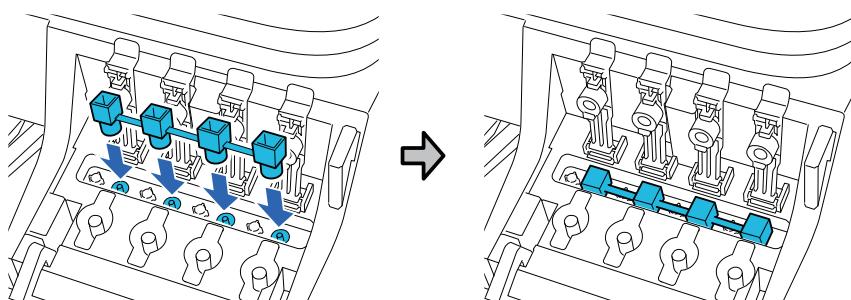
3. Remove the Transportation Cap.



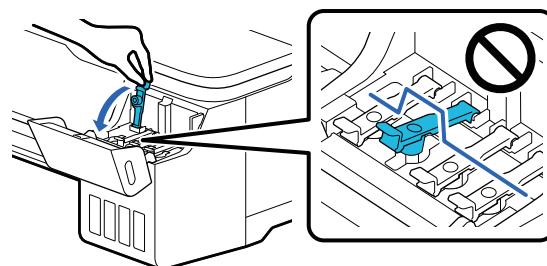
4. Turn over the Transportation Cap.



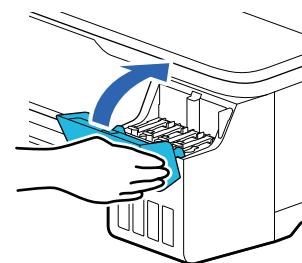
5. Place the overturned Transportation Cap in the position shown in the image (transportation position).



6. Close the Ink Tank Cap firmly.



7. Close the Ink Tank Upper Cover.



## 5.3 Exchange Parts

Exchange parts of this printer are as follows.

**Table 5-1. Exchange Parts**

Parts	Counter	Life		Exchange Timing (call)	
		Maintenance call/ Standard value	Service call	Maintenance call (near life end)	Maintenance call (life end)
Print Head	Head conduction counter	228,883 x 2^20 (Standard value)	---	---	---
	Initial charge date	5 years (Standard value)	---	---	---
RTC Battery	---	5 years or more (Standard value)	---	---	00008000
Pump Cap Unit	Pump counter (operation times)	265,500	270,000	00000001	00010000
Ink Tube Assy	CR Pass Count	1,152,000	1,200,000	00000004	00040000
Ink Tank Upper Porous Pad	Ink Reset (Number of Execute) Total of four colors	282	302	00000008	00080000

## 5.4 Lubrication

This section describes necessary lubrication to maintain the functions and performance of this printer. Make sure to properly lubricate the parts/units specified in this section as necessary when replacing or maintaining them.



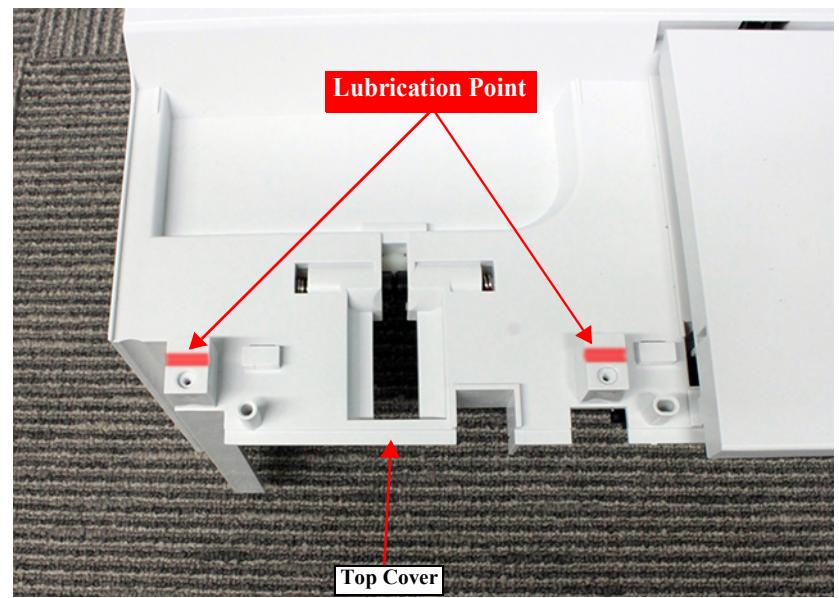
- Make sure to perform the lubrication following the specified lubrication points, lubricants, and amount. Otherwise, the printer may not operate normally.
- When lubricating the originally installed parts, first wipe off the old lubricant completely.

### LUBRICATION POINTS LIST

Lubrication No.	Corresponding Part	Name of Lubricant	Lubrication Tool	Reference
1	Top Cover	Part name: G-97 Part code: 1635441	φ 2 mm injector	<a href="#">P. 398</a>
2	Left Upper Cover B	Part name: G-97 Part code: 1635441	φ 2 mm injector	<a href="#">P. 399</a>
3	CR Main Shaft	Part name: O-17 Part code: 1521154	φ 2 mm injector	<a href="#">P. 399</a>
4	CR Sub Shaft	Part name: G-97 Part code: 1635441	φ 2 mm injector	<a href="#">P. 400</a>
5	Oil Pad	Part name: O-17 Part code: 1521154	---	<a href="#">P. 400</a>
6	CR Unit	Part name: G-97 Part code: 1635441	φ 2 mm injector	<a href="#">P. 401</a>
7	CR Slider	Part name: G-97 Part code: 1635441	φ 2 mm injector	<a href="#">P. 401</a>
8	CR Frame	Part name: G-97 Part code: 1635441	Brush	<a href="#">P. 402</a>
9	Paper Guide Front Support	Part name: G-96 Part code: 1590700	Brush	<a href="#">P. 402</a>

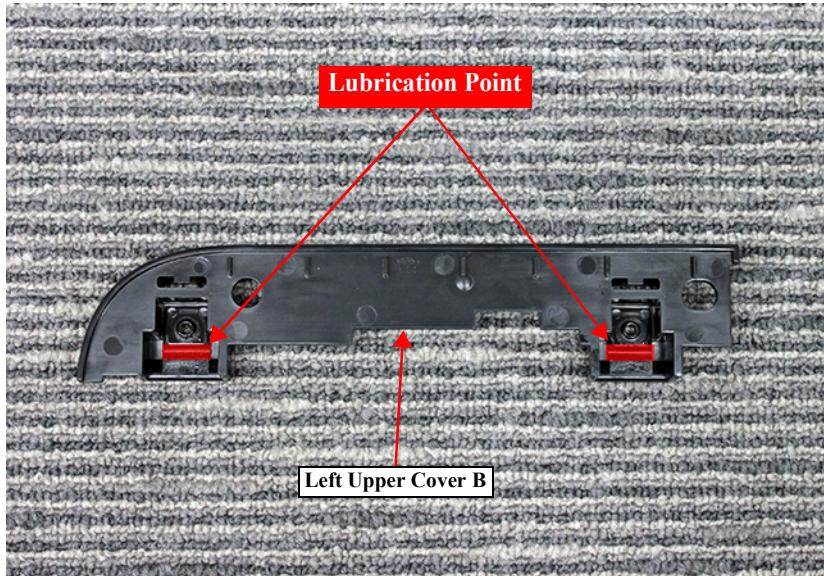
### [Lubrication 1]

Part Name	Top Cover
Lubricants (Part Code)	G-97 (1635441)
Amount	φ 2 mm x 1 mm x 2 points
Lubrication Tool	φ 2 mm injector
Lubrication Manner	Spread the lubricants with brush in the range shown below (hinge part and contact point) after applying specified amount application with injector.
Note	Be careful not to apply lubricant beyond the specified point.



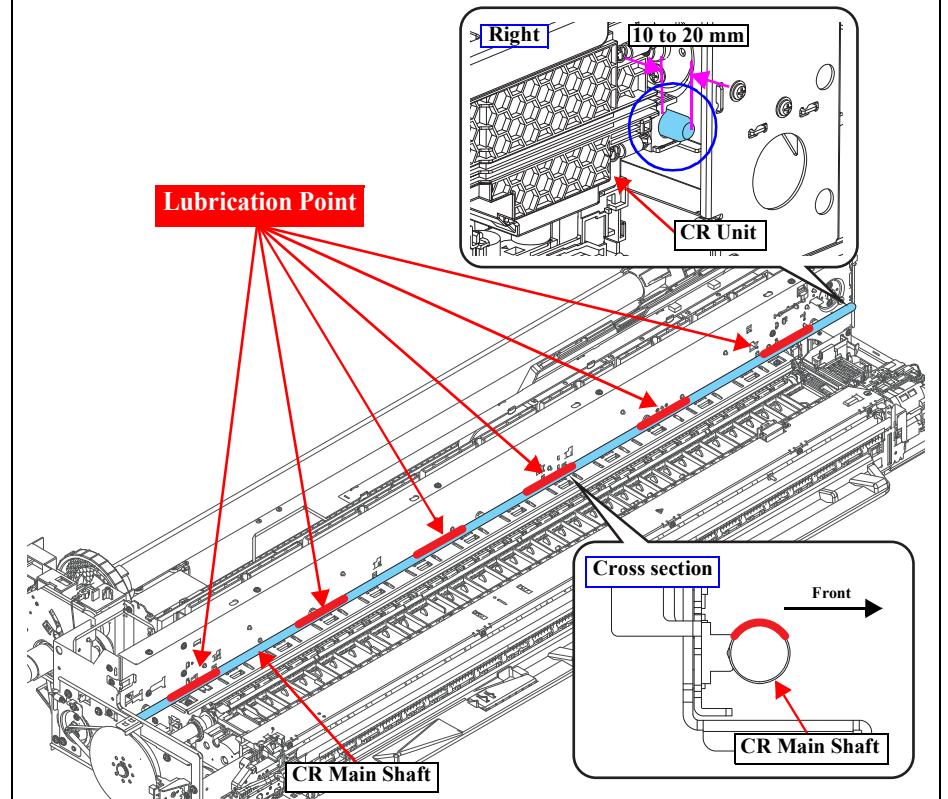
## [Lubrication 2]

Part Name	Left Upper Cover B
Lubricants (Part Code)	G-97 (1635441)
Amount	φ 2 mm x 1 mm x 2 points
Lubrication Tool	φ 2 mm injector
Lubrication Manner	Spread the lubricants with brush in the range shown below (hinge part and contact point) after applying specified amount application with injector.
Note	Be careful not to apply lubricant beyond the specified point.



