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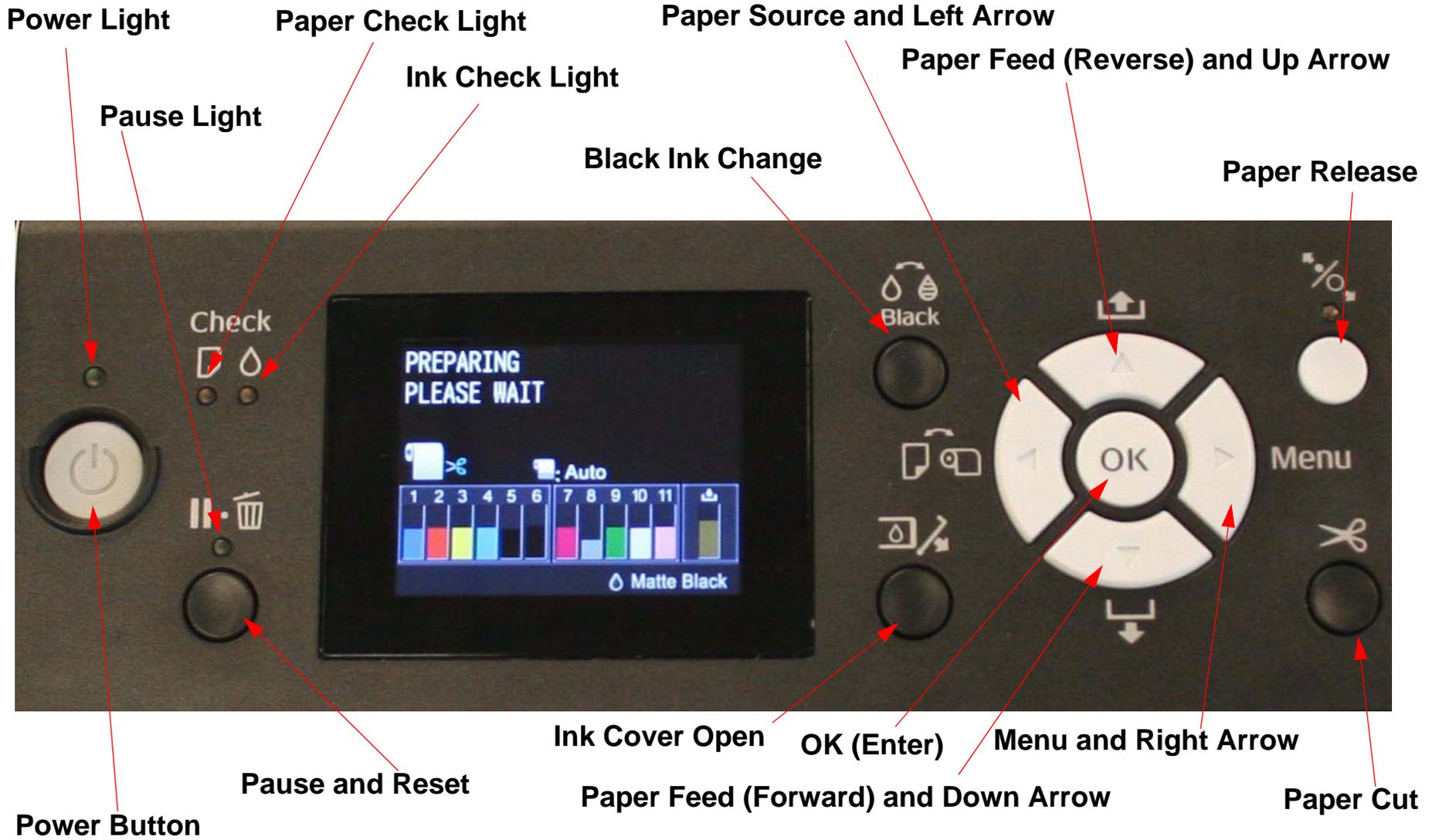
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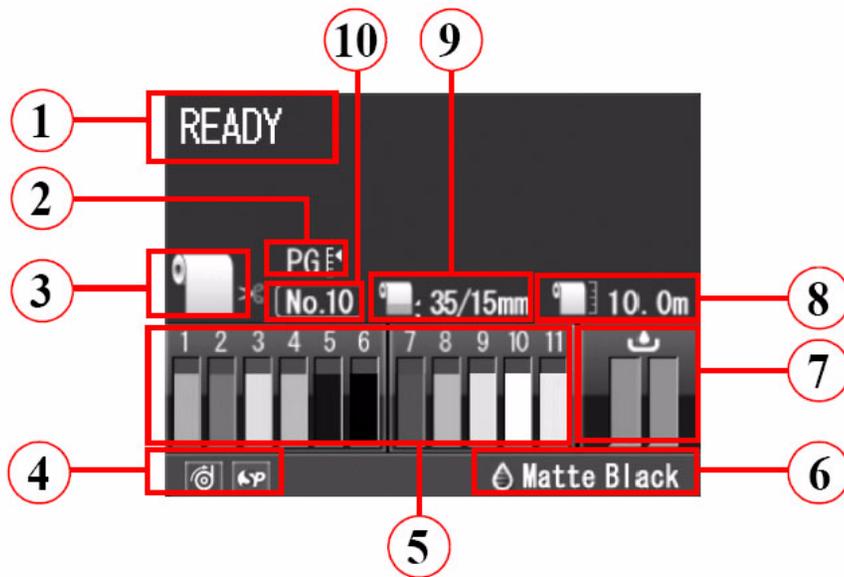
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Control Panel Map



Printers LCD Display



1. **Printer Status**
2. **Platen Gap Setting**
3. **Paper Type and Roll Paper Auto Cut Setting**
4. **Enabled Options**
5. **Ink Levels**
6. **Black Ink Setting**
7. **Waste Ink Cartridge Level(s)**
8. **Roll Paper Counter**
9. **Roll Paper Margin Setting**
10. **Custom Paper Setting**

SELF TESTING: **Down**, **Right**, and **OK**, at power on (Hold the buttons until the Ink Cartridge Icons appear).

NVRAM (Parameter) Backup Mode: **Up**, **Down**, **Left**, and **Right**, at power on.

NVRAM (Parameter) Restore Mode: Disengage **11 Ink Cartridges**, remove the **1 (or 2) Maintenance Tank(s)**, hold the **Up**, **Down**, **Left**, and **Right** buttons and turn on the **Printer**. **Wait an additional 20 seconds after the data is transferred to ensure completion.**

F/W DOWNLOAD MODE: **Up**, **Down**, **Left**, and **Right**, at power on.

Maintenance Mode 1: **Pause**, at power on.

User Menu: Press the **Menu** button when the printer displays **Ready**

1. PRINTER SETUP.

PLATEN GAP: NARROW, *STANDARD, WIDE, WIDER, WIDEST
PAGE LINE: *ON, OFF
ROLL PAPER MARGIN: *DEFAULT, TOP/BOTTOM 15mm, TOP 35/BOTTOM 15mm, 3mm,15mm
PAPER SIZE CHK: *ON, OFF
PAPER SKEW CHECK: *ON, OFF
REFRESH MARGIN: *ON, OFF
AUTO NOZZLE CHECK: ON:PERIODICALLY*, ON:EVERY JOB, OFF
PRINT NOZZLE PATTERN: OFF*, ON:EVERY PAGE, ON EVERY 10 PAGES,
INITIALIZE SETTINGS: EXECUTE

2. TEST PRINT.

NOZZLE CHECK: PRINT
STATUS SHEET: PRINT
NETWORK STATUS SHEET: PRINT
JOB INFORMATION: PRINT
CUSTOM PAPER: PRINT

3. MAINTENANCE

CUTTER ADJUSTMENT: EXEC
CUTTER REPLACEMENT: EXEC
CLEANING: NORMAL CLEANING: EXECUTE
CLEAN FOR EACH COLOR: C/VM, PK, (MK)/LK, O/G, LLK/Y,VLM/LC
POWER CLEANING: EXECUTE
CLOCK SETTING: (mm/dd/yy hh:mm)

4. PRINTER STATUS.

VERSION: (CURRENT FIRMWARE)
INK LEVEL: (FOR EACH COLOR) (nnn%)
MAINTENANCE TANK: LEFT (nnn%), CENTER REAR (nnn%), RIGHT (nnn%)
JOB HISTORY: NO.(n) INK:(n)ml, PAPER:(nnnn)cm2
TOTAL PRINTS: (n) PAGES
EDM STATUS: ENABLED, LAST UPLOADED (mm/dd/yy hh:mm)

5. PAPER SETUP.

ROLL PAPER REMAINING (*This Menu is only active when paper is not loaded and the Pinch Rollers are closed*)

REMAINING PPR SETUP: *OFF, ON:PRINT EVERY PAGE, ON: AT ROLL EXCHANGE

ROLL PAPER LENGTH: (nnn)ft (*REMAINING PPR SETUP must be on to enable*)

ROLL LENGTH ALERT: (nn)ft (*REMAINING PPR SETUP must be on to enable*)

PAPER TYPE: Photo Paper, Proofing Paper, Fine Art Paper, Matte Paper, Plain Paper, Others, Custom Paper, No Paper Selected

CUSTOM PAPER: Paper NO. (1-10)

PAPER TYPE: Photo Paper, Proofing Paper, Fine Art Paper, Matte Paper, Plain Paper, Others

PLATEN GAP: NARROW, STANDARD, WIDE, WIDER, WIDEST

THICKNESS PATTERN: PRINT

PAPER FEED ADJUST: (n.nn)%

DRYING TIME: (n.n)sec

PAPER SUCTION: *STANDARD, -1, -2, -3, -4

SET ROLL PAPER TENSION: *STANDARD, HIGH, HIGHER

6. Head Alignment.

PAPER THICKNESS: SELECT PAPER TYPE: (Photo Paper, Proofing Paper, Fine Art Paper, Matte Paper, Plain Paper, Others) SELECT THICKNESS: (N)mil

ALIGNMENT: AUTO (UNI-D, BI-D 2-COLOR, BI-D All, BI-D #1, BI-D #2, BI-D #3, BI-D #3, BI-D #4) MANUAL (UNI-D, BI-D 2-COLOR, BI-D ALL)

7. NETWORK SETUP: (*DISABLE, ENABLE)

IP ADDRESS SETTING: AUTO, PANEL,

BONJOUR: *ON, OFF

INIT NETWORK SETTING: EXECUTE

Note: Manual IP **169.254.1.2 Subnet 255.255.0.0** works with most computers.

8. OPTIONS SETUP:

SPECTROPROOFER:

STATUS INFORMATION: DEVICE VERSION, CALIBRATION TILE SERIAL#, DEVICE TEMPERATURE, FIRMWARE VERSION, AIR TEMPERATURE, BACKING COLOR

Device Alignment: EXECUTE

TAKE UP REEL: Version

NVRAM Data (Parameter) Backup Mode

Hold the **Up, Down, Left, and Right** buttons and turn on the power. The Printer will display **F/W Download**.

NVRAM Data (Parameter) Restore Mode

Disengage **11 Ink Cartridges**, remove the **1 (or 2) Maintenance Tank(s)**, hold the **Up, Down, Left, and Right** buttons and turn on the **Printer**. **Wait an additional 20 seconds after the data is transferred to ensure completion.**

F/W Download Mode

Hold the **Up, Down, Left, and Right** buttons and turn on the power. The Printer will display **F/W Download**.

Maintenance Mode 1: Press and hold the **Pause** button and turn on the Printer.

LANGUAGE: JAPANESE, *ENGLISH, FRENCH, ITALIAN, GERMAN, PORTUGUE, SPANISH, DUTCH, Korean, Chinese (**Panel Language**)

LENGTH UNITS: *FEET/INCH, METRIC (**Set's the unit of measure that the printer displays**)

TEMPERATURE UNITS: C, F

ROLL PAPER TENSION: *4 (1-5)

SS CLEANING: EXEC (**Super Strong Cleaning**)

PWR ON ROLL PPR FEED: *ON, OFF (**On = Feeds the paper 3" lower, when auto cut is off**)
(**Off = Does not feed the paper 3" lower, when auto cut is off**)

DEFAULT PANEL: EXEC (**Resets to Factory Default all of the User Menus**)

AUTO CLEANING TIMES: 1, 2, 3

Custom:*0 (0 - 9)

SELF TESTING: Press and hold the **Down**, **Right**, and **OK** buttons and turn on the Printer.



1. **Down**, **Right**, and **OK**, and turn on the **Printer**. Continue to hold the buttons the **Down**, **Right**, and **OK** buttons.



2. Release the **Down**, **Right**, and **OK** buttons when the Ink Icons appear.



3. Press the **Right Arrow** to enter the **Self Testing** Menu.

Note: The **Left Arrow** can be used to temporarily leave the Self Testing Menu to access and use the Pinch Roller Release Button, the Cut Button, etc. Use the **Right Arrow** to re-enter the **Self Testing** Menu.

SELF TESTING:**Test:**

Version: F/W: (nnnnnnn,n.nn,n.nnnn) (Displays the current firmware version)

Fan: Paper(Duty): (200% - 0%) (Tests the fan suction for all paper suction fans)

Paper1: (Fan test for paper suction fan #1 (Right Side Fan))

Paper2: (Fan test for paper suction fan #2 (Left Side Fan))

Paper3: (Fan test for paper suction fan #3 (Left Side Fan))

Error History (list of past errors)

Mecha Adjustment:

Paper: Paper Thick 00, 01, 10, 11 (Displays the output from the Paper Thickness Sensors)

RearAD: [Enter]Start (nnn nnn nnn) (For adjusting the Rear Paper Sensor)

Selector Check: [Enter]Start (Tests the PK/MK Valve Motor and Sensor)

APG Check: [Enter]Start (Tests the Auto Platen Gap Motor and Sensor)

PF Ageing: Variable Mode, Aging 400, Aging 12 (Excercises the Paper Feed Motor and Encoder)

CR Ageing: [Enter]Start (Excercises the Carriage Motor and Encoder)

Cleaning PG: Adjustment, Check (Measures the gap between the Nozzle Plate and the AID Grid)

Decomp: [Enter]Start

MK Nozzle/Alignment: (Nozzle check using Matte Black plus all other colors)

Output Pattern: [Enter]Print

Output Alignment: [Enter]Print

Cleaning CL1: [Enter]Start

Cleaning CL2: [Enter]Start

Cleaning CL3: [Enter]Start

PK Nozzle/Alignment: (Nozzle check using Photo Black plus all other colors)

Output Pattern: [Enter]Print

Output Alignment: [Enter]Print

Cleaning CL1: [Enter]Start

Cleaning CL2: [Enter]Start

Cleaning CL3: [Enter]Start

IM Sensor Gap: [Enter]Un Cap

Fan: Fan Adjust *0% (-10% to +10%) (Adjusts Suction Fans)
Temporary PG: [Enter]Un Cap (Releases the Carriage Mechanism)
PF Head Slant: [Enter]Print (Prints the PF Slant adjustment pattern)
CR Head Slant: [Enter]Print (Prints the CR Slant adjustment pattern)
PG Adj: [Enter]Un Cap (Releases the Carriage Mechanism)
CR Scale: [Enter]Start (Excercises the Carriage Motor and Encoder)
CR Active Dumper: All, 240CPS, 300CPS, Hybrid
AIDCheck: [Enter] Start (Test the AID circuitry)
IM Sensor: [Enter]Print (do not perform)
Gap Adj: (Auto Bi-d and Uni-d)
 Auto Uni-D, [Enter]Print
 Auto Bi-D, [Enter]Print
Feed Adj: (990.6mm adjustment)
 Printing: [Enter]Print
 Input: Feed Adj Value: (n:nn)mm
Cutter: (Test the Cutter Mechanism)
 Printing: [Enter]Print
 Input: Cut Position Home: (n:n)mm
TBS Pos: (Margin adjustments)
 Printing: [Enter]Print
 Input: Top Margin: (n:n)mm
Pad Position: [Enter]Print (Checks the borderless pad position carriage timing)
Measurement:
 Mecha,[Enter]Start
 Ink System, [Enter]Start
Print Adj. Variable: [Enter] Print (Prints the numeric adjustment variables currently set)
Board Paper Check: Please Set Board, [Enter]Start
LCD RGB Check: Red, Green, Blue
Counter Check: [Enter] Start
Counter Clear: [Enter] Start

Maintenance

Tube Exchange: Sequence, Counter Clear

Wiper Exchange: Sequence, Counter Clear

Pump Exchange: [Enter] Start

Press Pump Exchange: [Enter] Start

Selector Exchange: Sequence, Counter Clear

I/H Exchange: Sequence, Counter Clear

Head Exchange: [Enter] Start

Cleaning:

Std. CL1

Std. CL2

Std. CL3

Init.Fill

SSCL

A/B (C/M)

C/D (Bk/Lk)

E/F (Or/Gr)

G/H (LLk/Y)

I/J (Lm/Lc)

Parameter:

Update: InkParameter: Init. Fill: (Set, Reset) (Reset, turns off the initial fill)

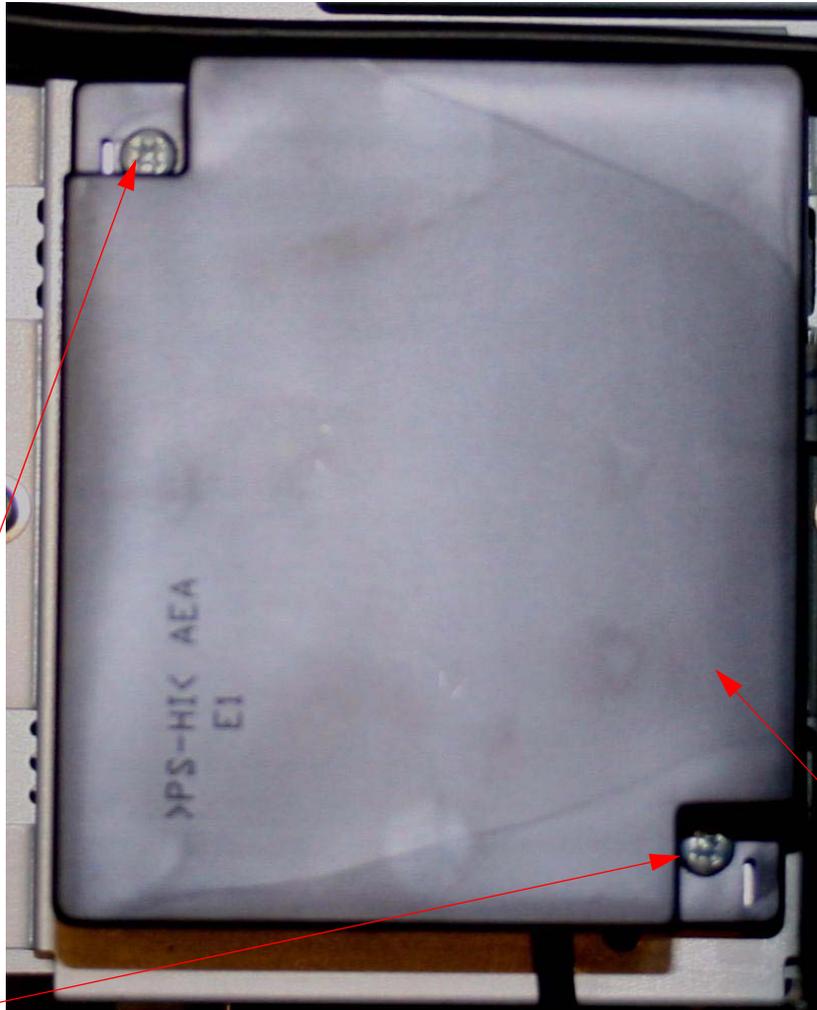
Display: (nnnn)

Life: CR, PF, RR, Tension, Driven roller, APG, Cutter, Take up, Colormetric Carrier, Paper Pressing Plate, Carriir
+ Plate, Display Count

Component Replacement

Board (AID) Removal

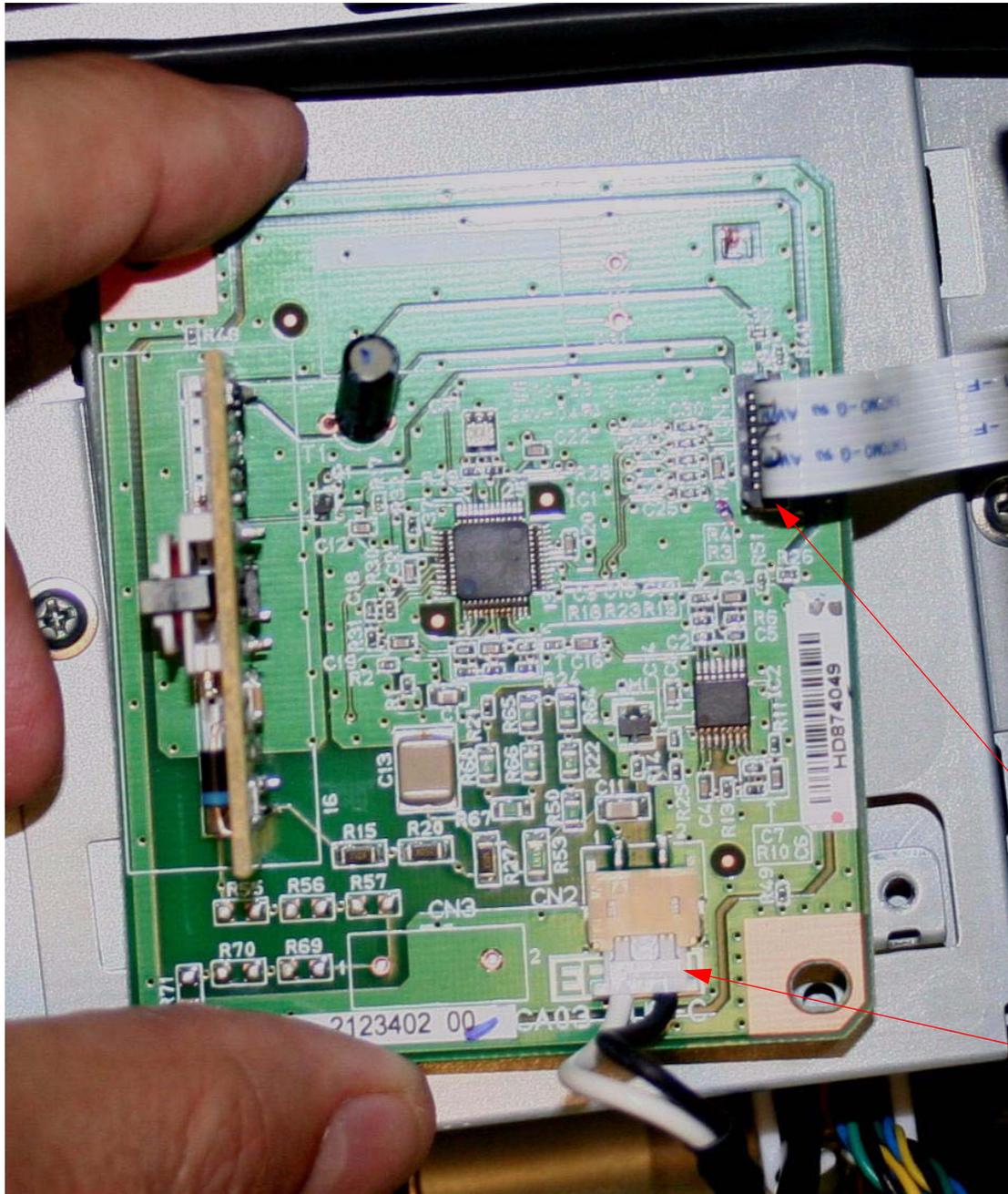
1. Remove the **Right Side Cover**.
2. Remove **2 Screws** that fasten the **AID Board Assembly** to the top of the **Cleaning Unit**.



1. Remove **2 Screws**.

2. Remove the **Black Plastic Cover**.

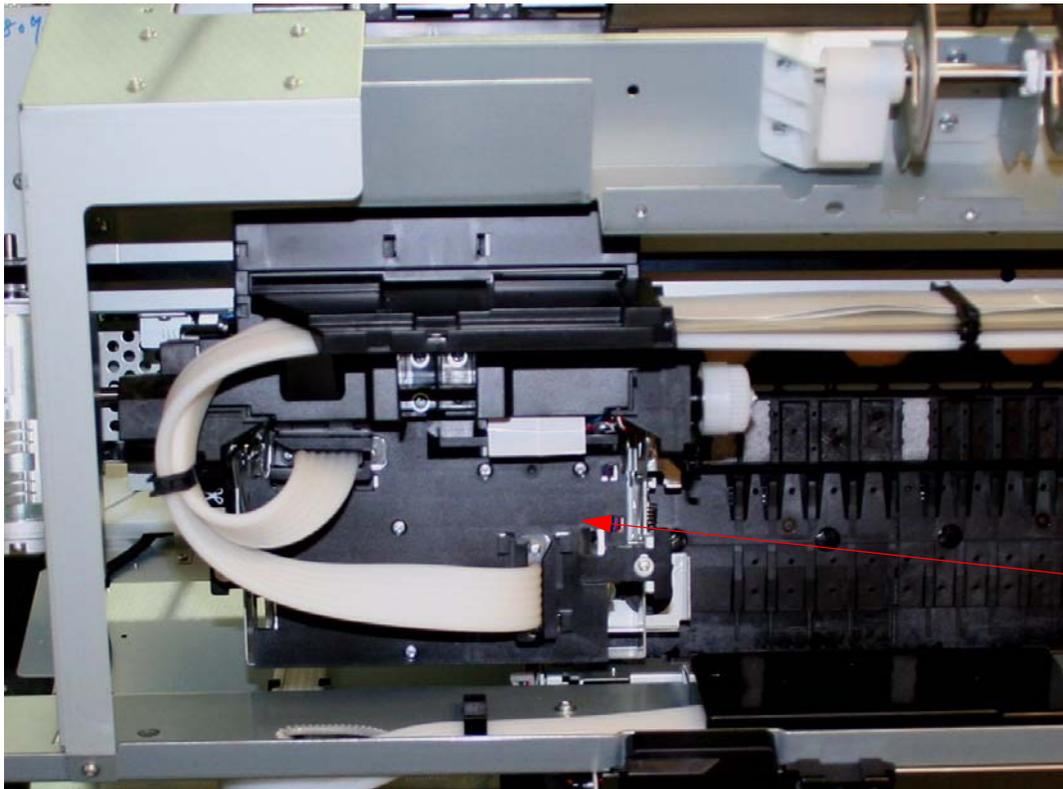
3. Unplug **2 Cables** that connect the **AID Board** to the **Printer**.



Unplug **2 Cables**.

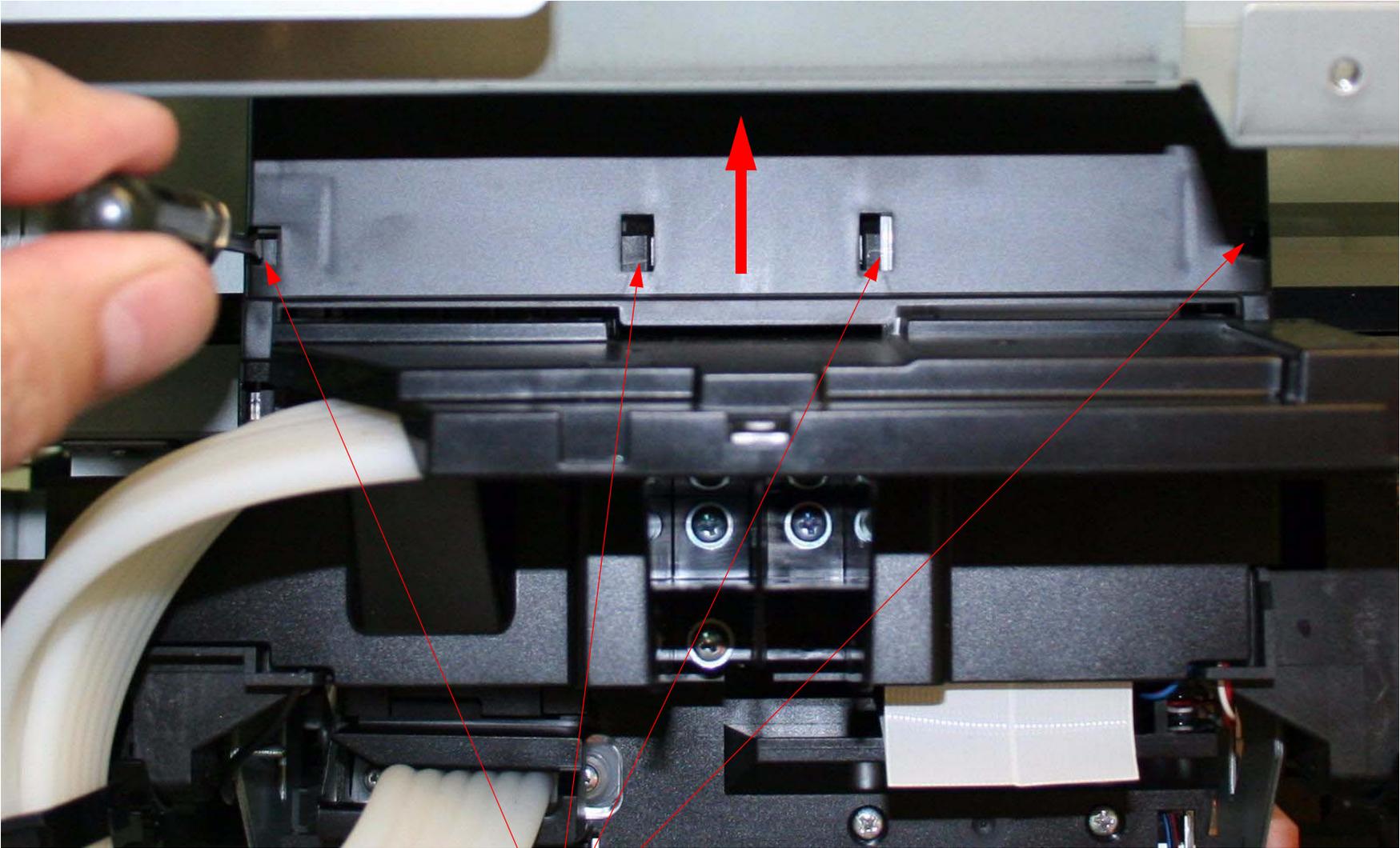
Board Carriage Removal

1. Release the **Carriage Mechanism**, following the directions found in the Carriage Release Auto) Chapter, located in the Reference Section.
2. **Unplug the Printer.**
3. Remove the **Cover (Top)**.
4. Remove the **Cover (Left Side)**.
5. Move the **Carriage Mechanism** to the left side of the **Printer**.



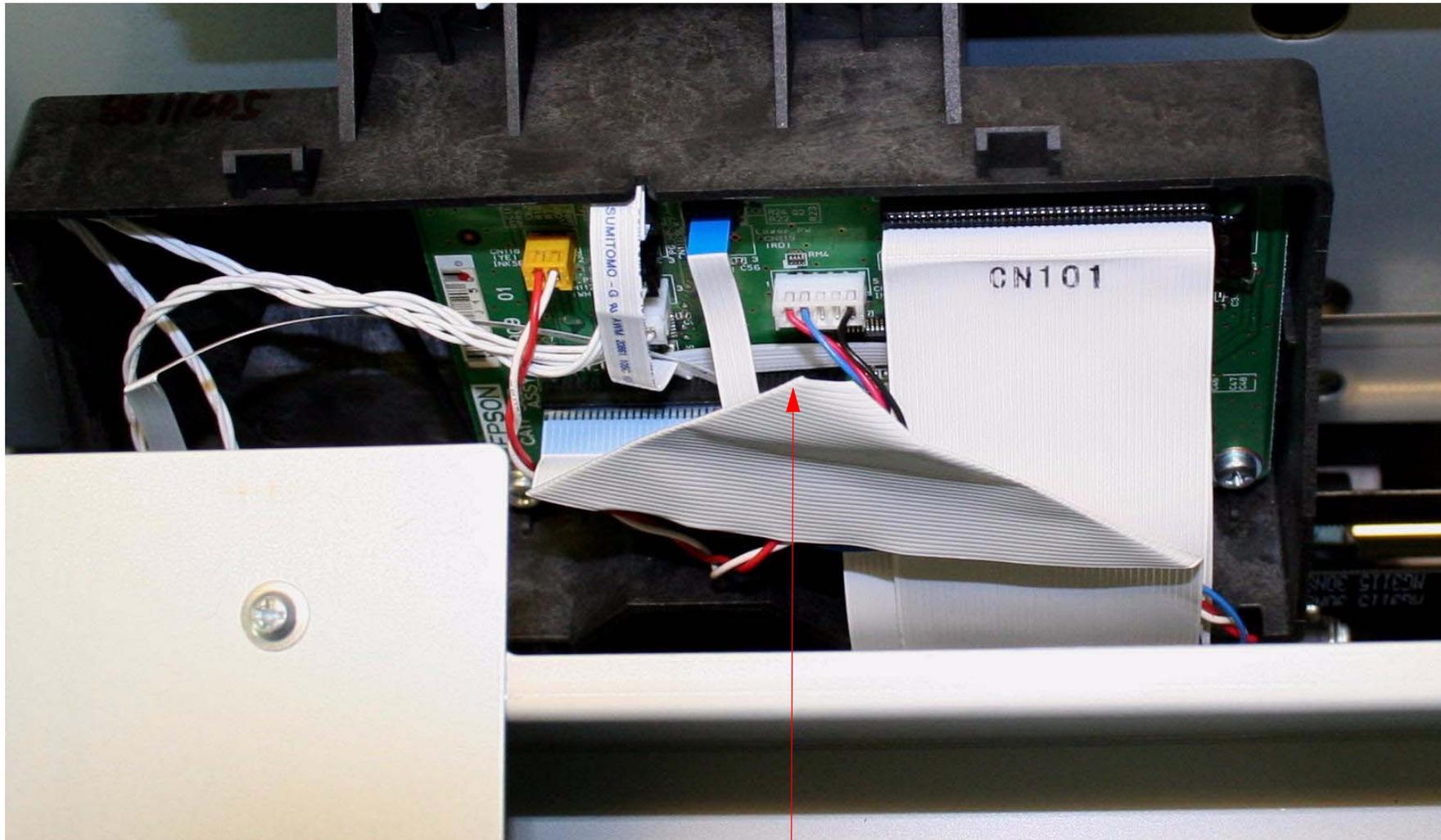
Move the **Carriage Mechanism** to the left side of the **Printer**.

6. Remove the **Carriage Board Cover**.



Working from left to right, release **4 Interlocks** and remove the **Carriage Board Cover**.

7. Unplug **4 Wired Cables** and **7 Foil Cables**.



Unplug all **Cables**.