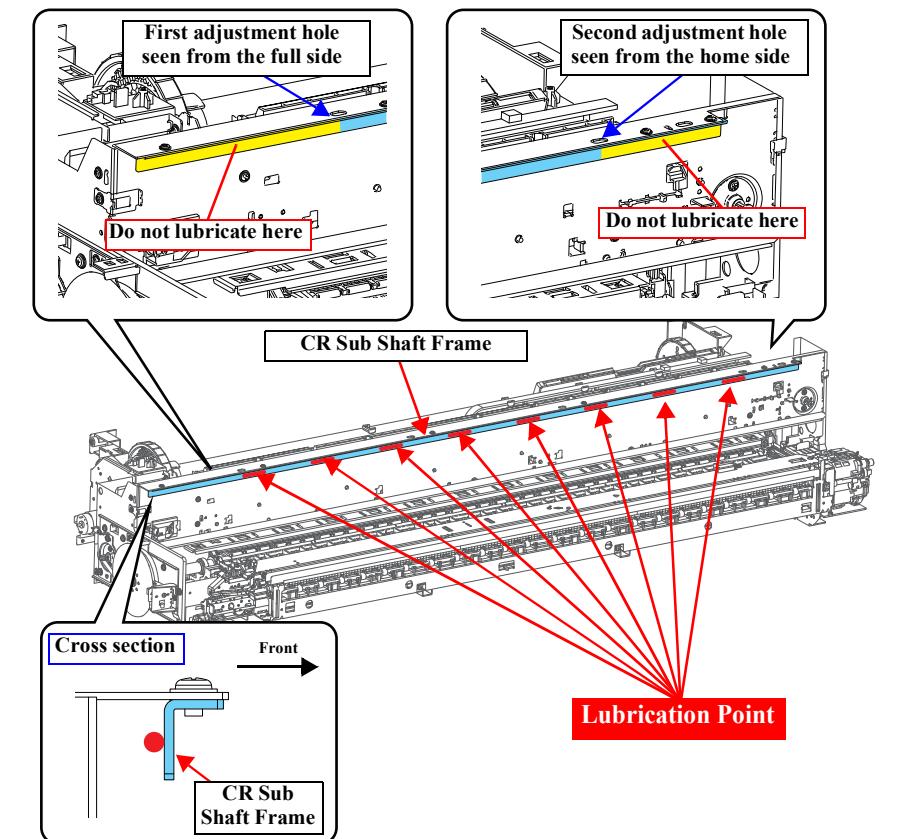
## [Lubrication 3]

Part Name	CR Main Shaft
Lubricants (Part Code)	O-17 (1521154)
Amount	<input type="checkbox"/> 24-inch model: φ 2 mm x 80 mm x 5 points <input type="checkbox"/> 36-inch model: φ 2 mm x 80 mm x 6 points
Lubrication Tool	φ 2 mm injector
Lubrication Manner	Before installing the CR Unit, lubricate in equal distance on the upper part of the CR Main Shaft and spread the lubricant evenly with a brush or the like.
Note	Be careful not to apply lubricant beyond the specified point. After installing the CR Unit, move the CR Unit to 10 to 20 mm away from the home side end, and remove the grease on the tip of the shaft on in the blue circle shown below.



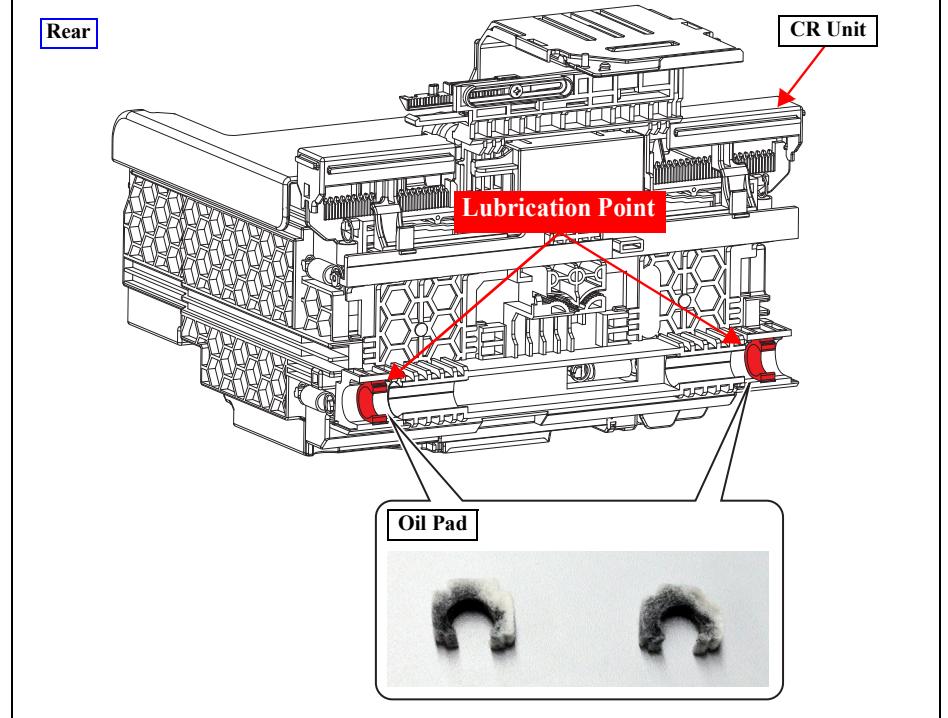
## [Lubrication 4]

Part Name	CR Sub Shaft
Lubricants (Part Code)	G-97 (1635441)
Amount	<input type="checkbox"/> 24-inch model: φ 2 mm x 30 mm x 6 points <input type="checkbox"/> 36-inch model: φ 2 mm x 30 mm x 8 points
Lubrication Tool	φ 2 mm injector
Lubrication Manner	Lubricate the contact point between rear side of the CR Sub Shaft Frame and CR Unit from the center of the second adjustment hole seen from the home side on the CR Sub Shaft Frame to the center of the first adjustment hole seen from the full side on the CR Sub Shaft Frame in an interval of 60 to 80 mm and spread the lubricant equally with a brush or the like.
Note	Do not lubricate in the area shown in yellow.



## [Lubrication 5]

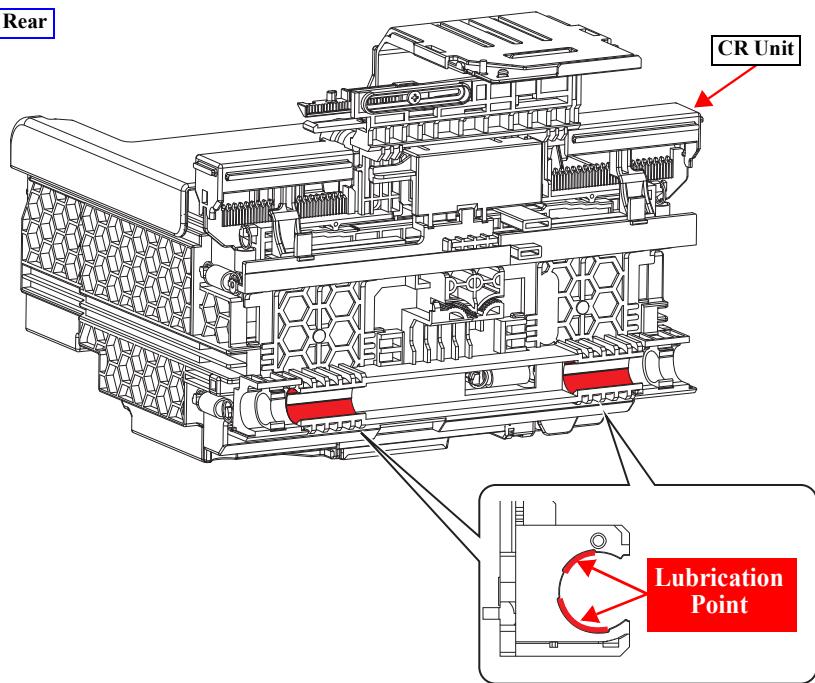
Part Name	Oil Pad (x2)
Lubricants (Part Code)	O-17 (1521154)
Amount	Adequate dose
Lubrication Tool	---
Lubrication Manner	Soak the oil before attaching the Oil Pad.
Note	---



## [Lubrication 6]

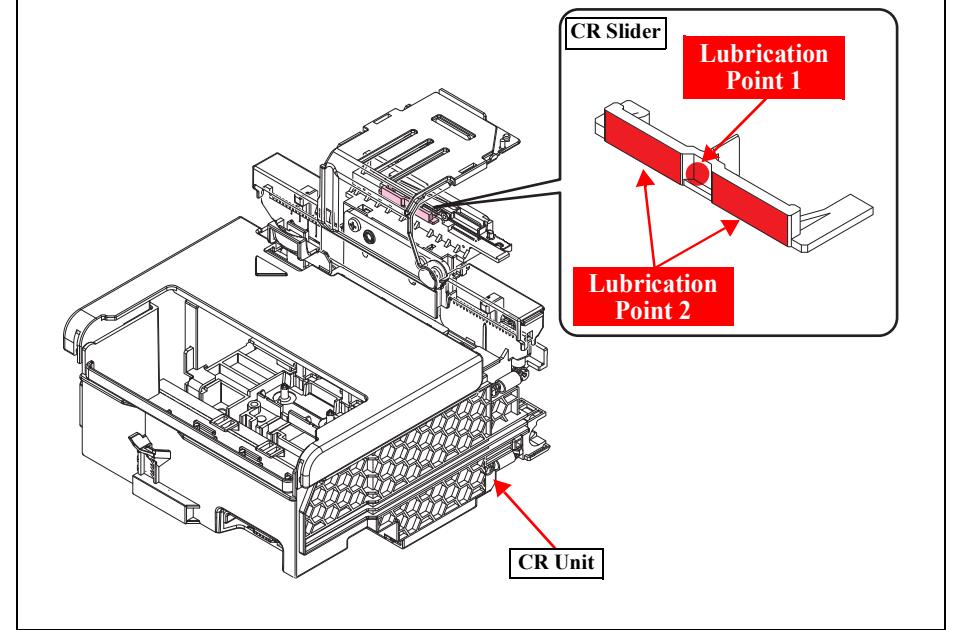
Part Name	CR Unit
Lubricants (Part Code)	G-97 (1635441)
Amount	$\varphi 2$ mm x bush width x 4 points (2 points each on both left and right side)
Lubrication Tool	$\varphi 2$ mm injector
Lubrication Manner	Spread the lubricants with brush in the range shown below as to fill the groove part with grease after applying specified amount application with injector.
Note	Be careful not to apply lubricant beyond the specified point.

Rear



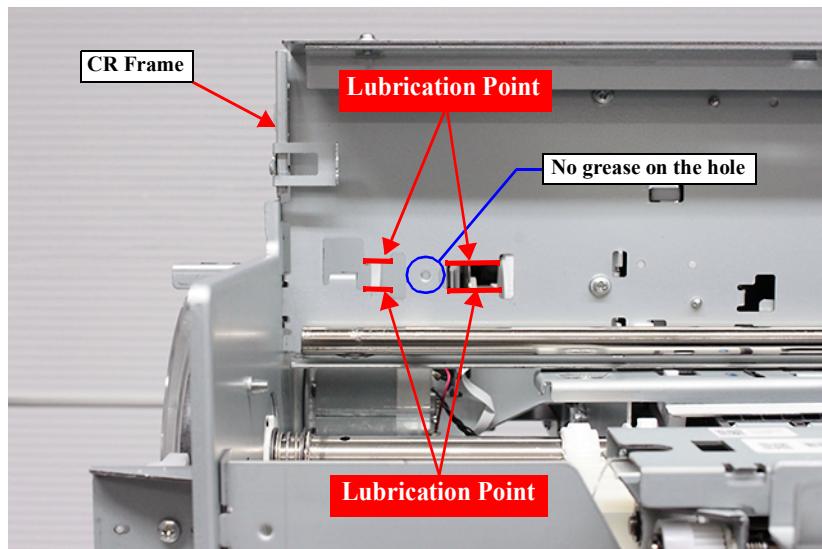
## [Lubrication 7]

Part Name	CR Slider
Lubricants (Part Code)	G-97 (1635441)
Amount	1. $\varphi 2$ mm x 8 mm x 1 point 2. $\varphi 2$ mm x 5 mm x 2 points
Lubrication Tool	$\varphi 2$ mm injector
Lubrication Manner	Remove the CR Slider. 1. Fill the groove shown below with grease. 2. Spread the lubricants with brush in the range shown below after applying specified amount application with injector.
Note	Be careful not to apply lubricant beyond the specified point.