Board (Main) Removal

Note: 7900 Main Board Part # 2124160

Note: 9900 Main Board Part # 2124159

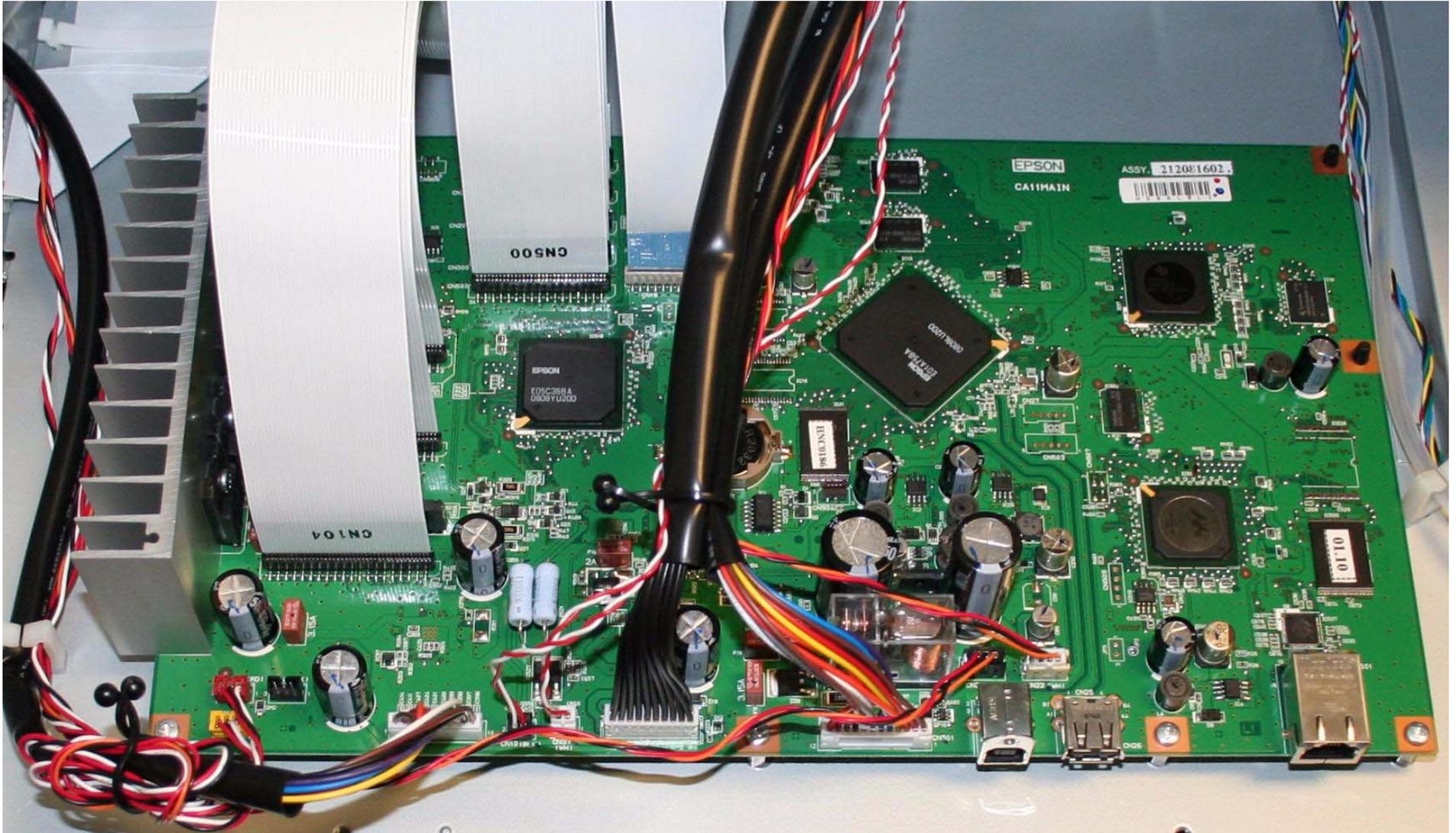
Main Board Removal (Overview)

- Back up the **Printer's Parameters**.
- Remove the **Rear Cover**.
- Unplug the **Cables**.
- Remove the **Screws**.
- Remove the **Main Board**.

Main Board Removal (Detail)

1. Back up the **Printer's** parameters using the **NV-Ram Backup Utility** feature of the **servprog.exe** utility.
2. Turn off the **Printer** and **UNPLUG from AC**.
3. Remove the **Cover (Rear)**.

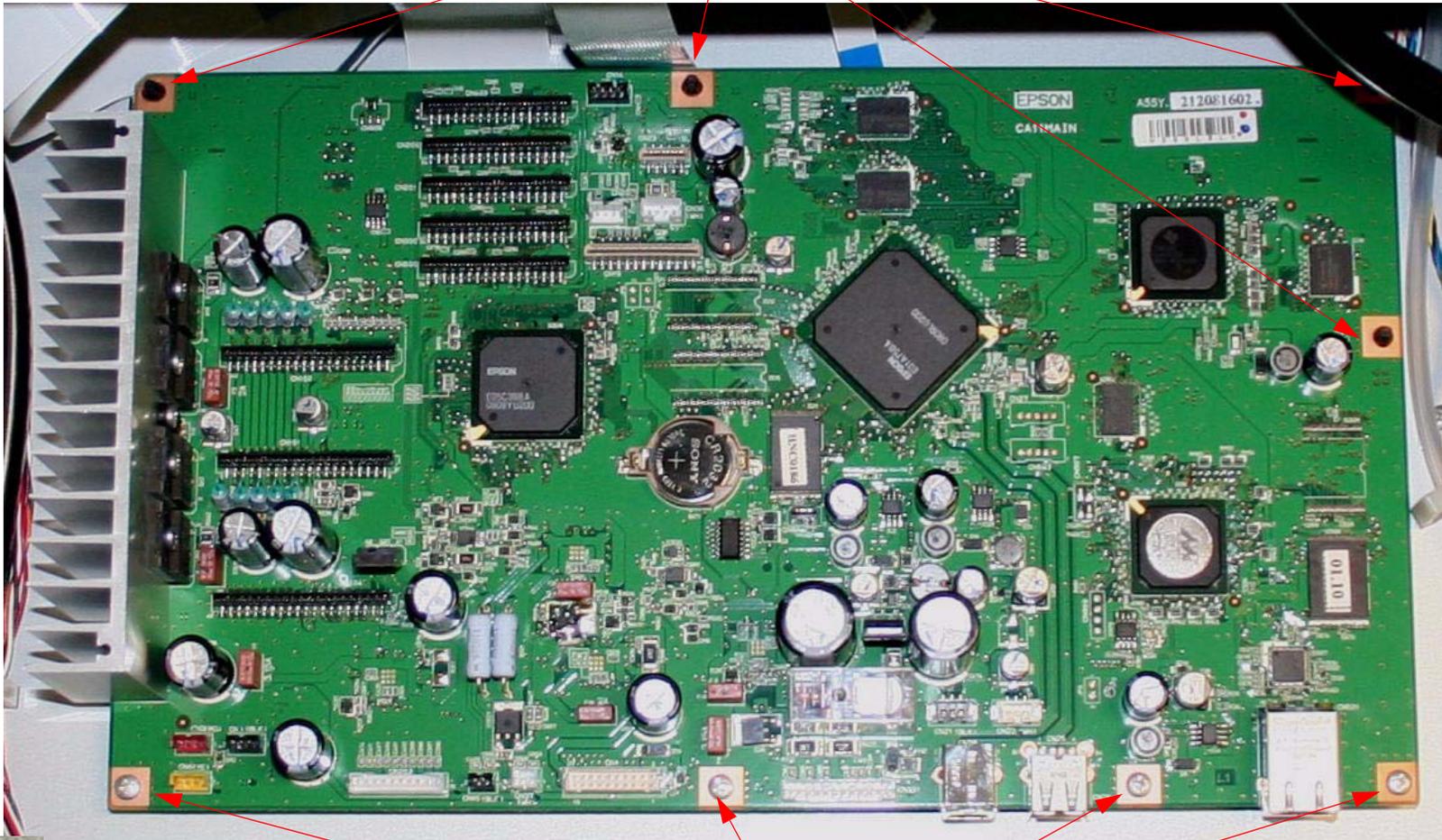
4. Unplug the **10 Foil Cables** that attach the **Main Board** to the **Printer**.



Unplug **10 Foil Cables** and **11 Wire Cables**.

5. Remove the **Main Board** from the **Printer**.

2. Release **4 Interlocks**.



1. Remove **4 Screws**.

3. Lift out the **Main Board**.



Board (Main) Installation

Note: 7900 Main Board Part # 2124160

Note: 9900 Main Board Part # 2124159

Main Board Installation (Overview)

- Install the **Main Board**.
- Install the **Screws**.
- Plug in the **Cables**.
- Upload **Firmware**.
- Install the **Printer's Parameters**.
- Perform the **RTC&USBID Adjustment**.
- Install the **Rear Cover**.

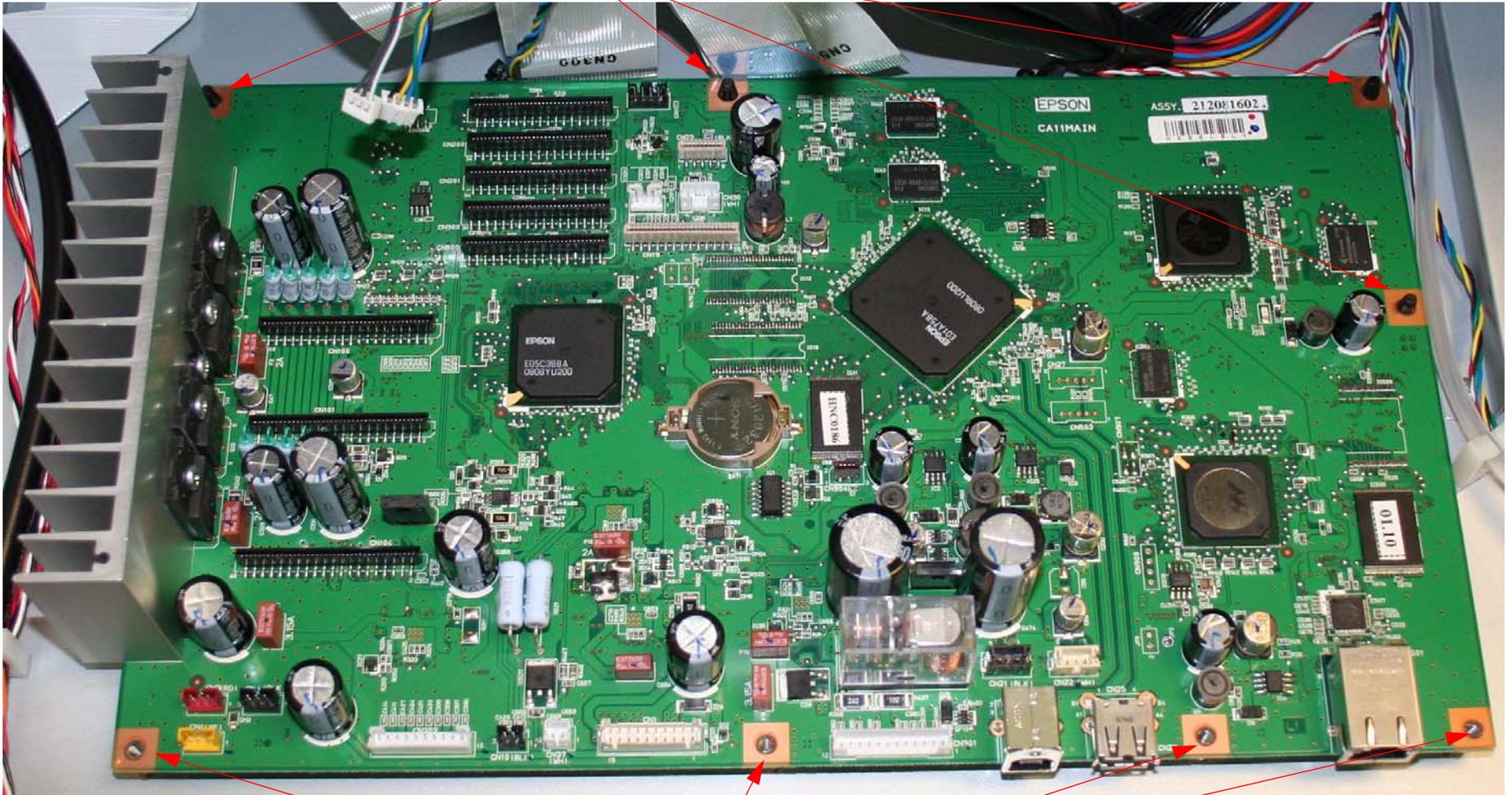
Main Board Installation (Detail)

1. Compare the **New Main Board** to the **Old Main Board**. Verify that the **Components, Brackets, and Part Numbers** match.

2. Install the **Main Board** into the **Printer**.

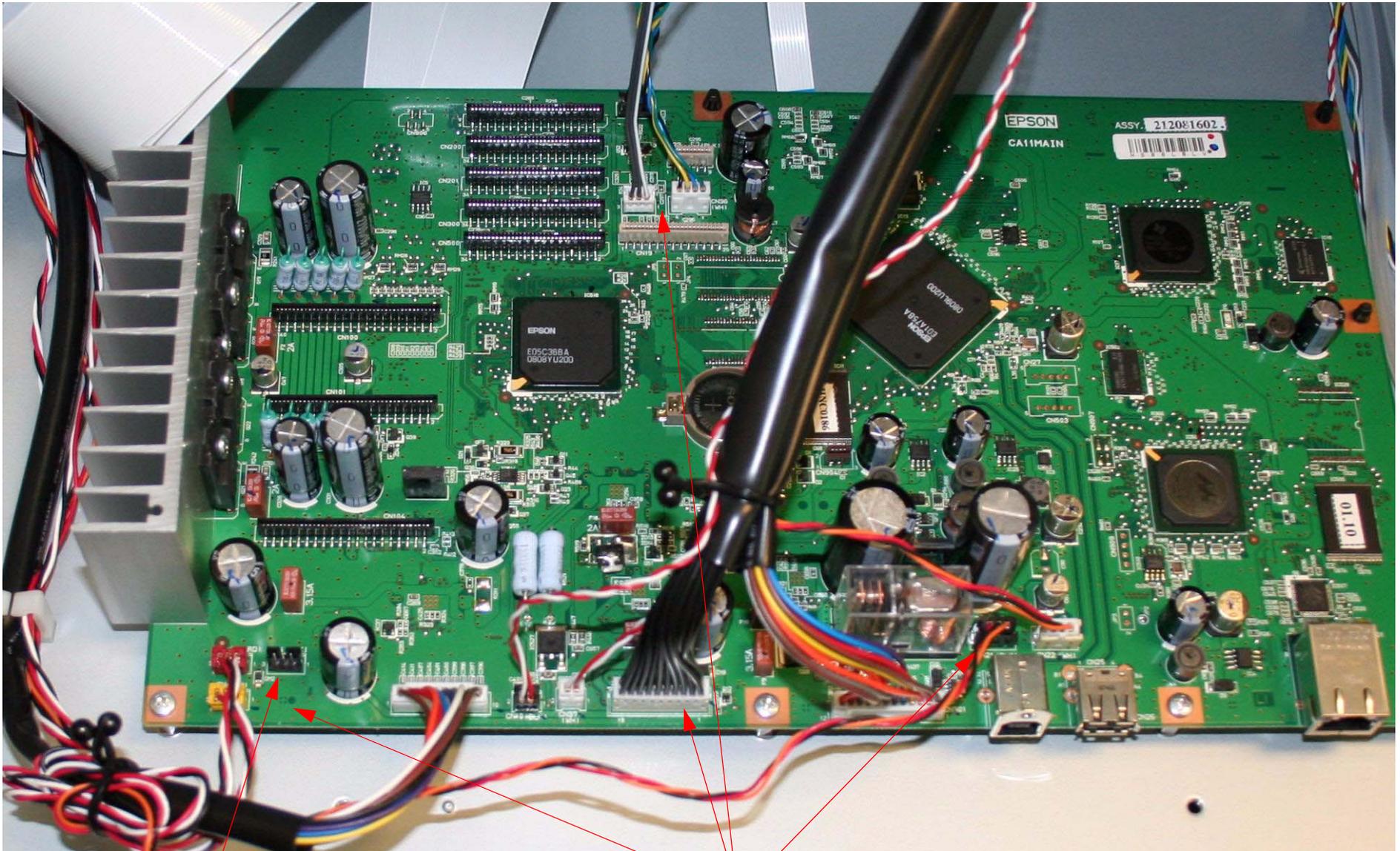
1. Drop in the **Main Board**.