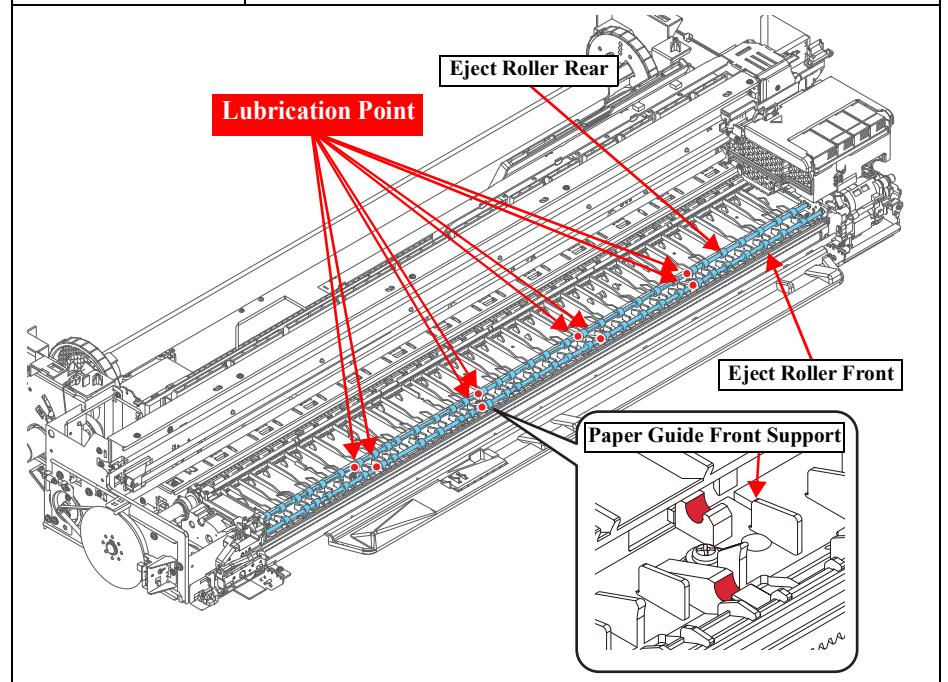
## [Lubrication 8]

Part Name	CR Frame
Lubricants (Part Code)	G-97 (1635441)
Amount	Adequate dose
Lubrication Tool	Brush
Lubrication Manner	Apply to the edge of the contact point of CR Belt Pulley Assy shown below.
Note	No grease on the hole shown below. Also, make sure no grease accumulation exist.



## [Lubrication 9]

Part Name	Paper Guide Front Support
Lubricants (Part Code)	G-96 (1590700)
Amount	<input type="checkbox"/> 24-inch model: Adequate dose x 6 points <input type="checkbox"/> 36-inch model: Adequate dose x 8 points
Lubrication Tool	Brush
Lubrication Manner	Lubricate on the bearing of the Eject Roller shown below.
Note	Be careful not to apply lubricant beyond the specified point.



## 5.5 Difference between Standard Models and Fluorescent Ink Models

The colors of ink of the standard models and of the fluorescent ink models are different. To prevent mixing up magenta ink and fluorescent pink ink, or mixing up yellow ink and fluorescent yellow ink, the ink tanks and the ink bottles are different in shape. For black and cyan inks, the tanks and bottles have no difference in shape.

- It is impossible to pour fluorescent pink ink and fluorescent yellow ink into the tanks of the standard ink model.
- It is impossible to pour magenta ink and yellow ink into the tanks of the fluorescent ink model.

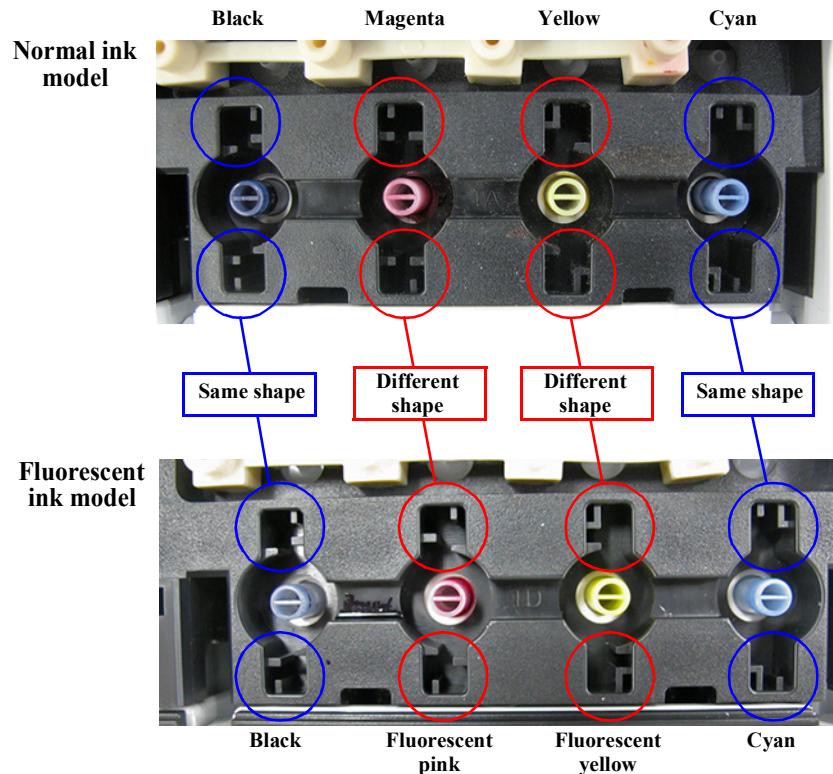


Figure 5-1. Shape of the ink tanks

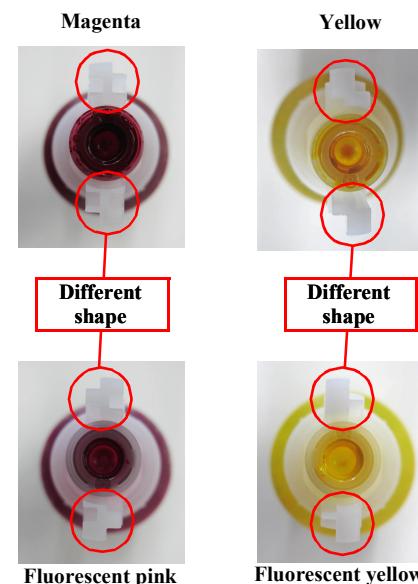


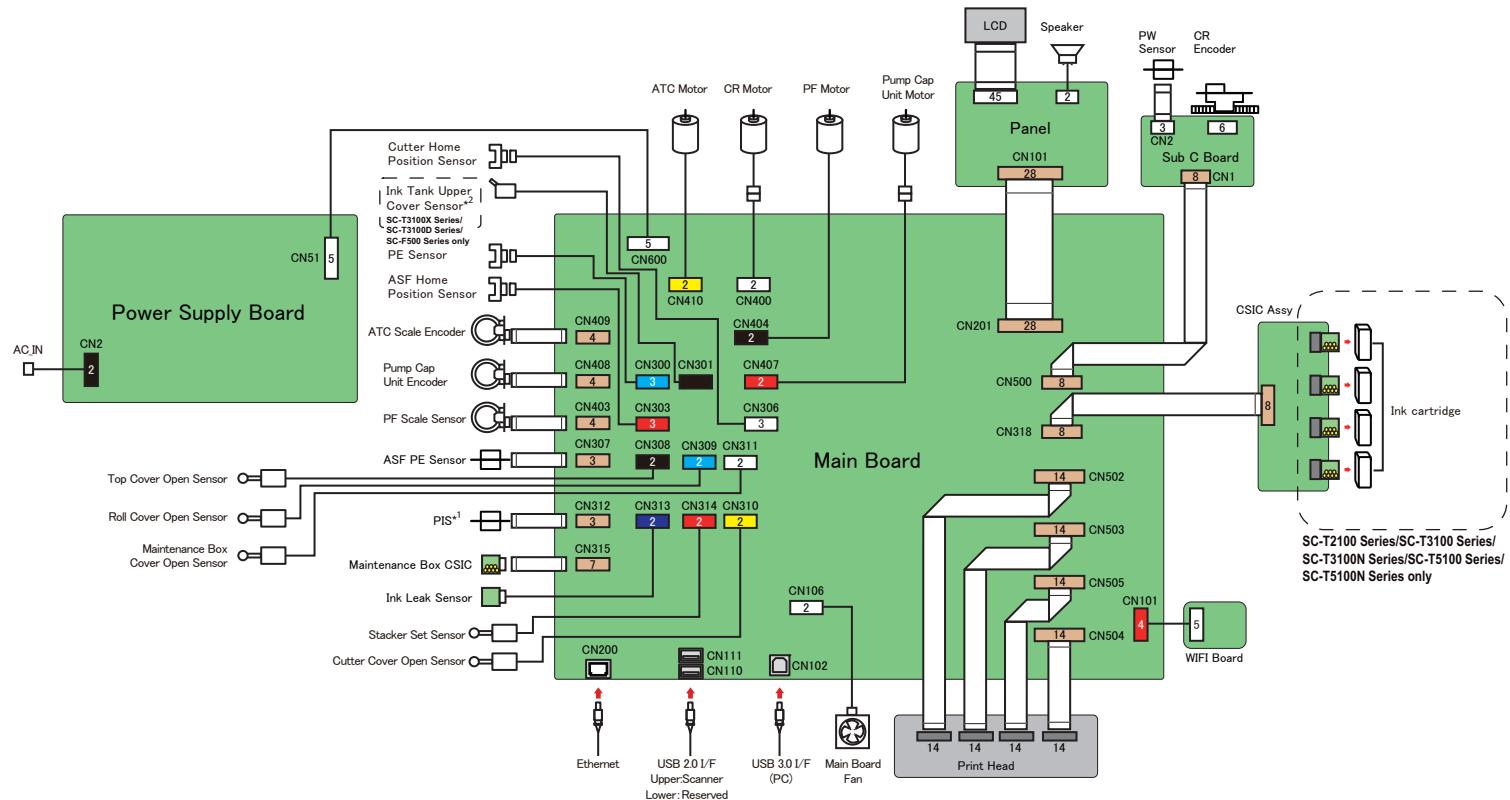
Figure 5-2. Shape of the ink bottles

CHAPTER

6

APPENDIX

## 6.1 Block Wiring Diagram



\*1: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series

\*2: SC-T3100X Series/SC-T3100D Series/SC-F500 Series/SC-F5X1 Series

SC-T2100/SC-T3100/SC-T3100N/SC-T3100X/SC-T3100D/SC-T5100/SC-T5100N/SC-F500 Series

## 6.2 Connection Diagram

Table 6-1. Connection Diagram List

Parts		Ref. (Ch3 sec.No.)	
Housing	CSIC (Right Lower Cover B)	P. 410	3.4.2.10
	Ink Leak Sensor (Right Lower Cover B)	P. 407	3.4.2.10
	Top Cover Open Sensor	P. 408	3.4.2.12
	Cutter Cover Open Sensor	P. 408	3.4.2.13
	Maintenance Box Cover Open Sensor	P. 407	3.4.2.14
	Roll Cover Open Sensor	P. 408	3.4.2.15
Electric Circuit Components/Fan	WIFI Board	P. 412	3.4.3.3
	Power Supply Board	P. 412	3.4.3.4
	Panel	P. 411	3.4.3.5
	AC Inlet	P. 412	3.4.3.6
	Main Board Fan	P. 412	3.4.3.7
Carriage Mechanism/Ink System Mechanism/Cutter Mechanism	CSIC Assy	P. 411	3.4.4.4
	PIS *1	P. 410	3.4.4.5
	CR Motor	P. 409	3.4.4.6
	Head FFC	P. 411	3.4.4.10
	ASF Encoder Sensor (ASF Unit)	P. 407	3.4.5.18
	PW Sensor	P. 411	3.4.4.14
	Sub C Board	P. 411	3.4.4.17
	Pump Cap Unit Motor	P. 409	3.4.4.18
	Pump Cap Unit Encoder	P. 409	3.4.4.18
	Ink Tank Upper Cover Sensor *2	P. 410	3.4.2.16
	Cutter Home Position Sensor	P. 408	3.4.4.25

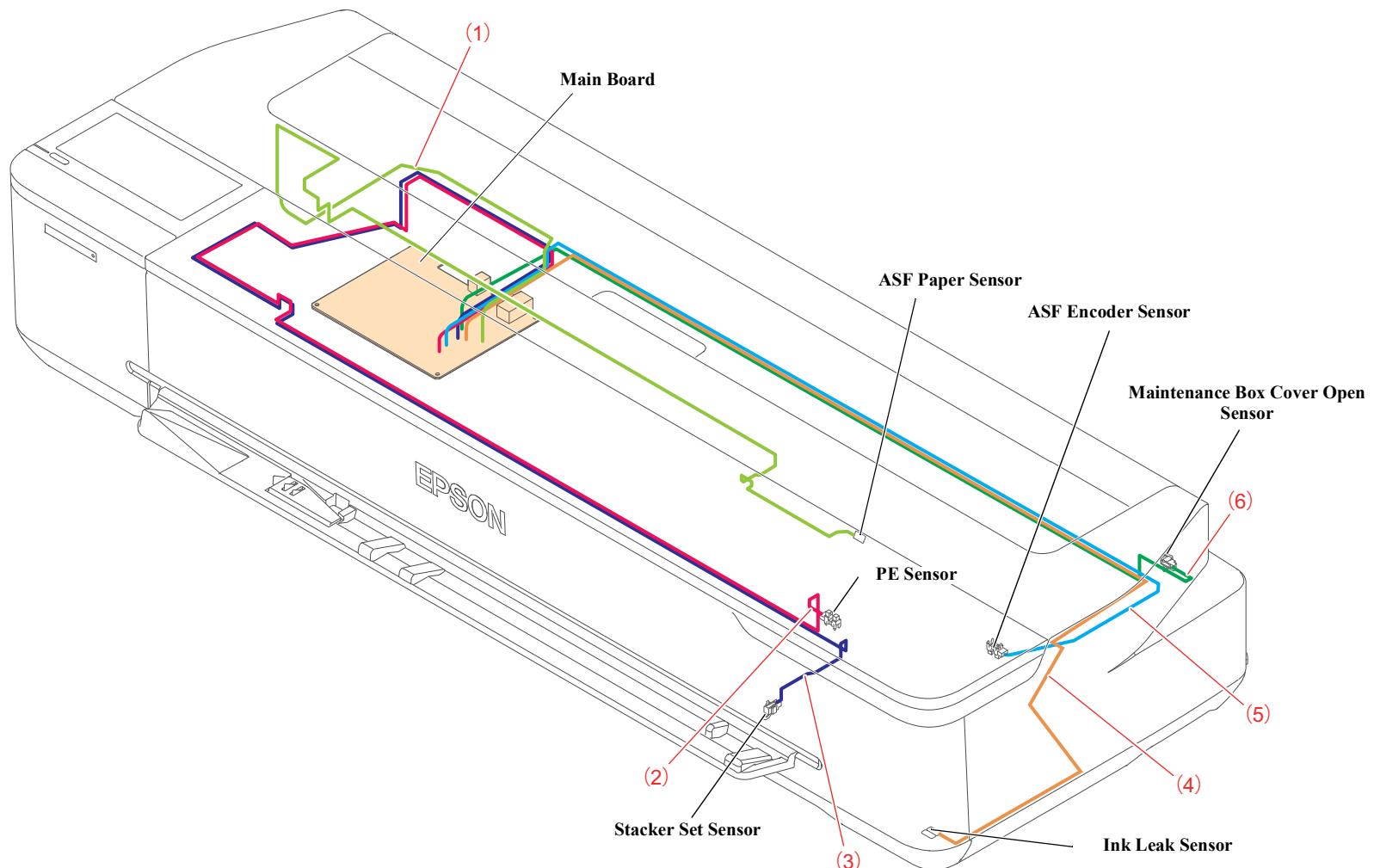
Table 6-1. Connection Diagram List

Parts	Ref. (Ch3 sec.No.)
Paper Feed Mechanism	ATC Scale Encoder (ATC Assy)
	P. 409
	ATC Motor
	P. 409
	PF Motor
	P. 409
	PF Encoder
ASF Paper Sensor	P. 407
PE Sensor	P. 407
Stacker Set Sensor	P. 407

Note \*1: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series only

\*2: SC-T3100X Series/SC-T3100D Series/SC-F500 Series only

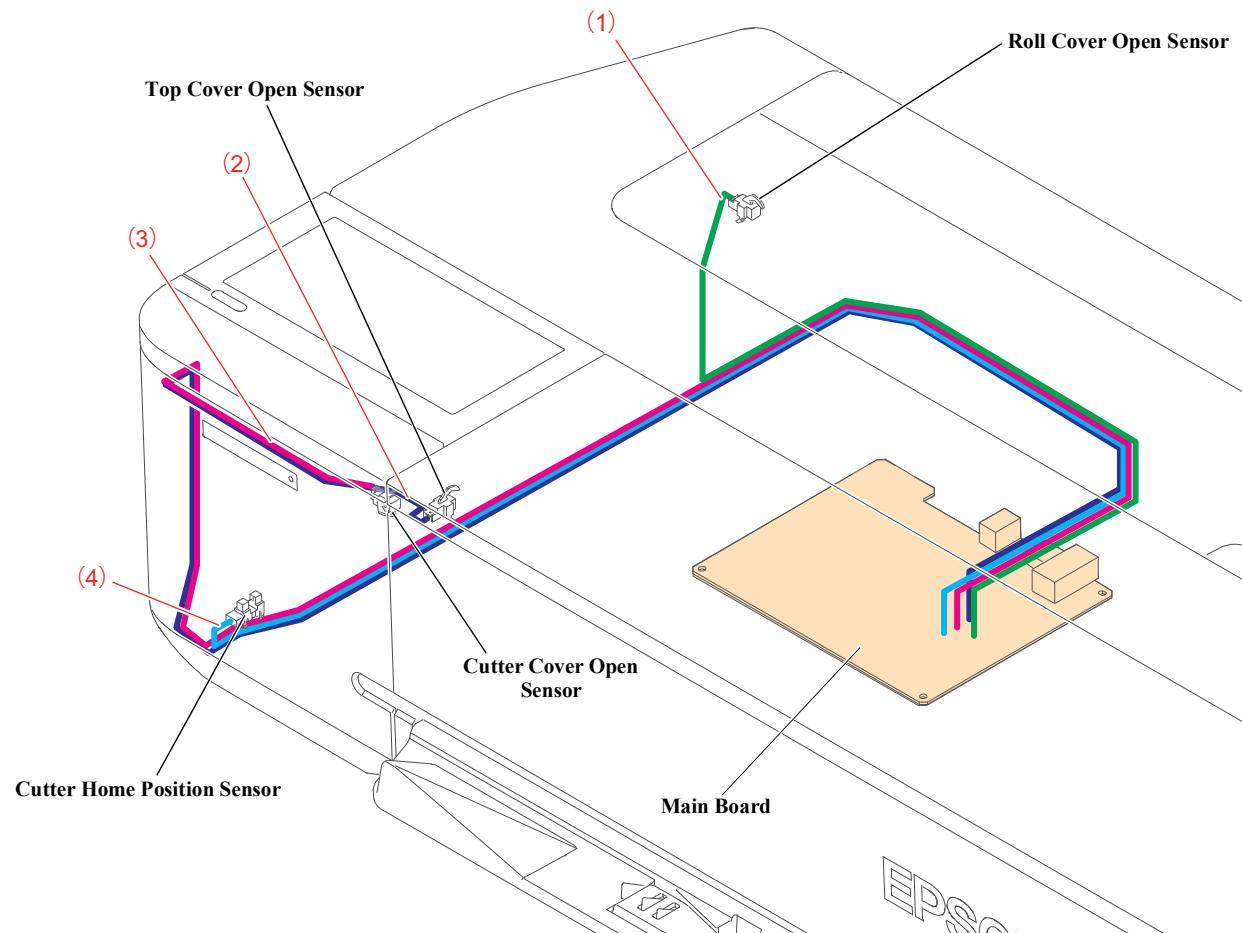
Sensors



Cable No.*	Connection		Cable No.*	Connection	
1	ASF Paper Sensor	Main Board (CN307)	2	PE Sensor	Main Board (CN300)
3	Stacker Set Sensor	Main Board (CN314)	4	Ink Leak Sensor	Main Board (CN313)
5	ASF Encoder Sensor	Main Board (CN303)	6	Maintenance Box Cover Open Sensor	Main Board (CN311)