2. Engage the **4 Interlocks**.



3. Install **4 Screws**.

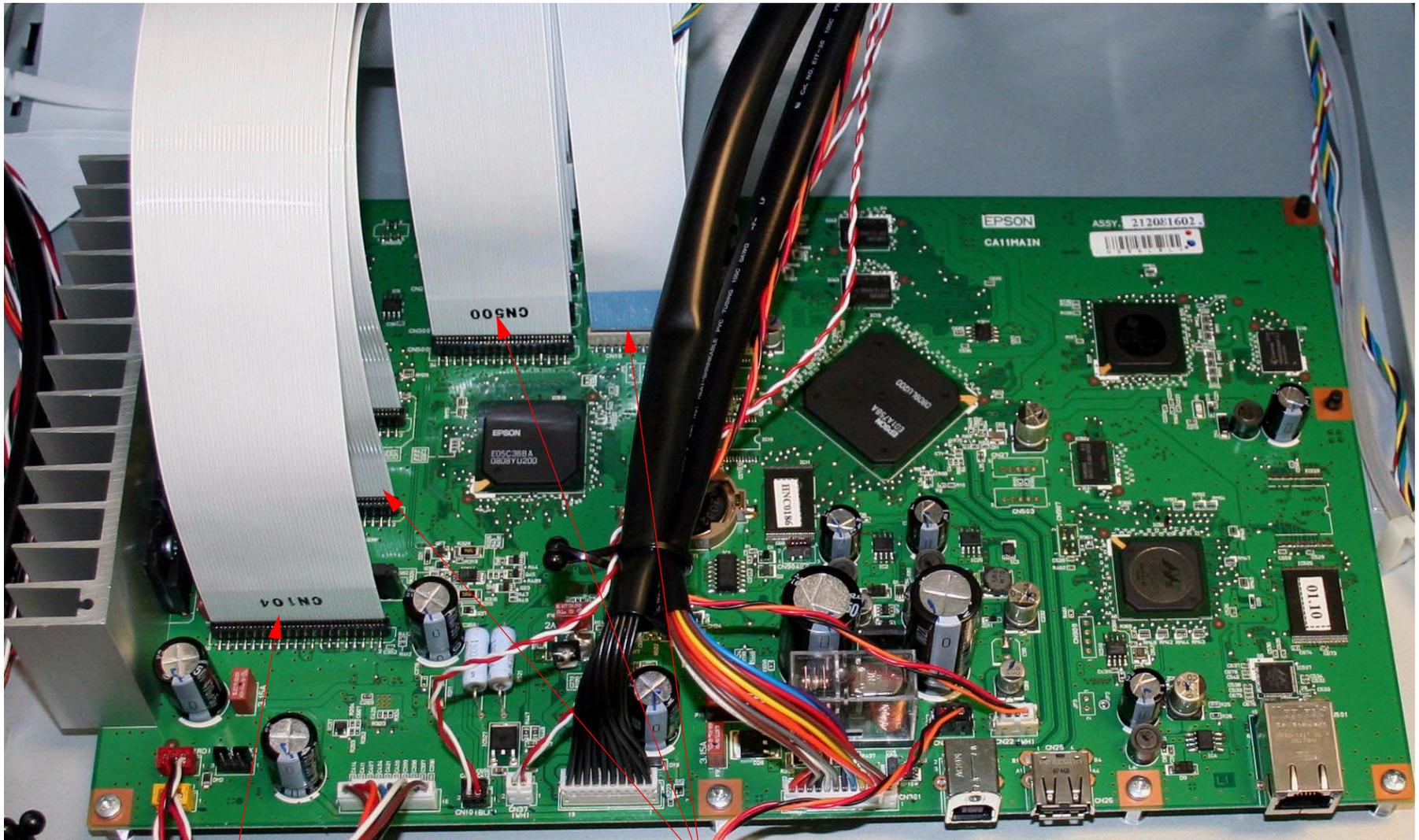
3. Plug in **11 Wired Cables** that attach the **Main Board** to the **Printer**.



Note: CN5 is not used.

Plug in 11 Wired Cables.

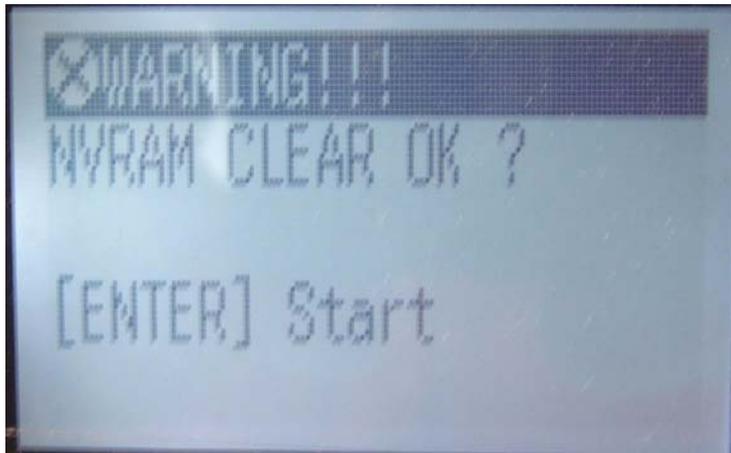
4. Plug in **10 Foil Cables** that attach the **Main Board** to the **Printer**. **Ensure that the Cables are fully seated (straight).**



Plug in **10 Foil Cables**.

Note: The Foil Cables have their Connector Number printed on them.

5. Install the **Rear Cover**.
6. Plug in and turn on the **Printer** in Firmware Download Mode (depress the **Up**, **Down**, **Left**, and **Menu** buttons, and turn on the power to the **Printer**).
7. Download the latest Firmware following the directions found in the *Firmware Update Procedure Using FWUpdate.exe* chapter located in the Reference section of the Field Guide.
8. New **Main Boards** (never used **Boards**) will display this message. Follow the steps below.



Note: During the boot process after installing firmware, the Printer may display this message. It indicates that pressing the Enter Button will clear the NVRAM area. This NVRAM area will be overwritten when Parameters are installed in the following steps.

- 8.1 Press the **Enter** Button.
- 8.2 Immediately turn off the **Printer**, and proceed to Step 11.

Note: If the Printer is allowed to fully boot after clearing the NVRAM, the Printer will begin an “Initial Ink Charge”. If it does, open an Ink Door to interrupt the “Initial Ink Charge”, and turn the Printer off. Installing Parameters in the next step will cancel the “Initial Ink Charge”.

If the Printer's Parameters are not available skip step 9, and proceed with step 10.

Note: The new board will have a new USB ID. The original driver connection will not work. Allow the driver to connect to a new USB ID.

9. Re-Install the **Printer's** parameters using the **NV-Ram Backup Utility** feature of the **servprog.exe** utility.

9.1 Perform the **RTC & USBID** Adjustment located in the **servprog.exe** utility. **(End of the Procedure)**.

9.2 Perform the **Input MAC Address**.

Note: After installing the original Boards parameters, the new board will have the original USB ID. Use the original driver connection for future service operations.

10. Install the appropriate generic NVRAM data (generic **Printer** parameters) (using the **NV-Ram Backup Utility** feature of the **servprog.exe** utility).

Note: If the new Board does not have any parameters, the Printer will not function well enough to allow alignments, paper loading, nozzle check, or the rest of step 11. Generic parameters are a set of working parameters from another printer. They are available for download at: <https://www.epsoninsider.com> listed under the Printer name, as Generic NVRAM Backup.

Note: Installing generic parameters will introduce a new USB ID. Allow the driver to connect to a new USB ID.

Note: Install **Photo Black Generic Parameters** on a Printer that is in photo black mode, or **Matte Black Generic Parameters** on a Printer that is in Matte Black Mode. Remove the paper and disconnect all optional devices (Take Up Reel and Spectroproofer). This matches the Printer to the Generic Parameters.

11. Perform the following operations in the order listed.

11.1 Perform the **RTC&USBID** Adjustment.

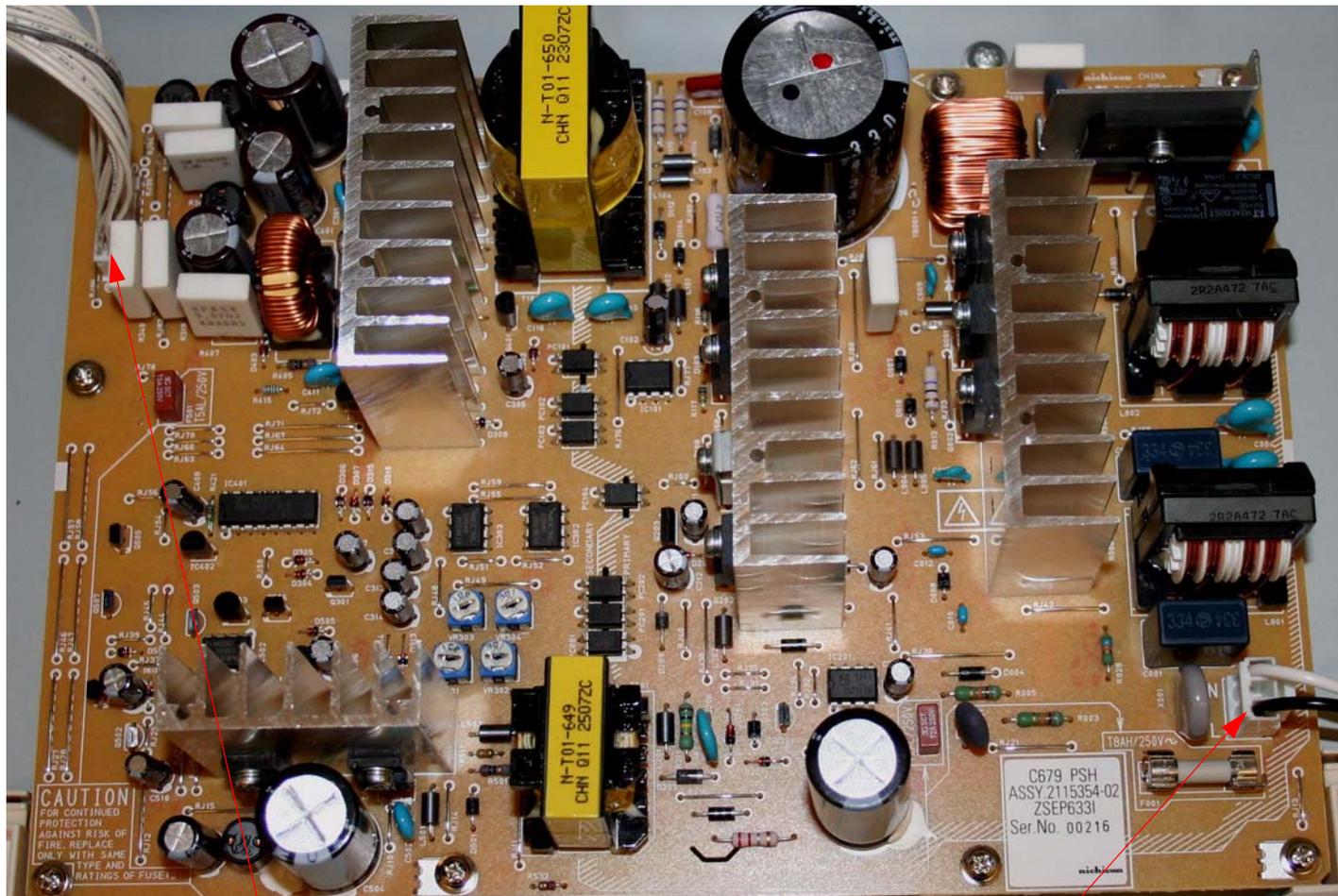
11.2 Perform the **Head Rank Input** (**Print Head** calibration values).

11.3 Perform **Input Serial Number**.

- 11.4 Perform **Input MAC Address**.
- 11.5 Perform the **Rear AD** Adjustment.
- 11.6 Perform the **Feed Adj** Adjustment.
- 11.7 Perform the **TBS Pos** Adjustment.
- 11.8 Perform the **Cleaning PG** Adjustment.
- 11.9 Perform the **Gap Adjust: Auto Bi-D** Adjustment.
- 11.10 Perform the **Gap Adjust: Auto Uni-D** Adjustment.
- 11.11 Perform the **Colorimetric Calibration** (*When specifically requested by Epson*).

Board (Power Supply) Removal

1. Turn off the *Printer* and **UNPLUG from AC.**
2. Remove the *Cover (Rear).*
3. Unplug the *Cables* that attach the *Power Supply* to the *Printer.*



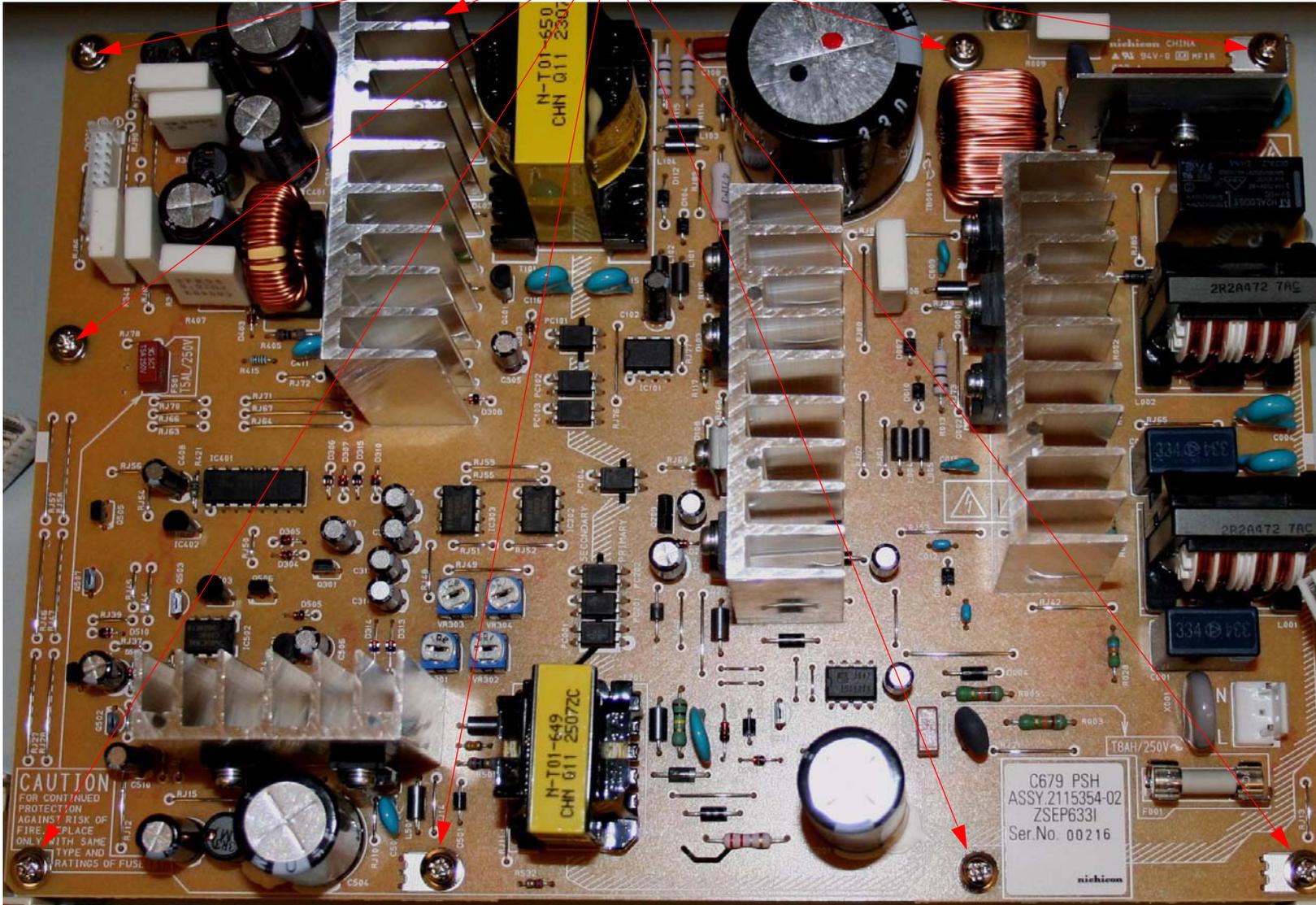
1. Unplug **CN301**.

2. Unplug **CN001**.

4. Remove **9 Screws**, and lift out the **Power Supply**.



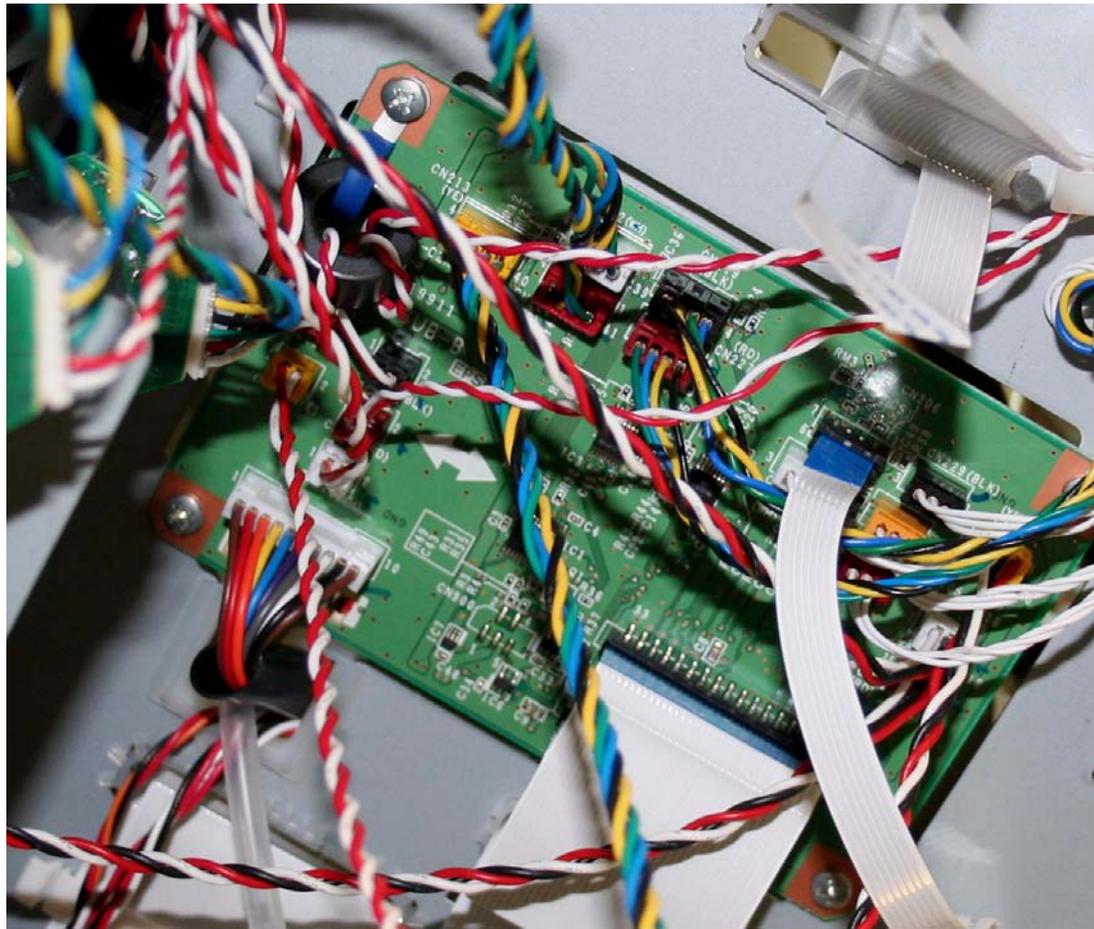
1. Remove **9 Screws**



2. Lift out the **Power Supply**.

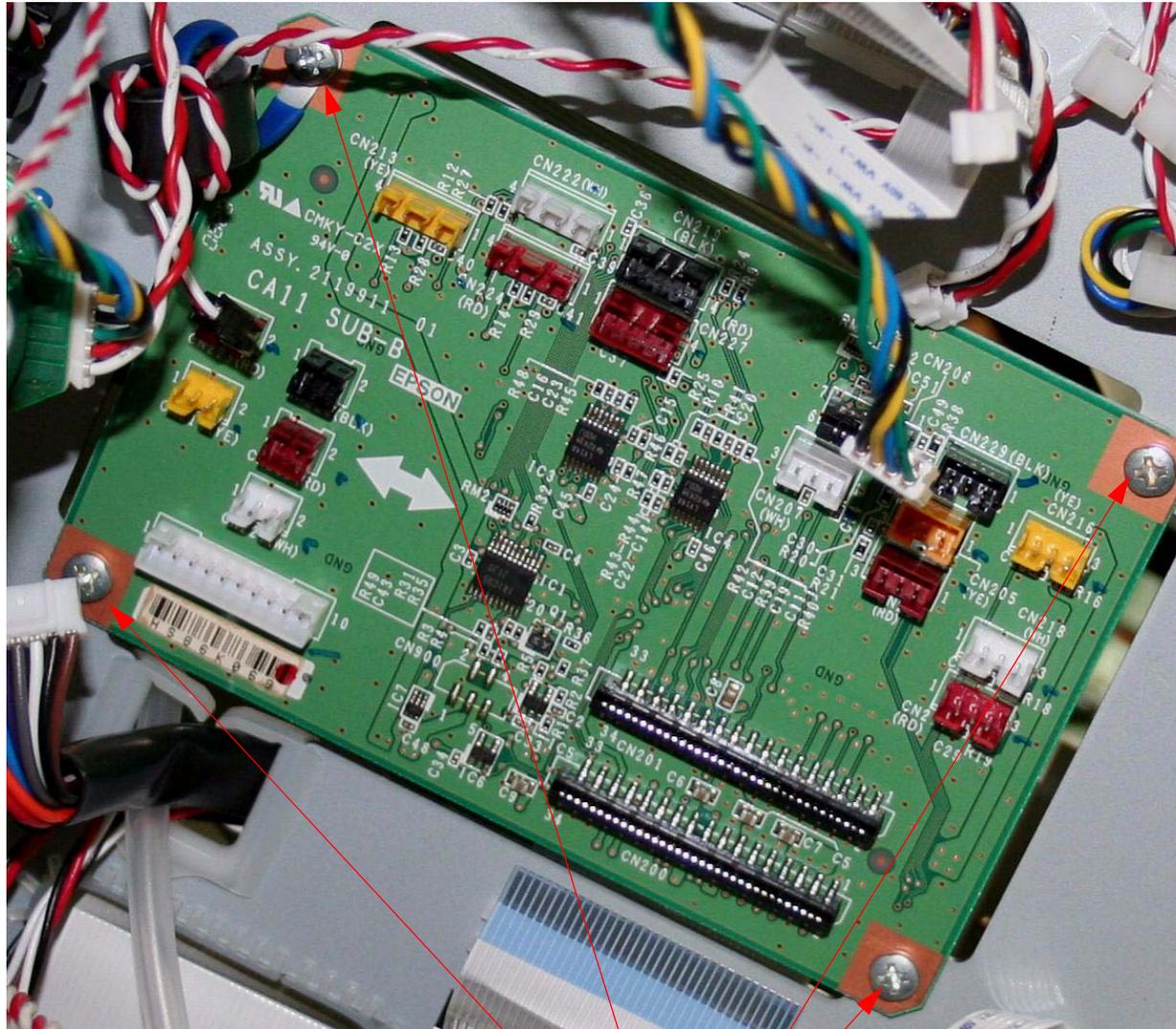
Board (Sub B) Removal

1. Turn off the *Printer* and **UNPLUG from AC.**
2. Remove the *Cover (Right Side).*
3. Unplug the **21 Cables** that attach the *Sub Board B* to the *Printer.*



Unplug **3 Foil Cables** and **18 Wire Cables.**

4. Remove the **Sub Board B** from the **Printer**.



1. Remove **4** Screws.

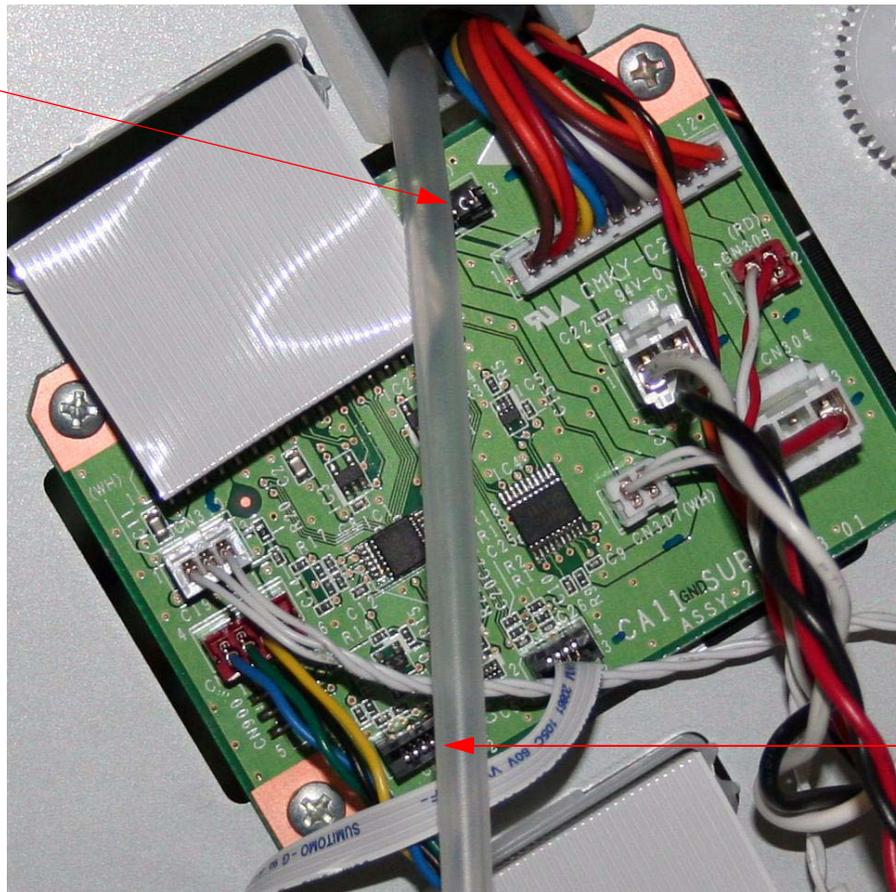
2. Remove the **Board**.



Board (Sub C) Removal

1. Turn off the *Printer* and **UNPLUG from AC.**
2. Remove the *Cover (Left Side).*
3. Unplug the **9 Cables (10 Cables on a 9900)** that attach the *Sub Board C* to the *Printer.*

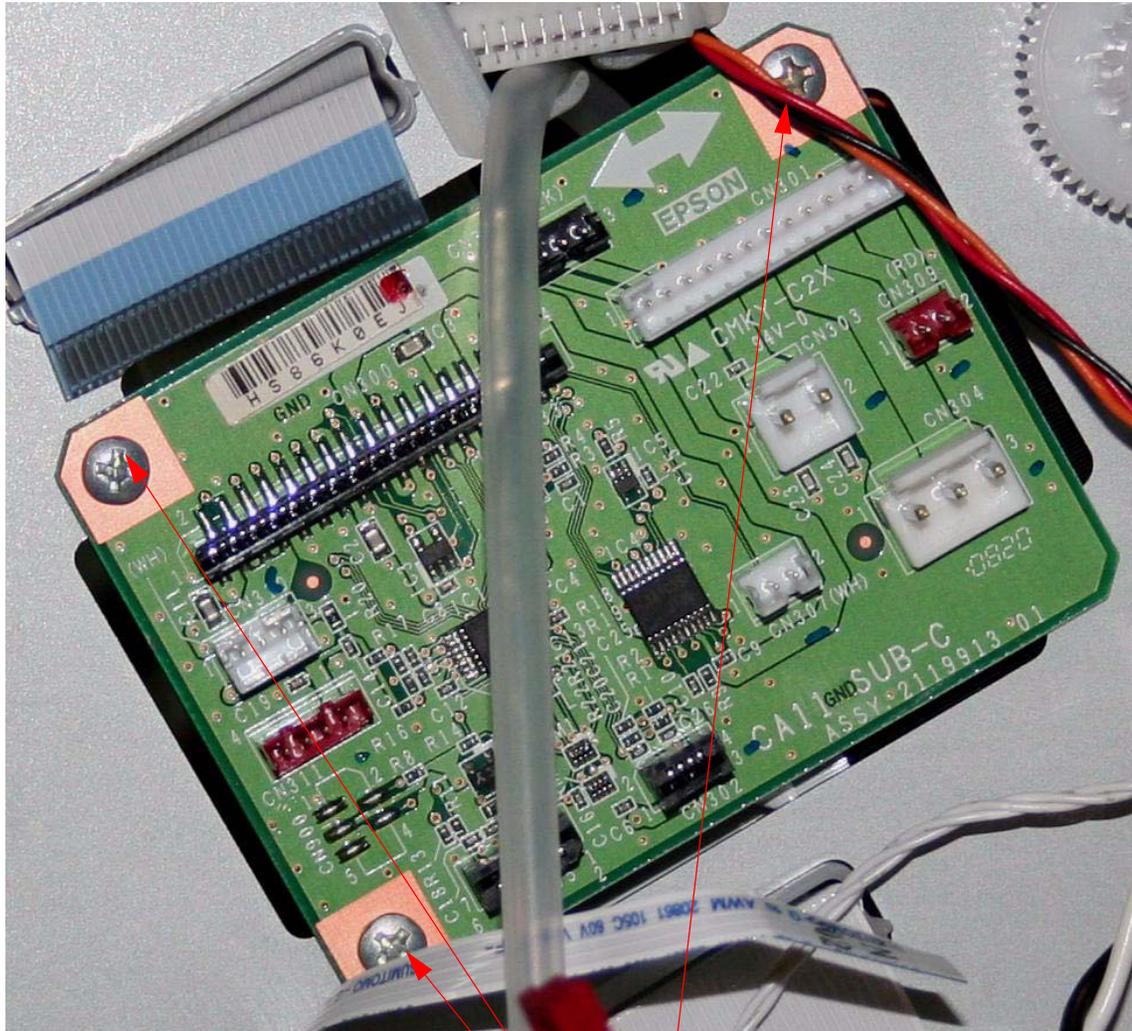
CN308 is not used.



CN305 is connected to the *Left Maintenance Tank* on a *9900.*

Unplug **2 Foil Cables** and **7 Wire Cables.**

4. Remove the **Sub Board B** from the **Printer**.



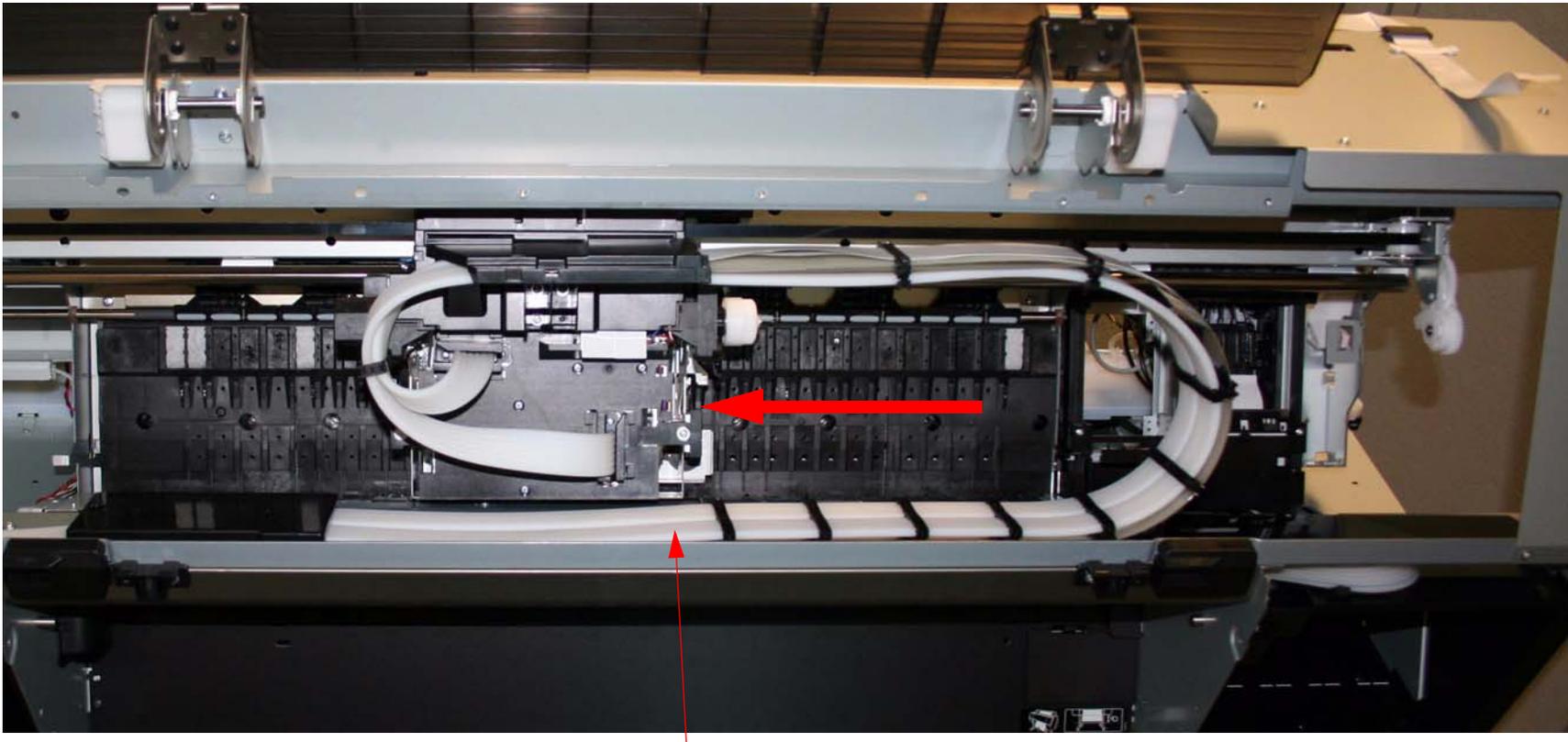
1. Remove 3 Screws.

2. Remove the **Board**.

Cleaning Unit Removal

1. Remove the **Right Side Cover**.
2. Remove the **AID Board**.
3. Move the **Carriage Assembly** to the center of the **Printer**.
 - 3.1 Follow the directions in the Carriage Release (Manual) Chapter found in the Reference Section.

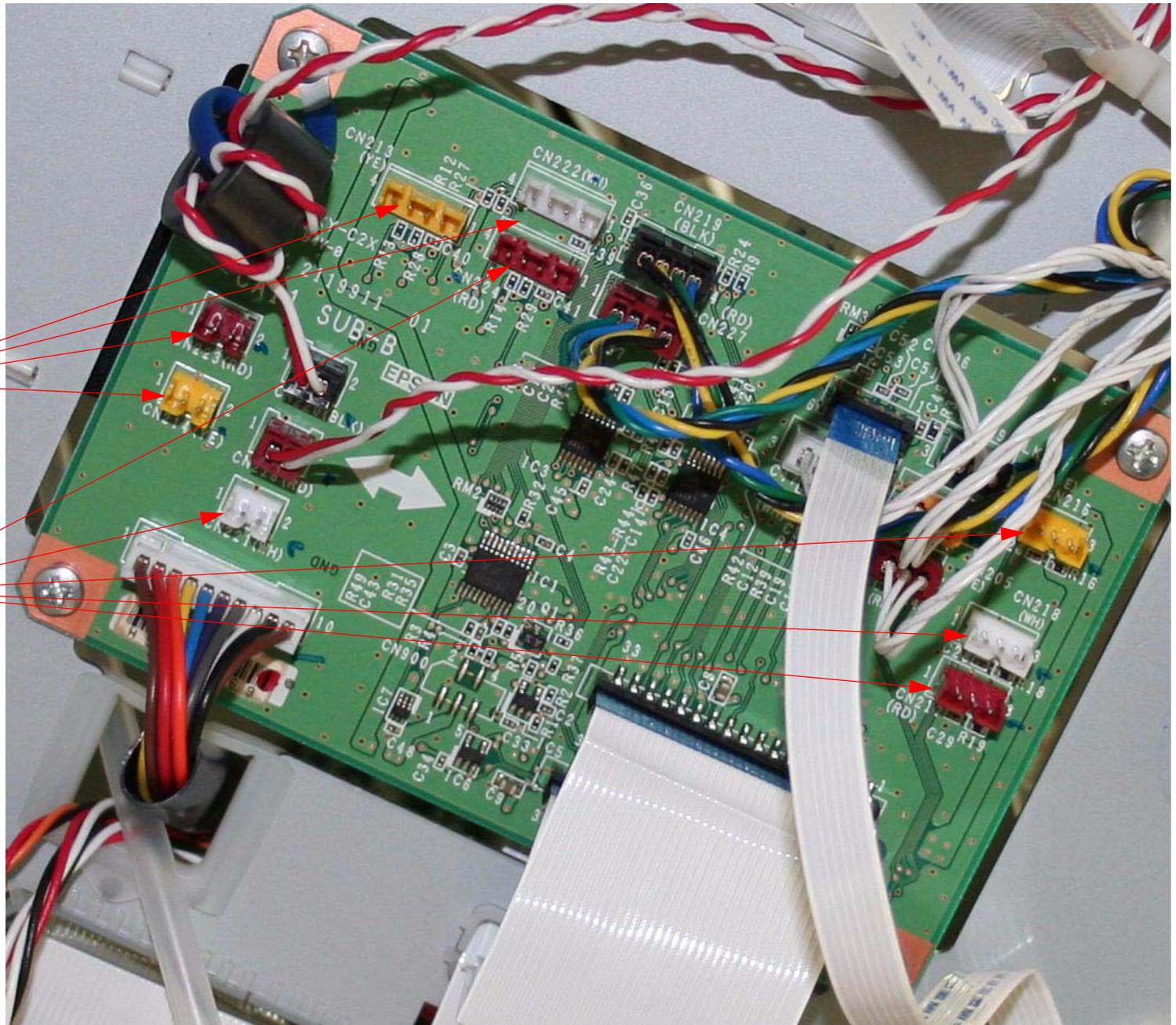
Note: The Print Head is very fragile and can be damaged moving it away from the Cleaning Unit.