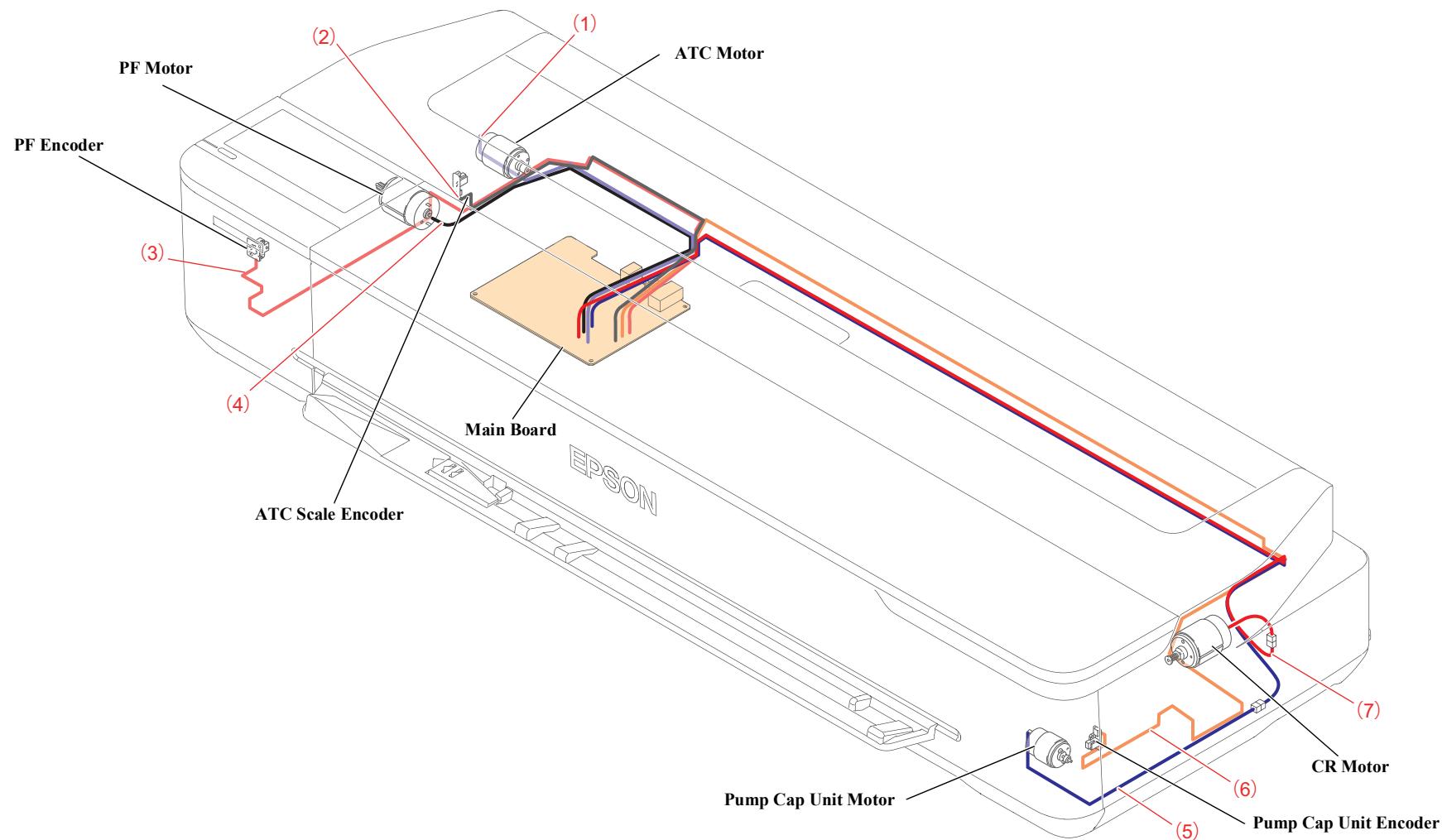
Note "\*": Underline: FFC

Sensors



Cable No.	Connection		Cable No.	Connection	
1	Roll Cover Open Sensor	Main Board (CN309)	2	Top Cover Open Sensor	Main Board (CN308)
3	Cutter Cover Open Sensor	Main Board (CN310)	4	Cutter Home Position Sensor	Main Board (CN306)

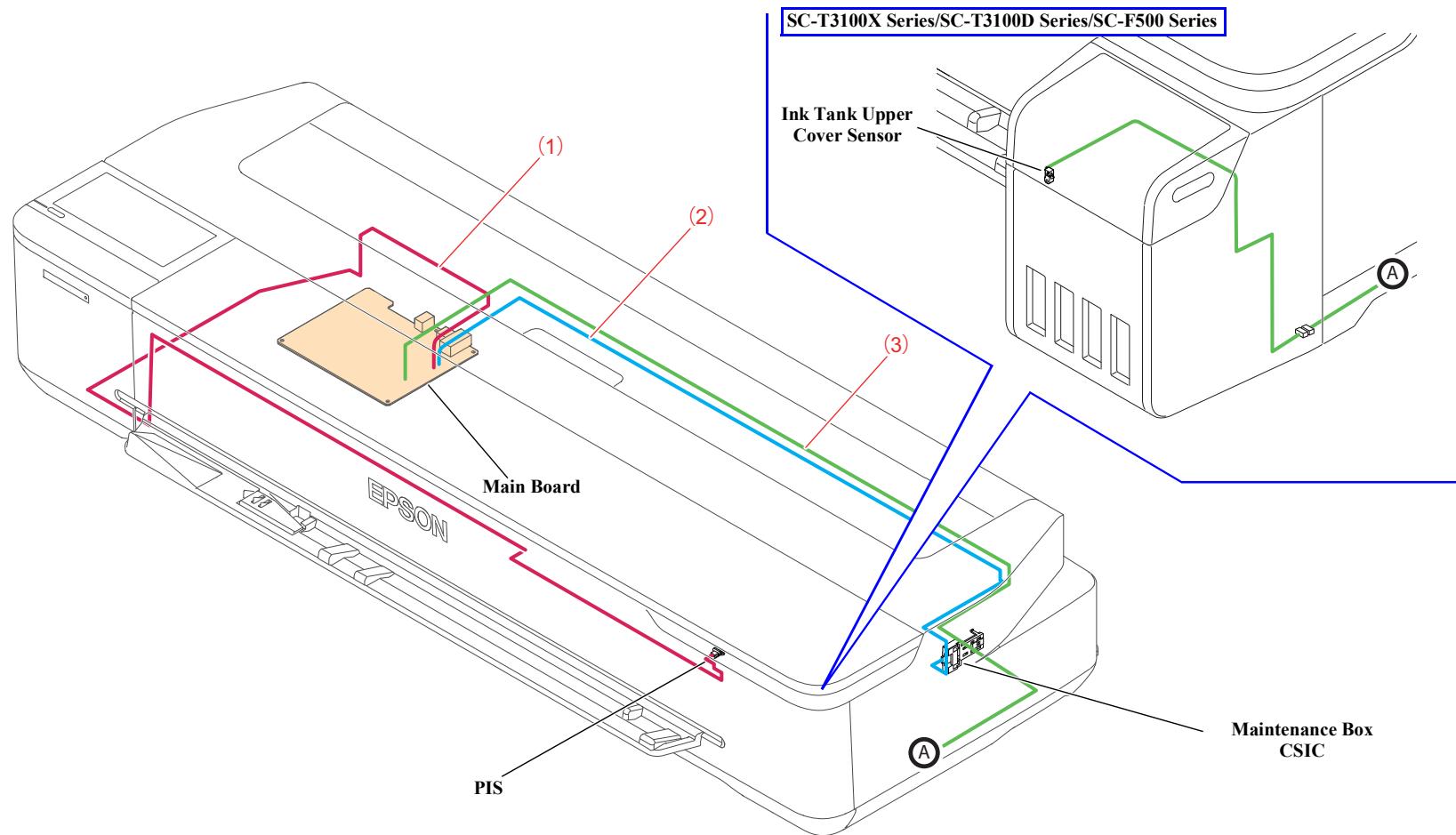
Motor/Encoder



Cable No.*	Connection		Cable No.*	Connection	
1	ATC Motor	Main Board (CN410)	2	ATC Scale Encoder	Main Board (CN409)
3	PF Encoder	Main Board (CN403)	4	PF Motor	Main Board (CN404)
5	Pump Cap Unit Motor	Relay cable (Main Board (CN407))	6	Pump Cap Unit Encoder	Main Board (CN408)
7	CR Motor	Relay cable (Main Board (CN400))			

Note \*\*: Underline: FFC

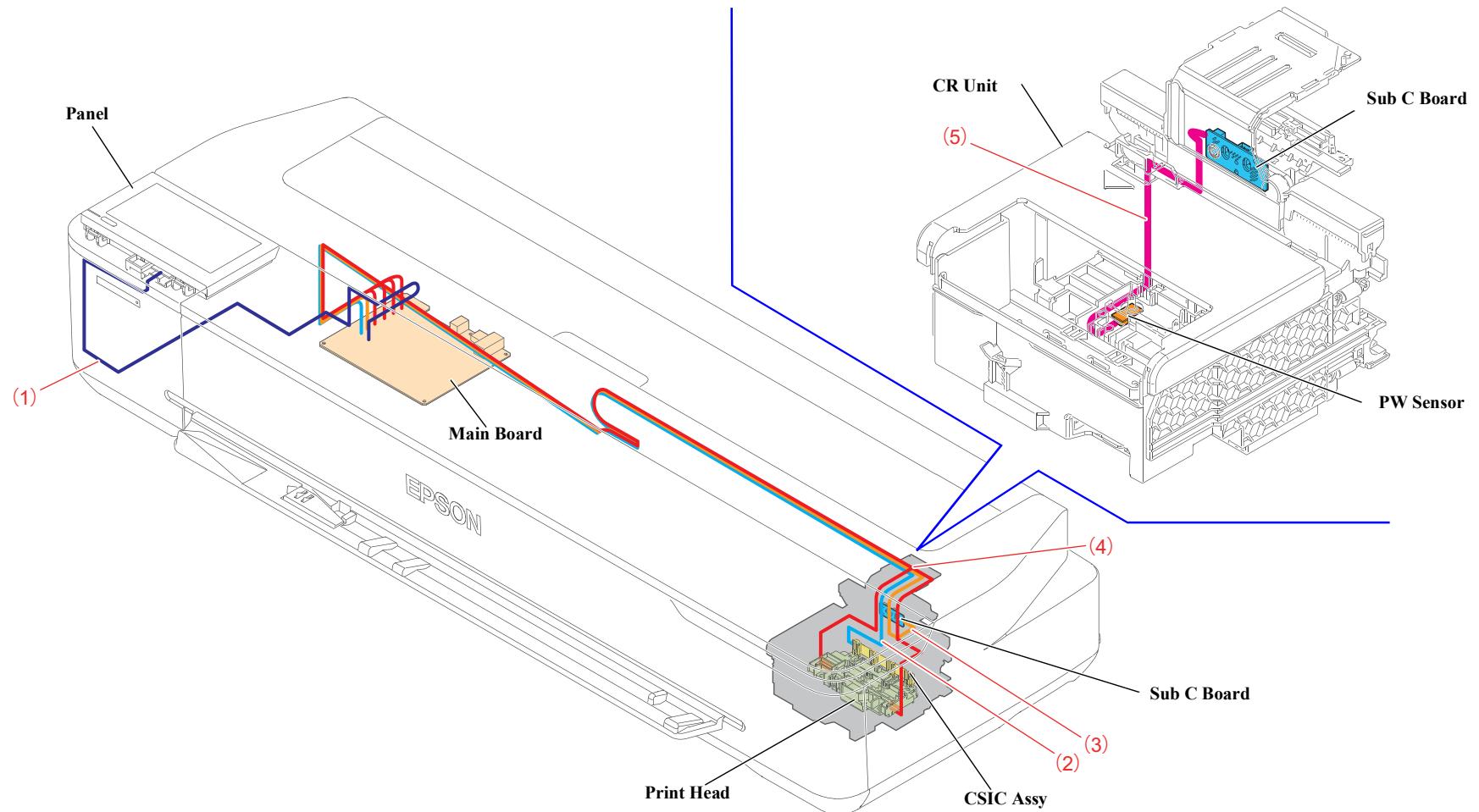
CSIC/PIS



Cable No.*	Connection		Cable No.*	Connection	
<u>1</u>	PIS	Main Board (CN312)	<u>2</u>	CSIC	Main Board (CN315)
<u>3</u>	Ink Tank Upper Cover Sensor	Main Board (CN301)			