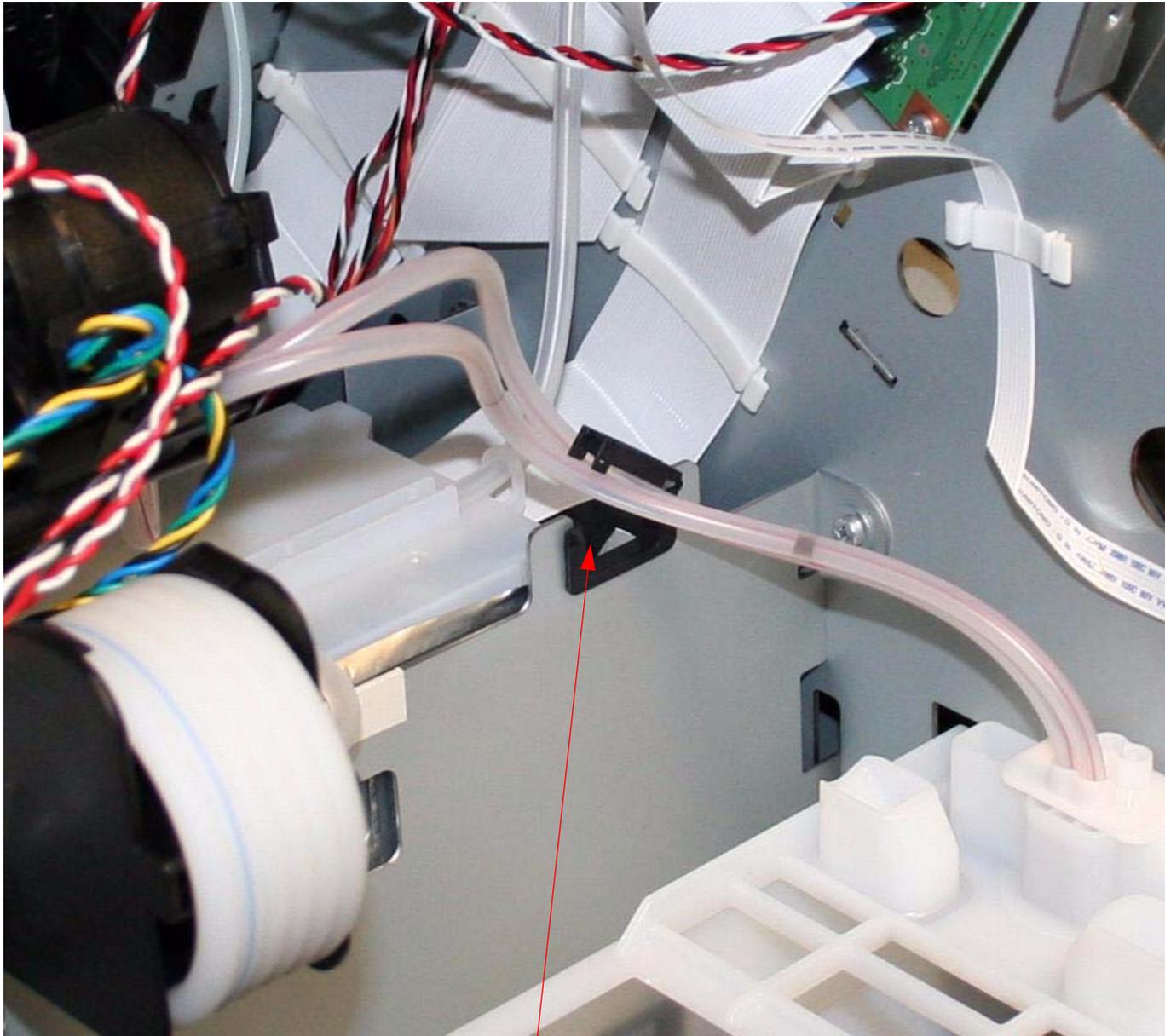
Move the **Carriage Assembly** to the center of the **Printer**.

4. Unplug **3 Motors** and **6 Sensors** from **Sub Board B**.

- Unplug:
- CN213
- CN222
- CN224
- CN223
- CN214
- CN221
- CN216
- CN218
- CN217

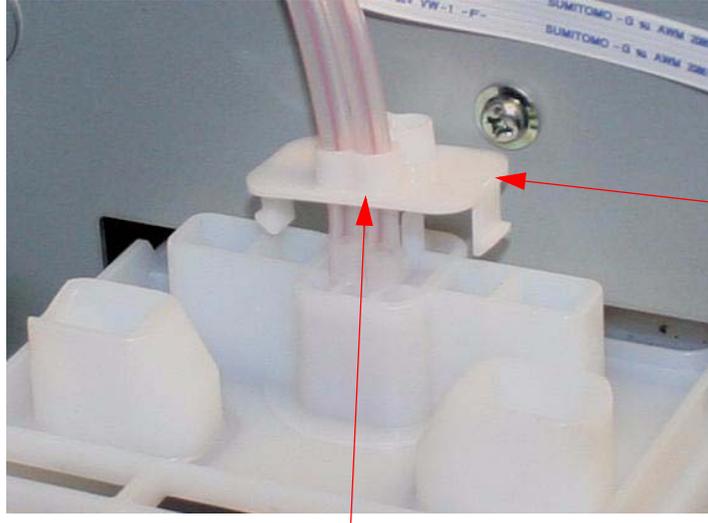
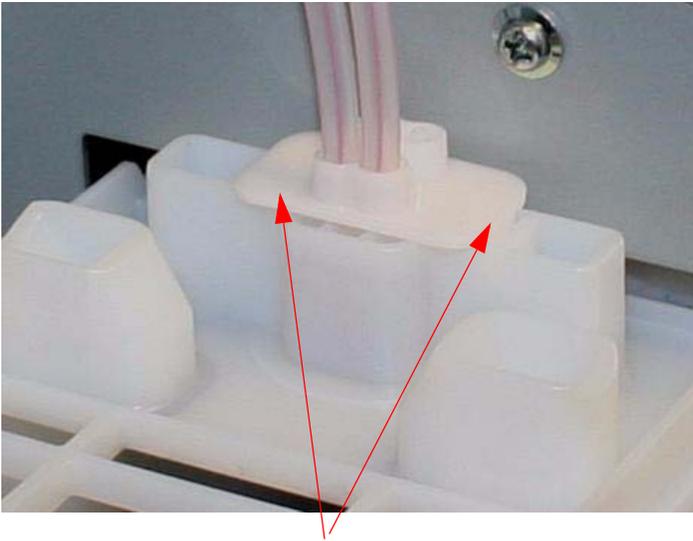


5. Free the **Waste Ink Tube** from the **Fastener**,



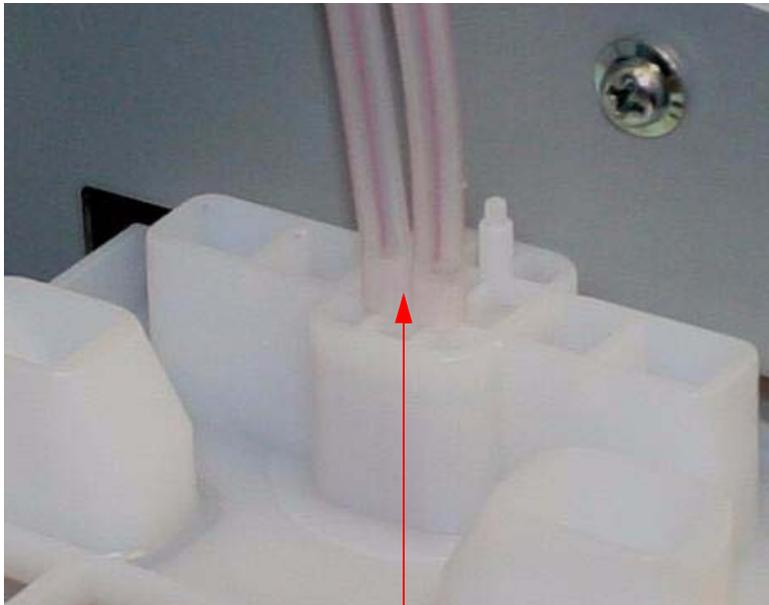
Free the **Tube** from this **Fastener**.

6. Remove the **Waste Tubes** from the **Maintenance Tank**, and wrap them in a paper towel.

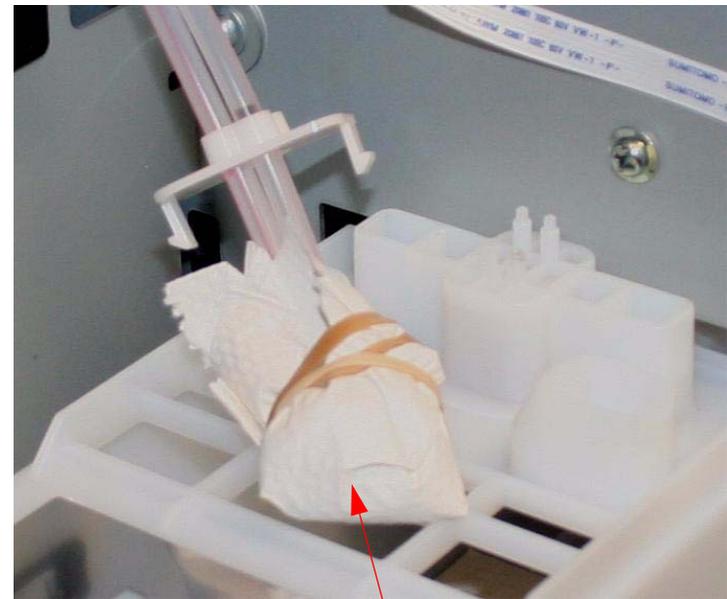


Note: This White Nylon Clamp must be transferred to the new Cleaning Unit if the old one is being replaced.

1. Release **2 Interlocks** and move the **Waste Tube Fastener** up the **Tubes**.

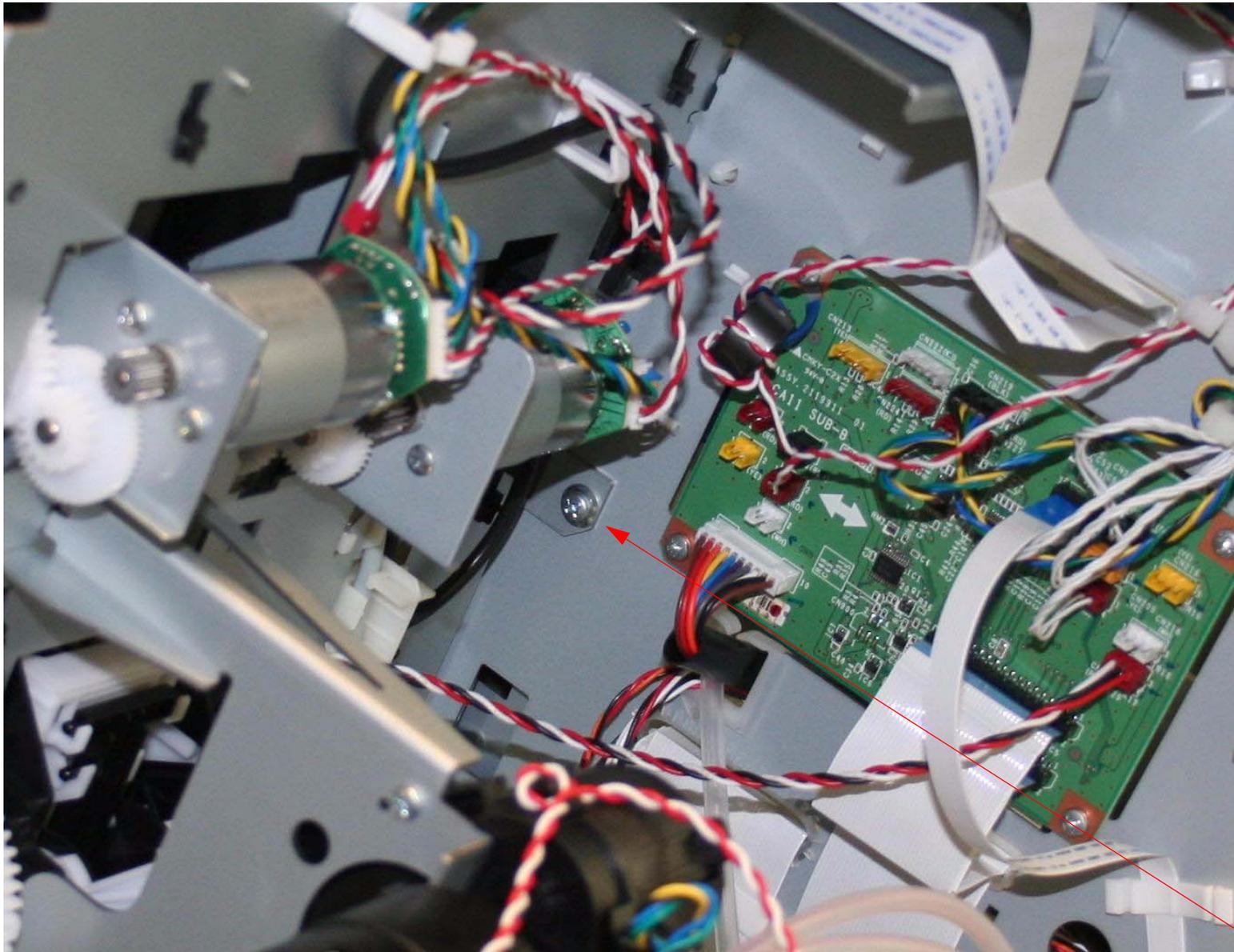


2. Pull off the **Tubes**.



3. Wrap the **Tubes**.

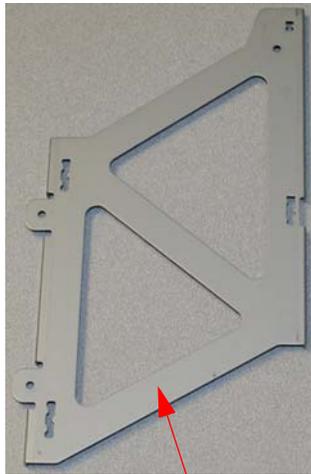
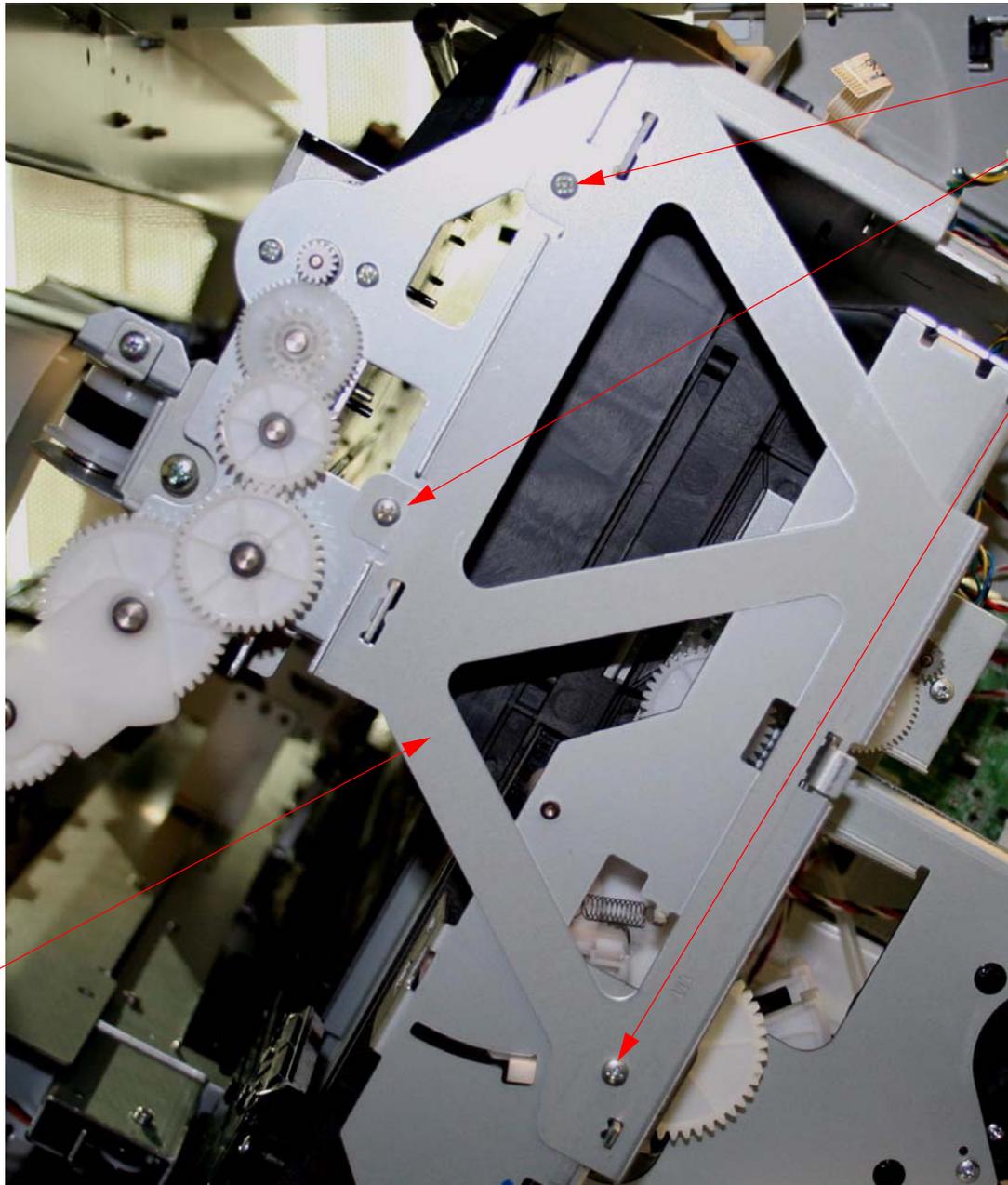
7. Remove **1 Screw** that fastens the **Cleaning Unit** to the **Printer**.



Remove **1 Screw**.

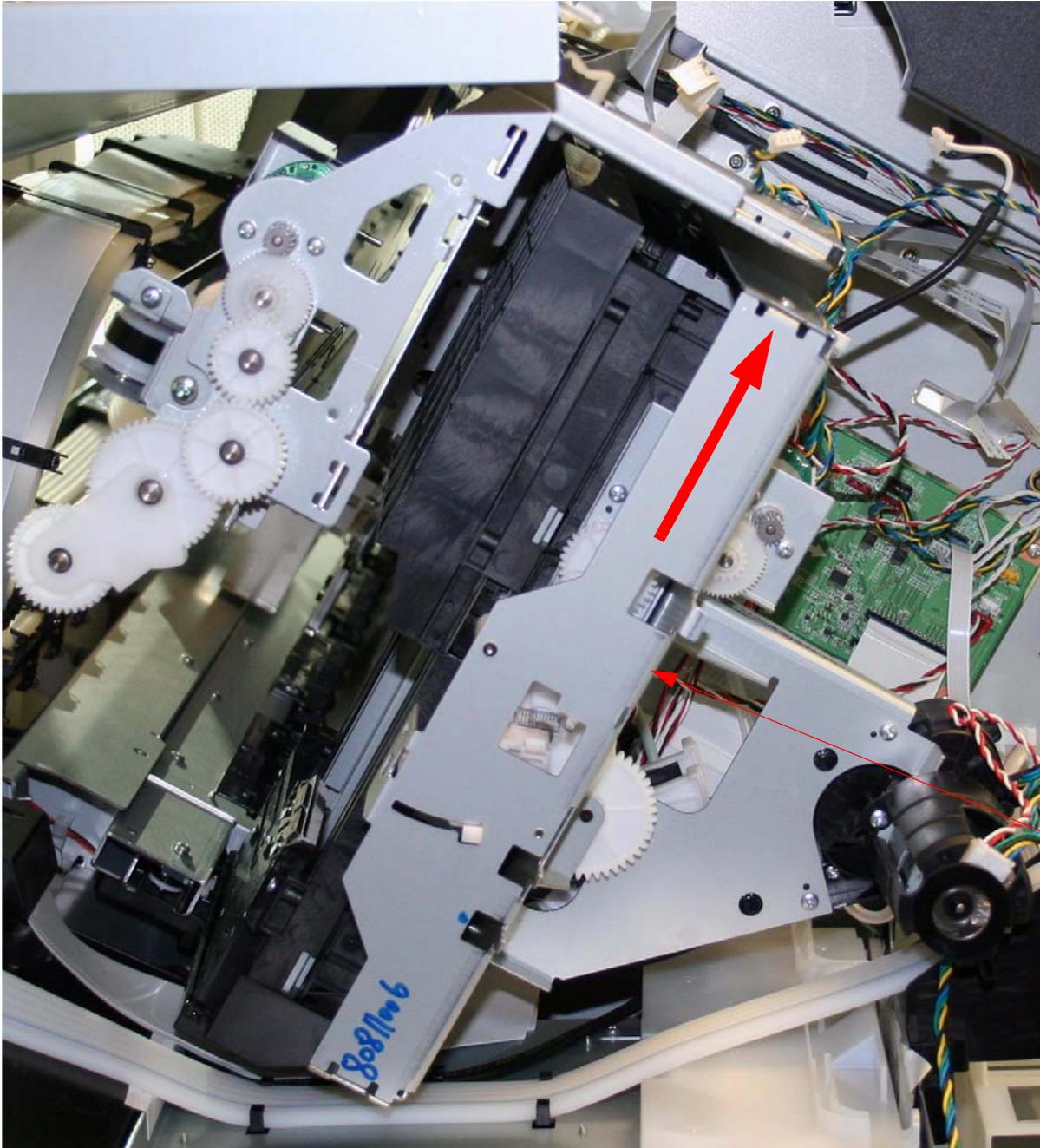
8. Remove the **Cleaning Unit Support Bracket**.

1. Remove 3 Screws.



2. Remove the **Cleaning Unit Support Bracket**.

9. Remove the **Cleaning Unit**.

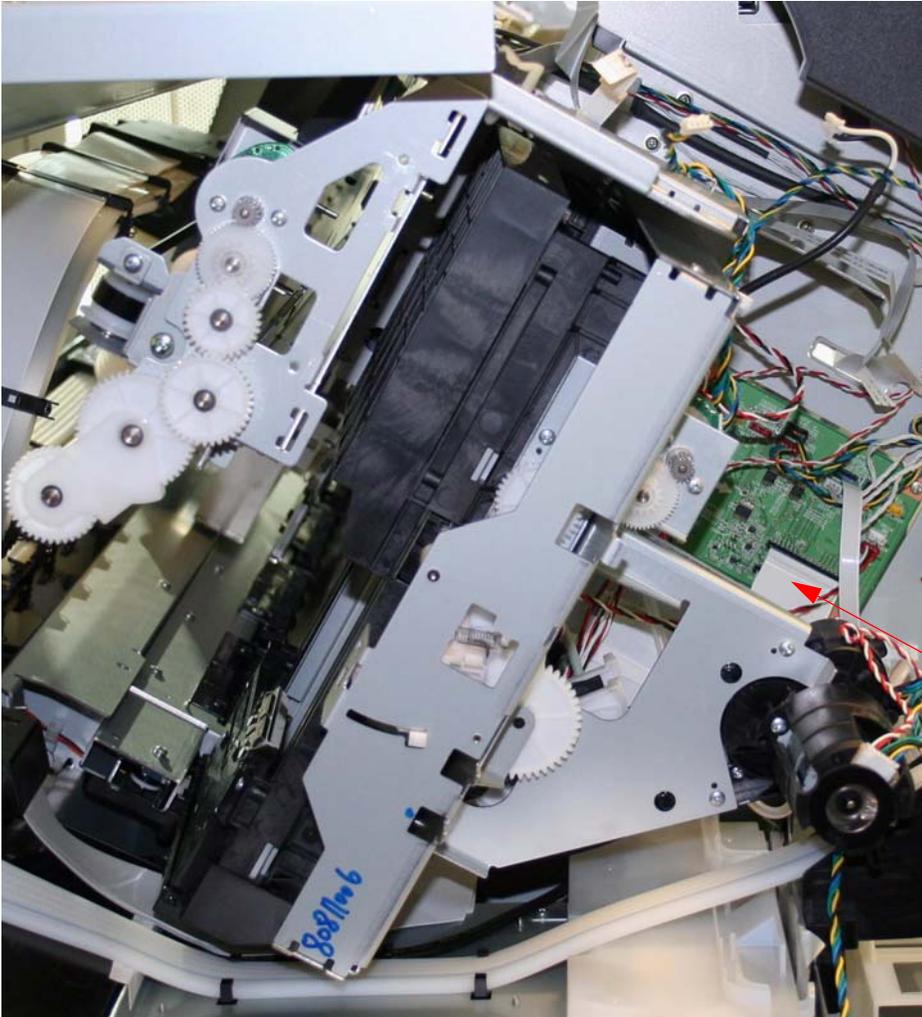


Lift up, and out to remove the **Cleaning Unit**.

Cleaning Unit Installation

Note: A new Cleaning Unit does not include a Wiper Blade Assembly. Install a Wiper Blade before installing the Cleaning Unit.

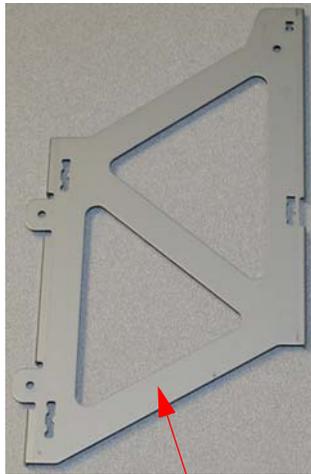
1. Put the **Cleaning Unit** in position.



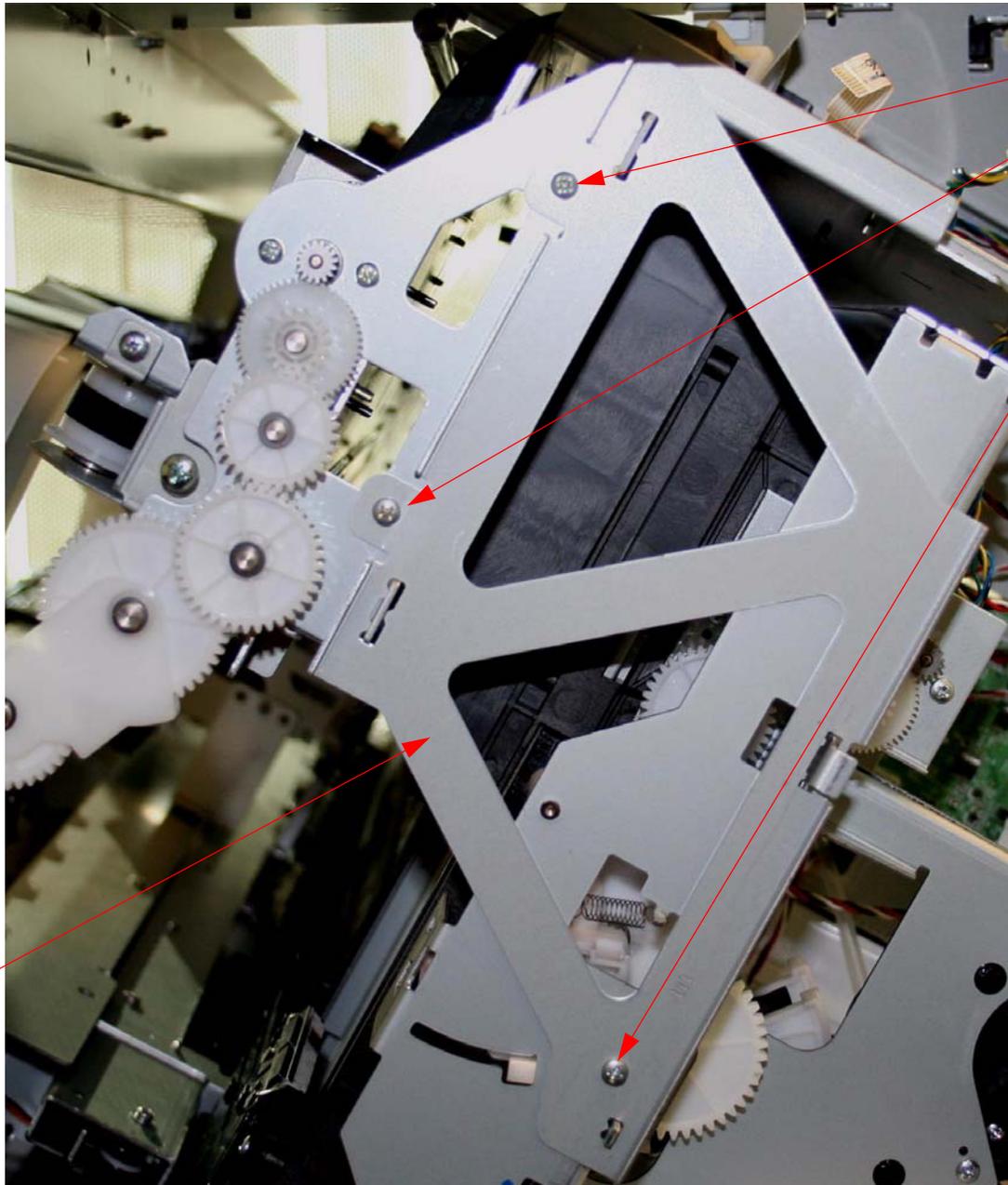
Put the **Cleaning Unit** in position.

2. Install the **Cleaning Unit Support Bracket**.

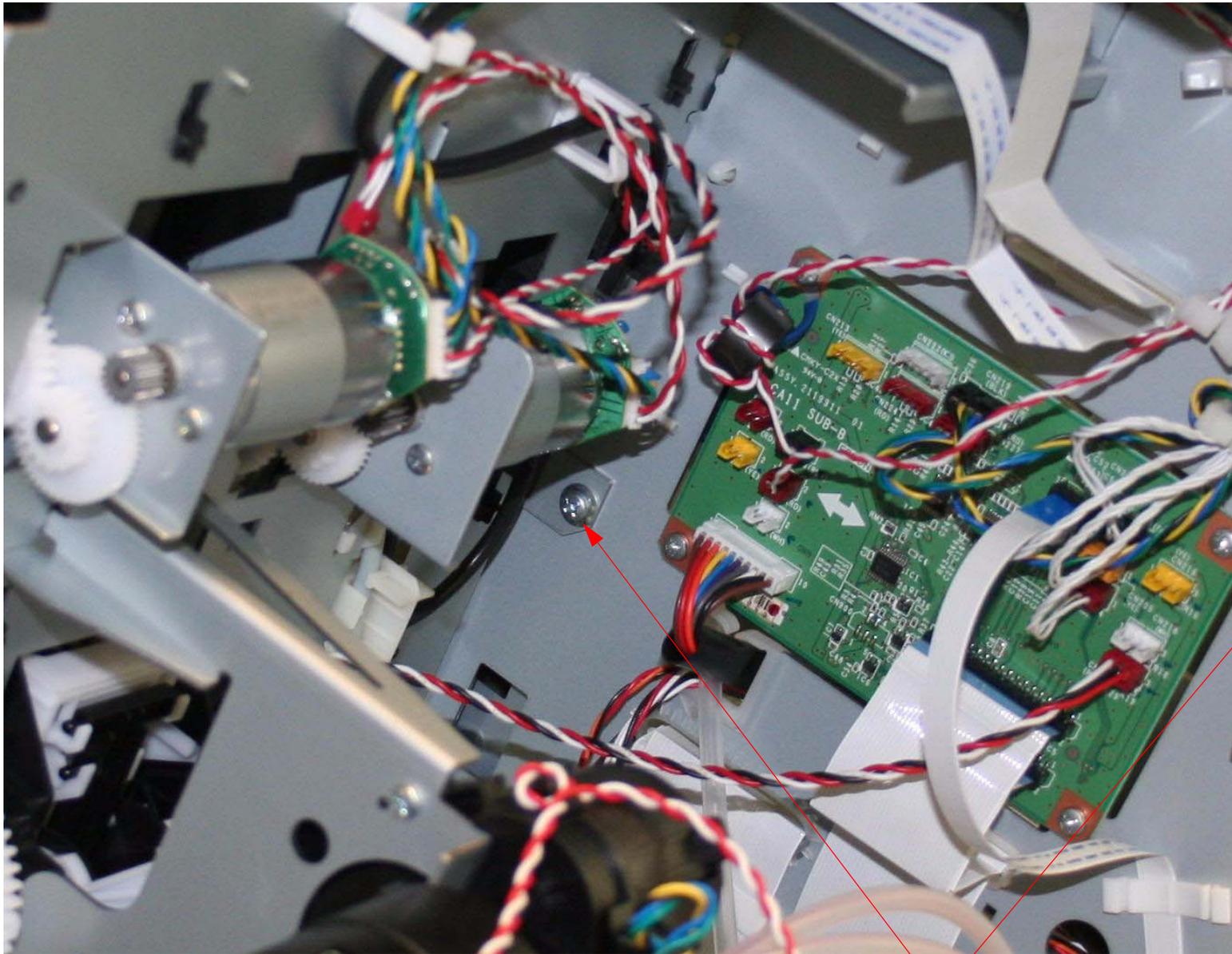
2. Install **3 Screws**.