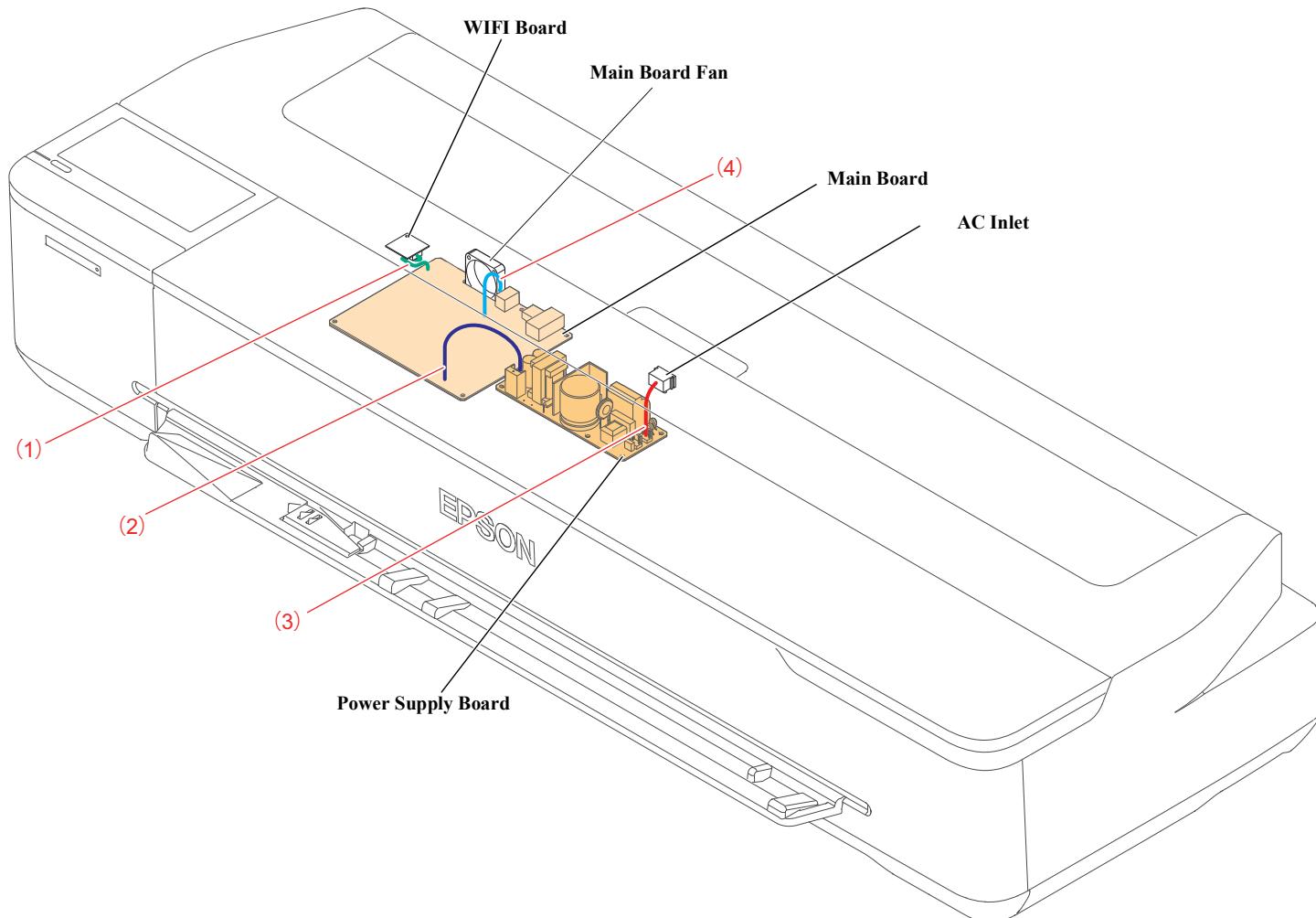
Note "/\*": Underline: FFC

Panel/CR Unit



Cable No.*	Connection		Cable No.*	Connection	
<u>1</u>	Panel	Main Board (CN201)	<u>2</u>	CSIC Assy	Main Board (CN318)
<u>3</u>	Sub C Board	Main Board (CN500)	<u>4</u>	Print Head	Main Board (CN502, CN503, CN504, CN505)
<u>5</u>	PW Sensor	Sub C Board (CN2)			

Note \*\*: Underline: FFC

Electric Circuit Components/Fan

Cable No.	Connection		Cable No.	Connection	
1	WIFI Board	Main Board (CN101)	2	Power Supply Board	Main Board (CN600)
3	AC Inlet	Power Supply Board (CN2)	4	Main Board Fan	Main Board (CN106)

## **6.3 Panel Menu Map**

---

## User Menu Map

★ Number inside (): Default setting

\*1: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series

\*2: SC-F500 Series

\*3: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T3100X Series/SC-T3100D Series/SC-T5100 Series/SC-T5100N Series only

\*4: SC-T3100X Series/SC-T3100D Series only



## User Menu Map

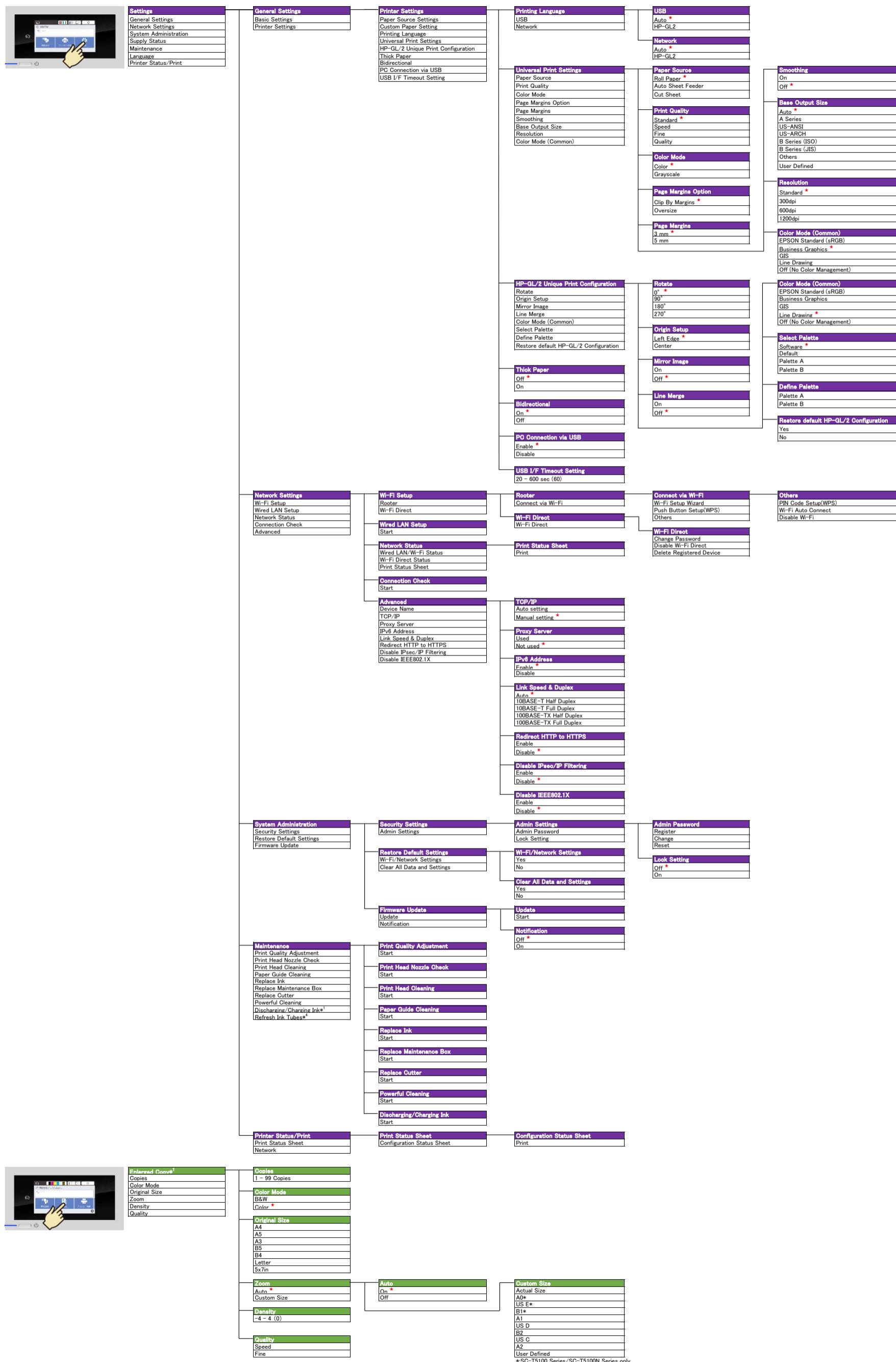
★ Number inside (): Default setting

\*1: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T5100 Series/SC-T5100N Series

\*2: SC-F500 Series

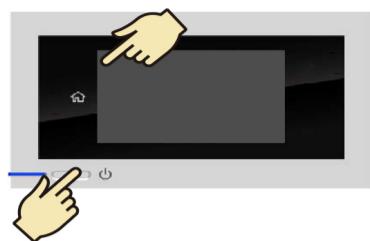
\*3: SC-T2100 Series/SC-T3100 Series/SC-T3100N Series/SC-T3100X Series/SC-T3100D Series/SC-T5100 Series/SC-T5100N Series only

\*4: SC-T3100X Series/SC-T3100D Series only



## ■ Inspection Mode

★ Number inside (): Default setting



1. Inspection Menu	
1.	ALL Check
2.	CR Unlock
3.	CR Lock
4.	CR Unlock(Maintenance/Power OFF)
5.	Initial Operation
6.	-
7.	Panel Display Check
8.	Touch Panel Key Check
9.	Sensor Check
10.	CSIC & PIS Check

2. Initial Operation	
1.	Initial Operation

## 6.4 Part names used in this manual

To make it easier to locate the target part from its part name, this manual uses the part names different from the ASP part names. The table below shows the conversion of the part names used in this manual and the corresponding ASP part names.

Parts name listed below are parts name of SC-T5100 Series/SC-T5100N Series.

NOTE \*1: SC-T5100 Series/SC-T5100N Series

\*2: SC-T3100X Series/SC-T3100D Series/SC-F500 Series

**Table 6-2. Conversion Table**

Part name used in this manual	ASP part name	Ref. (Ch3 sec.No.)	
Housing	Right Lower Cover A	HOUSING,LOWER,R,SUB *1 HOUSING,LOWER,RIGHT, SUB,CISS *2	3.4.2.1
	Cutter Cover	COVER,CUTTER	
	Front Cover	HOUSING FRONT,IEI,;ASSY *1 HOUSING FRONT,CISS,IEI,;ASSY *2	3.4.2.3
	Left Upper Cover A	HOUSING,UPPER,SUPPOR T	
	Left Upper Cover B	DECORATION PLATE,HOUSING,UPPER	3.4.2.5
	Top Cover	HOUSING UPPER,IEI,;ASSY ASP*1 HOUSING UPPER,IEI,;ASSY ASP*2	
		COVER PRINTER,IEI,;ASSY ASP	
	Rear Cover	HOUSING,REAR,36	3.4.2.7
	Roll Cover	COVER ROLL PAPER,IEI,;ASSY ASP	
		COVER,ASF,36	3.4.2.8
	Ink Tank Upper Cover *2	COVER, CISS, Unit	
	Ink Tank Front Cover *2	COVER,CISS,FRONT	3.4.2.3

**Table 6-2. Conversion Table**

Part name used in this manual	ASP part name	Ref. (Ch3 sec.No.)	
Housing	Right Lower Cover B	HOUSING,LOWER,RIGHT, B,IEI,;ASSY ASP*1 HOUSING,LOWER,RIGHT, IEI,;ASSY ASP *2	3.4.2.10
	Left Lower Cover	HOUSING,LOWER,LEFT *1 HOUSING,LOWER,LEFT,C ISS, Unit *2	
	Top Cover Open Sensor	LEAF SENSOR	
	Cutter Cover Open Sensor	LEAF SENSOR	
	Maintenance Box Cover Open Sensor	LEAF SENSOR	
	Roll Cover Open Sensor	LEAF SENSOR	
	Ink Tank Upper Cover Sensor *2	HARNESS,DETECTOR,TA NK COVER	
Electric Circuit Components	Main Board	BOARD ASSY.,MAIN	3.4.3.2
	WIFI Board	WIRELESS LAN USB MODULE	
	Power Supply Board	BOARD ASSY.,POWER SUPPLY	
	Panel	PANEL UNIT,;IEI ASP	
	AC Inlet	HARNESS,P/S,INLET	
	Main Board Fan	COOLING,FAN	

Table 6-2. Conversion Table

Part name used in this manual	ASP part name	Ref. (Ch3 sec.No.)
CR Cover	COVER,CR *1 COVER,CR,CISS *2	3.4.4.1
Print Head Assy	---	3.4.4.2
Print Head	PRINT HEAD,IF649V;ASP	3.4.4.3
CSIC Assy	HOLDER,BOARD,CR; ASSY ASP *1 HOLDER,BOARD,CR; ASSY CISS ASP *2	3.4.4.4
PIS*1	BOARD ASSY.,SUB	3.4.4.5
CR Motor	MOTOR ASSY.,CR	3.4.4.6
CR Scale	SCALE,CR,36	3.4.4.7
Head FFC Cover Upper	COVER,HARNESS,CR	3.4.4.8
Head FFC Cover Lower	HOLDER,HARNESS,CR	3.4.4.9
Head FFC	HEAD FFC,IEI,;ASSY	3.4.4.10
CR Belt Pulley Assy	HOLDER,PULLEY,DRIVE N	3.4.4.11
	CR PULLEY,IEI,;ASSY	
Right Frame	---	3.4.4.12
CR Unit	CARRIAGE,IEI,;ASSY ASP	3.4.4.13
PW Sensor	BOARD ASSY.,DETECTOR,PW;B	3.4.4.14
CR Belt	BELT,CR,36	3.4.4.15
Oil Pad	OIL PAD,CR	3.4.4.16
Sub C Board	BOARD ASSY.,ENCODER	3.4.4.17
Pump Cap Unit	INK SYSTEM,IEI,;ASSY ASP	3.4.4.18
Ink Tank Upper Porous Pad *2	POROUS PAD,TANK,UPPER	3.4.4.19
Ink Tank Cap *2	HINGE,CAP,TANK	3.4.4.20
Ink Tank Cap Rubber *2	CAP,TANK	3.4.4.21
Ink Tube Assy *2	ADAPTER,TANK,ASSY,CJ 15	3.4.4.22

Table 6-2. Conversion Table

Part name used in this manual	ASP part name	Ref. (Ch3 sec.No.)
Carriage Mechanism/ Ink System Mechanism	Cutter Blade	---
	Cutter Stopper	---
	Cutter Home Position Sensor	PHOTO INTERRUPTER
	Cutter Base	CARRIAGE CUTTER ASSEMBLY,IEI,;ASSY ASP
	Cutter Rail	CUTTER RAIL,IEI,;ASSY
Paper Feed Mechanism	Eject Roller Gear Assy	---
	Eject Roller Assy	THIRD EJ ASSY, 36 ASP *1 3rd EJ,CISS,IEI,;ASSY *2
	Left Spindle Holder	HOLDER ROLL LEFT,IEI,;ASSY
	ATC Assy	DRIVE ROLL PAPER,IEI,;ASSY
	ATC Motor	MOTOR ASSY.,ATC
	Right Spindle Holder	HOLDER ROLL RIGHT,IEI,;ASSY
	PF Motor	MOTOR ASSY.,PF,UNIT;IEI
	□ HOLDER,STAR WHEEL UNIT ASP	
	□ HOLDER,STAR WHEEL,B UNIT ASP	
	□ HOLDER,STAR WHEEL,C UNIT ASP	
	Eject Roller Middle Assy	3.4.5.8
	Eject Roller Front	EJ ROLLER C, 36 ASP
	Eject Roller Rear	EJ ROLLER ASSY REAR, 36 ASP
	PF Encoder	BOARD ASSY.,ENCODER,PF
	PF Scale	SCALE,PF
	PF Belt	TIMING BELT
	ASF CLUTCH,IEI;ASSY	
	SLIDER,TRANSMISSION,A SF	
	PF Switch Assy	3.4.5.14
	Home Side PF Gear Assy	---
	ASF Paper Sensor Cover	3.4.5.15

**Table 6-2. Conversion Table**

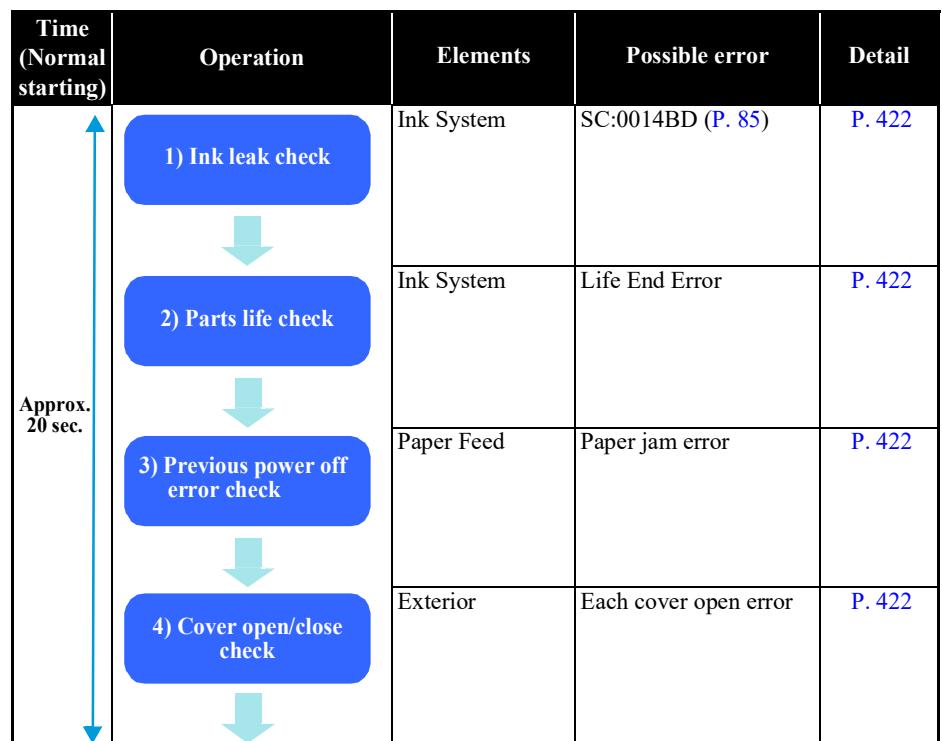
Part name used in this manual	ASP part name	Ref. (Ch3 sec.No.)
Paper Feed Mechanism	ASF Paper Sensor	---
	ASF Unit	ASF UNIT, 36 ASP
	PE Sensor	PHOTO INTERRUPTER
	Upper Roller Assy	PAPER GUIDE,ROLL,UPPER,36
	Driven Roller Assy	ROLLER,DRIVEN
	Paper Path	PAPER GUIDE,REAR,36
	PG Lever Assy	APG LEVER,IEI,;ASSY ASP
	Stacker Set Sensor	STACKER DETECTOR,IEI,;ASSY

## 6.5 Power-On Sequence

This section describes the power-on sequence of the printer. If the service call or the like occurs when initialization after turning the power on, refer to the following. The sequence is performed in the order shown in the [Operation] column of the list below.

- Condition
  - Initial charge is finished.
  - Start in the normal mode.
- Overview

Time (Normal starting)	Operation	Elements	Possible error	Detail
	Power ON 			



Time (Normal starting)	Operation	Elements	Possible error	Detail
Approx. 10 sec.	5) Fuse blow judgment	Print Head	SC:001A39 (P. 90)	P. 422
	6) Paper set check	PE Sensor, Paper Feed	PF related normal error, service call	P. 423
	7) Ink System power ON initialization	Ink System, Carriage	SC:001135 (P. 69) SC:001125 (P. 66) Pump Cap, CR related normal error, service call	P. 424
	8) Unlocking the CR Unit	Carriage, Pump Cap	Pump Cap, CR related normal error, service call	P. 426
	9) ASF initialization	ASF Unit	SC:001127 (P. 67) PF/CR related normal error, service call	P. 426
	10) Cutter initialization	Cutter, Carriage	<input type="checkbox"/> Cutter not equipped error <input type="checkbox"/> CR related normal error, service call SC:001136	P. 427

Time (Normal starting)	Operation	Elements	Possible error	Detail
Approx. 10 sec.	11) PG initialization	Carriage, Paper Feed	PF/CR related normal error, service call	P. 427
	12) Ink System power ON maintenance operation	PIS, Ink System	<input type="checkbox"/> Ink end error <input type="checkbox"/> Pump Cap, CR related normal error, service call	P. 428
	13) Paper set check	Paper Feed	PF related normal error, service call	P. 428
	14) Locking the CR Unit	Carriage, Pump Cap	Pump Cap, CR related normal error, service call	P. 428

Details

Major item	Included item (Order of execution)	Minor item	Purpose	Information	Possible error	Remedy
Error judgment	1) Ink leak check	---	Confirm the ink is not leaking with the Ink Leak Sensor.	---	■ Service call: 0014BD	<ul style="list-style-type: none"> <li>■ Check if the ink is leaking. If so, troubleshoot according to the ink leaking point. Also, escalate the information to the person in charge.</li> <li>■ If the ink is not leaking, replace the Right Lower Cover A and perform Ink Leak Flag Reset with service program.</li> </ul>
	2) Parts life check	---	Check if the periodic replacement parts reached the end of its life.	Check the Pump Cap counter to see if the life is end or not. If the life is end, the life end screen will be displayed on the panel.	Life end error	Replace the Pump Cap Unit and reset the counter.
	3) Previous power off error check	---	Check if the error occurred when turning the power off previously is canceled.	<ul style="list-style-type: none"> <li>■ If paper jam was occurring when turning the power off previously           <ul style="list-style-type: none"> <li>□ When the PE Sensor detected paper Paper jam error occurs again.</li> <li>□ When the PE Sensor did not detect paper The previous error information is reset.</li> </ul> </li> </ul>	Paper jam error	<ul style="list-style-type: none"> <li>■ Remove the jammed paper.</li> <li>■ Check the PE Sensor state.</li> </ul>
	4) Cover open/close check	---	Check the cover open/close state to diagnose if operation can be started.	When the Printer Cover, Roll Cover, Maintenance Cover, or Cutter Cover is open, Each cover open error will be displayed.	Each cover open error	<ul style="list-style-type: none"> <li>■ Close each cover.</li> <li>■ Check the state of sensor which the error is occurring.</li> </ul>
Head initialization process (first half)	5) Fuse blown judgment	---	Confirm the head fuse is not blown.	Check the head fuse. When the fuse is blown, service call occurs.	■ Service call: 001A39	Replace the Print Head.

Major item	Included item	Minor item	Purpose	Information	Possible error	Remedy
	(Order of execution)					
Unit initialization	6) Paper set check	Paper set check	Check if paper is set.	<ul style="list-style-type: none"> <li>■ When the PE Sensor did not detect paper           <ul style="list-style-type: none"> <li><input type="checkbox"/> Paper is not at the evacuation position Diagnose as no paper</li> <li><input type="checkbox"/> Paper is at the evacuation position Diagnose as paper exist.</li> </ul> </li> <li>■ When the PE Sensor detected paper Check if the printer is in paper feeding state and also the Cutter is at the home position.           <ul style="list-style-type: none"> <li><input type="checkbox"/> If not satisfying the condition Paper ejection waiting error occurs.</li> <li><input type="checkbox"/> If satisfying the condition Remove the excessive slack.</li> </ul> </li> </ul>	PF related normal error and/or service call may occur since the PF Motor will be driven.	Troubleshoot according to each error.
		Remove the excessive slack	Remove the excessive slack in the paper.	<ul style="list-style-type: none"> <li>■ Excessive slack removed Paper is fed until the tip of the paper reaches the position where the EJ Roller can hold the tip of the paper.</li> <li>■ Excessive slack not removed           <ul style="list-style-type: none"> <li><input type="checkbox"/> PE Sensor diagnosed as paper exist Judge as cut sheet is set, and requires paper ejection.</li> <li><input type="checkbox"/> PE Sensor Diagnosed as no paper Judged as paper wound in slack removing operation, and diagnose as no paper.</li> </ul> </li> </ul>	PF related normal error and/or service call may occur since the PF Motor will be driven.	Troubleshoot according to each error.

Major item	Included item	Minor item	Purpose	Information	Possible error	Remedy
	(Order of execution)					
Unit initialization 7) Ink System power ON initialization	Ink cartridge check	Make ink cartridge ready to use.	Check if ink cartridge is installed. <ul style="list-style-type: none"><li>■ Ink cartridge installed Renew ink residual quantity.</li><li>■ Ink cartridge not installed Ink end (abnormal) diagnosis is performed.</li></ul> *Error does not occur when the ink end is detected at this time. Error occurs before processing 13) Ink System power ON maintenance operation. This is because ink cartridge replacement cannot be performed if the carriage initialization is not finished.		---	---
		Maintenance Box check	Make the Maintenance Box ready to use.	Check if the Maintenance Box is installed. <ul style="list-style-type: none"><li>■ Maintenance Box installed Renew Maintenance Box residual quantity.</li><li>■ Maintenance Box not installed Maintenance Box not installed error occurs.</li></ul>	<ul style="list-style-type: none"><li>■ Maintenance Box residual quantity shortage error</li><li>■ Maintenance Box not installed error</li></ul>	Replace the Maintenance Box.
	Start PIS	Return after initialization (Waste ink suction before initialization)	Make the PIS ready to use.	Establish the initial state of PIS control.	Ink remaining quantity detection error	<ul style="list-style-type: none"><li>■ Check the PIS attachment state.</li><li>■ Check the ink cartridge attachment state.</li><li>■ Replace the ink cartridge.</li><li>■ replace the PIS.</li></ul>
		Check if ink exist in the Pump Cap to prevent ink contamination of when initializing the Pump Cap. Perform ink suction inside the cap if necessary.	<ul style="list-style-type: none"><li>■ No ink inside the cap Go to the next step</li><li>■ Ink exist inside the cap vacuum is performed.</li></ul> *It is diagnosed as ink exist when the printer turned off while suction in the Pump Cap is performed.	If ink exist in the cap, Pump Cap related normal error and/or service call may occur since the Pump Cap will be operated.	Troubleshoot according to each error.	

Major item	Included item	Minor item	Purpose	Information	Possible error	Remedy
	(Order of execution)					
Unit initialization	7) Ink System power ON initialization	Pump Cap Unit initialization	Initialize the Pump Cap Unit to make mechanism ready to start initialization.	<ul style="list-style-type: none"> <li>■ Drive the CR motor to check if the cable is broken.</li> <li><input type="checkbox"/> CR Motor does not rotate Service call occurs.</li> <li><input type="checkbox"/> CR Motor rotates Go to the next step</li> </ul> <p>*Check if the CR Motor cable is broken before evacuating the carriage.</p> <ul style="list-style-type: none"> <li>■ Evacuate the carriage to initialize the Pump Cap.</li> </ul>	<ul style="list-style-type: none"> <li>■ Service call: 001135</li> <li>■ Pump Cap related normal error and/or service call may occur since the Pump Cap will be operated.</li> </ul>	<ul style="list-style-type: none"> <li>■ For service call 001135</li> <li><input type="checkbox"/> Replace the CR Motor.</li> <li>■ For Pump Cap related error, troubleshoot according to each error.</li> </ul>
		CR initialization	Return carriage to the home position	<ul style="list-style-type: none"> <li>■ Unlock the CR Unit.</li> <li>■ Operate the carriage to detect the home position.           <ul style="list-style-type: none"> <li><input type="checkbox"/> Home side contact not detected service call occurs</li> <li><input type="checkbox"/> Home side contact detected Go to the next step.</li> </ul> </li> <li>■ Move the carriage for ASF drive pick OFF.</li> <li>■ Lock the CR Unit.</li> <li>■ Detect the home side starting position after locking the CR Unit.           <ul style="list-style-type: none"> <li><input type="checkbox"/> Home side contact not detected Service call occurs.</li> <li><input type="checkbox"/> Home side contact detected Go to the next step</li> </ul> </li> <li>■ Perform CR low temperature/long-term storage sequence (warming up operation).</li> </ul> <p>*Performed after when stored for long time or stored in low temperature.</p>	<ul style="list-style-type: none"> <li>■ Service call: 001125</li> <li>■ CR related normal error and/or service call may occur since the carriage will be driven.</li> </ul>	<ul style="list-style-type: none"> <li>■ For service call 001125</li> <li><input type="checkbox"/> <a href="#">001125 (CR HP Detection Error) (p.66)</a></li> <li>■ For CR related error, troubleshoot according to each error.</li> </ul>

Major item	Included item	Minor item	Purpose	Information	Possible error	Remedy
	(Order of execution)					
Unit initialization	7) Ink System power ON initialization	Return after initialization (Head wiping after initialization )	If the ink is stained on the head nozzle surface, remove the ink not to drip it.	<p>Check (Assume) the ink is stained on the head nozzle surface.</p> <ul style="list-style-type: none"> <li>■ Not stained Go to the next step</li> <li>■ Stained Perform the head wiping.</li> </ul> <p>*It is assumed that the ink is stained on the head nozzle surface when cleaning is interrupted, ink cartridge is replaced while the printer is turned off, or error occurred before performing wiping after replacing the cartridge.</p>	Pump Cap related normal error and/or service call may occur since the Pump Cap will be operated.	Troubleshoot according to each error.
	8) Unlocking the CR Unit	---	Unlock the CR Unit to initialize mechanism of 9) to 11).	Unlock the CR Unit to initialize mechanism.	<ul style="list-style-type: none"> <li>■ Pump Cap related normal error and/or service call may occur since the Pump Cap will be operated.</li> <li>■ CR related normal error and/or service call may occur since the carriage will be driven.</li> </ul>	Troubleshoot according to each error.
	9) ASF initialization	---	Return ASF Unit to the home position.	<ul style="list-style-type: none"> <li>■ Move the carriage for ASF connection.</li> <li>■ Operate the PF Motor for ASF connection.</li> <li>■ Perform ASF home position detection.</li> <li>■ Move the carriage to release the ASF connection. Operate the PF Motor to release ASF connection.</li> <li>■ Perform ASF home position detection. <ul style="list-style-type: none"> <li>□ Home position detected Go to the next step</li> <li>□ Home position not detected Lock the CR Unit and display the service call.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Service call: 001127</li> <li>■ CR related normal error and/or service call may occur since the carriage will be driven.</li> <li>■ PF related normal error and/or service call may occur since the PF will be operated.</li> </ul>	<ul style="list-style-type: none"> <li>■ For service call 001127 <ul style="list-style-type: none"> <li>□ <a href="#">001127 (ASF HP Detection Error) (p.67)</a></li> </ul> </li> <li>■ For CR/PF related error, troubleshoot according to each error.</li> </ul>

Major item	Included item	Minor item	Purpose	Information	Possible error	Remedy
	(Order of execution)					
Unit initialization	10) Cutter initialization	---	Return Cutter to the home position.	<ul style="list-style-type: none"> <li>■ Home position detected Go to the next step</li> <li>■ Home position not detected Move the CR Unit to the cutter home position to check again.           <ul style="list-style-type: none"> <li>□ Home position detected Go to the next step</li> <li>□ Home position not detected Cutter not installed error occurs.</li> </ul> </li> </ul> <p>*If the mechanism initialization is not finished, cutter not installed error occurs after the initialization.</p>	<ul style="list-style-type: none"> <li>■ Cutter not installed error</li> <li>■ CR related normal error and/or service call may occur since the carriage will be driven.</li> </ul> <p>Service call: 001136</p>	<ul style="list-style-type: none"> <li>■ Mount the Cutter.</li> <li>■ For CR related error, troubleshoot according to each error.</li> </ul>
	11) PG initialization	---	Return PG to the home position.	<ul style="list-style-type: none"> <li>■ Check the PG Lever state.           <ul style="list-style-type: none"> <li>□ PG Lever is not sticking out Go to the next step</li> <li>□ PG Lever is sticking out Operate the PF Motor to draw in the PG Lever to the rear side.</li> </ul> </li> <li>■ Check the PG position.           <ul style="list-style-type: none"> <li>□ At the typical value Go to the next step</li> <li>□ Not at the typical value Change PG to the typical value.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ PF related normal error and/or service call may occur since the PF will be operated.</li> <li>■ CR related normal error and/or service call may occur since the carriage will be driven.</li> </ul>	Troubleshoot according to each error.

Major item	Included item	Minor item	Purpose	Information	Possible error	Remedy
	(Order of execution)					
Ink System usage preparation	12) Ink System power ON maintenance operation	PIS initialization	Initialize the PIS for detecting the remaining ink in the ink cartridge correctly.	Check if the cartridge error occurred in cartridge check flow. <ul style="list-style-type: none"><li>■ If so Go to the next step</li><li>■ If not PIS is initialized, and ink cartridge residual quantity is checked.</li></ul>	<ul style="list-style-type: none"><li>■ Ink end error</li><li>■ CR related normal error and/or service call may occur since the carriage will be driven.</li></ul>	<ul style="list-style-type: none"><li>■ For ink end error<ul style="list-style-type: none"><li>□ Replace the ink cartridge.</li></ul></li><li>■ For CR related error, troubleshoot according to each error.</li></ul>
		TCL	Perform cleaning when satisfying the condition for TCL.	---	Pump Cap related normal error and/or service call may occur since the Pump Cap will be operated.	Troubleshoot according to each error.
Feed paper again	13) Paper set check	---	Check if paper is set. If so, move the roll paper to the waiting position.	---	PF related normal error and/or service call may occur since the PF Motor will be driven.	Troubleshoot according to each error.
Power-on sequence finishing process	14) Locking the CR Unit	---	Lock the CR Unit and go on to ready state to finish the power-on sequence.	---	---	---

## **6.6 Exploded Diagram/Parts List**

---

For the exploded diagrams and parts list, refer to Service Parts Information.