1. Install the **Cleaning Unit Support Bracket**.



3. Install **1 Screw** that fastens the **Cleaning Unit** to the **Printer**.

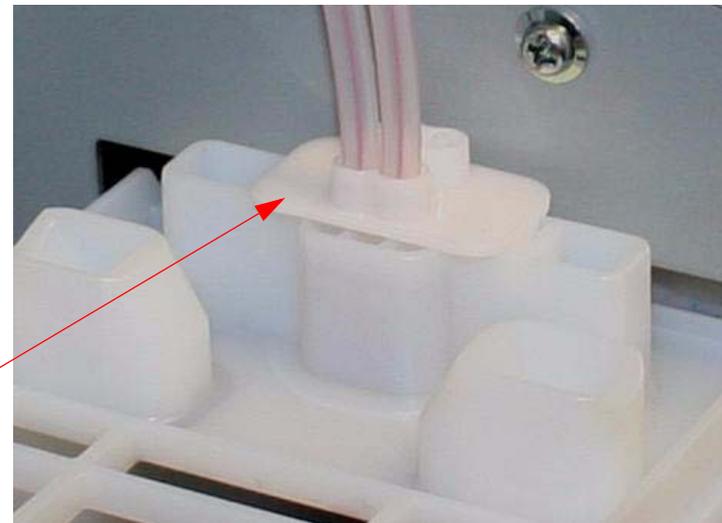
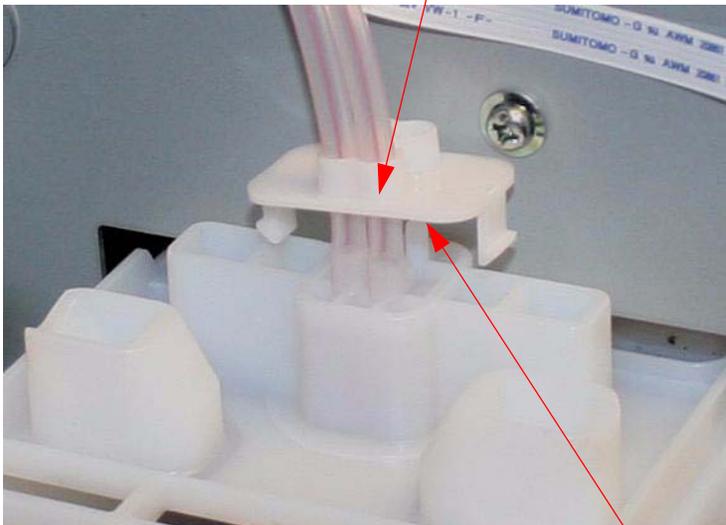
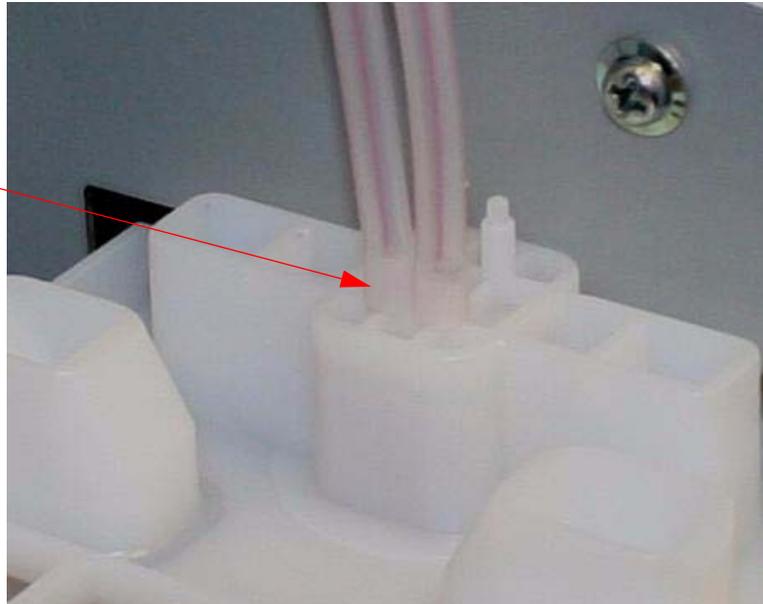


Install **1 Screw**.

4. Attach the **Waste Tubes** to the **Maintenance Tank**.

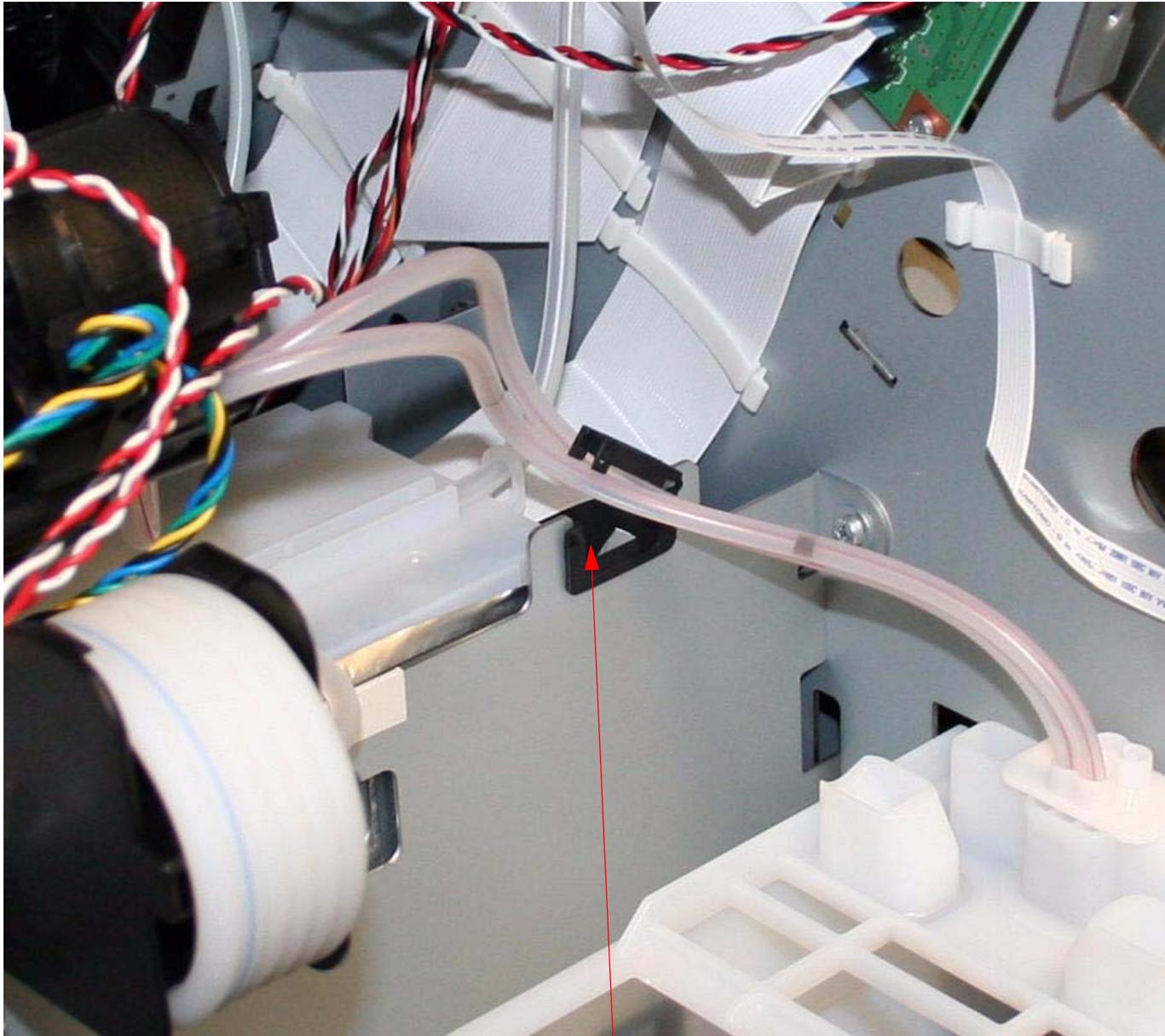
1. Put on the **Tubes**.

Note: This White Nylon Clamp must be transferred from the old Cleaning Unit.



2. Fasten the **Tubes** with the **Waste Tube Fastener**.

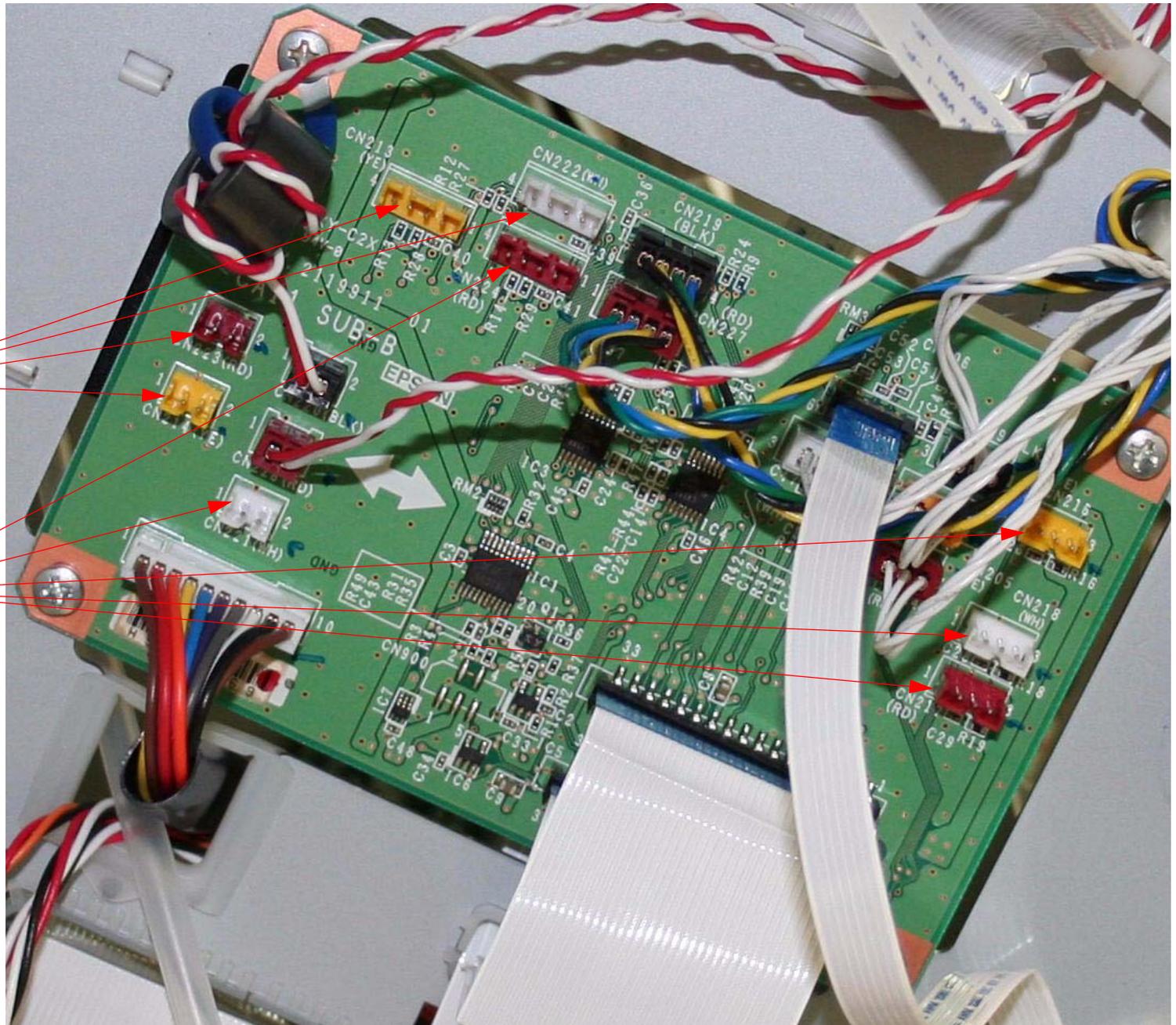
5. Fasten the **Waste Ink Tube** to the **Printer**



Fasten the **Waste Ink Tubes**.

6. Plug **3 Motors** and **6 Sensors** into **Sub Board B**.

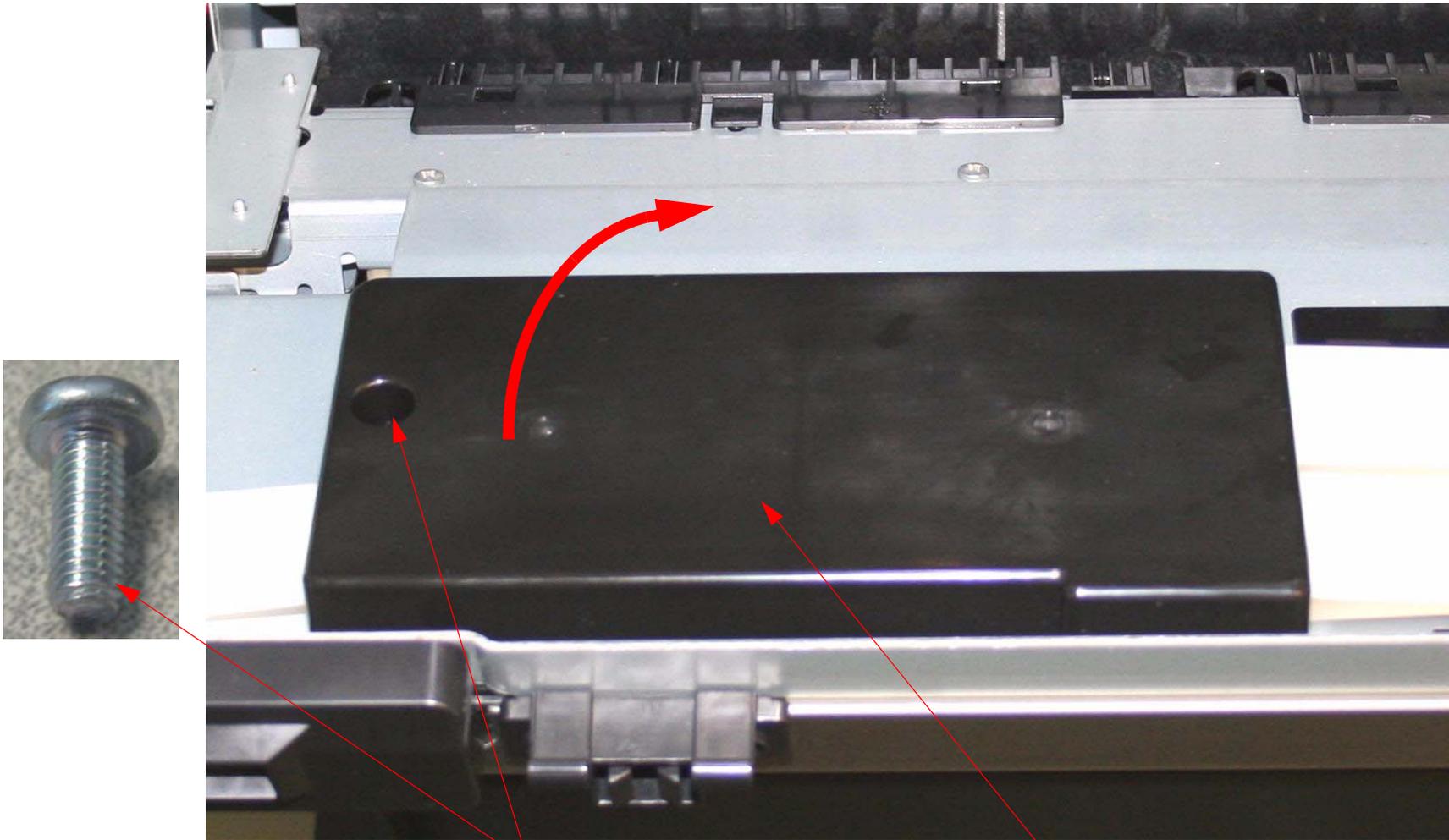
- Plug in:
- CN213
- CN222
- CN224
- CN223
- CN214
- CN221
- CN216
- CN218
- CN217



7. Install the **AID Board**.
8. Connect the **Control Panel**.
9. Perform **Clear Counter [when replacing Wiper]**.
10. Perform **Clear Counter [when replacing Pump Motor = Cleaning Assy]**
11. Perform the **Cleaning PG** Adjustment.
12. Disconnect the **Control Panel**.
13. Install the **Right Side Cover**.
14. Connect and install the **Control Panel**.

Cover (Cutter Assembly) Removal

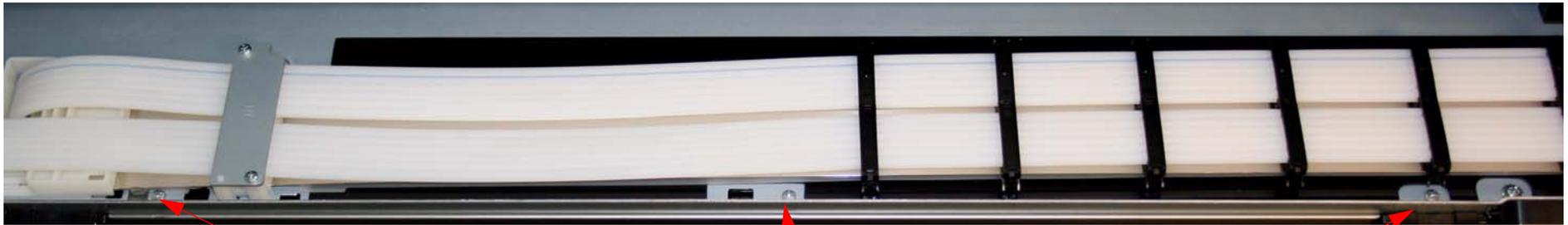
1. Open the **Cover (Front)**.
2. Remove the **Ink Tube Junction Cover**.



1. Remove **1 Screw**.

2. Lift off the **Cover**.

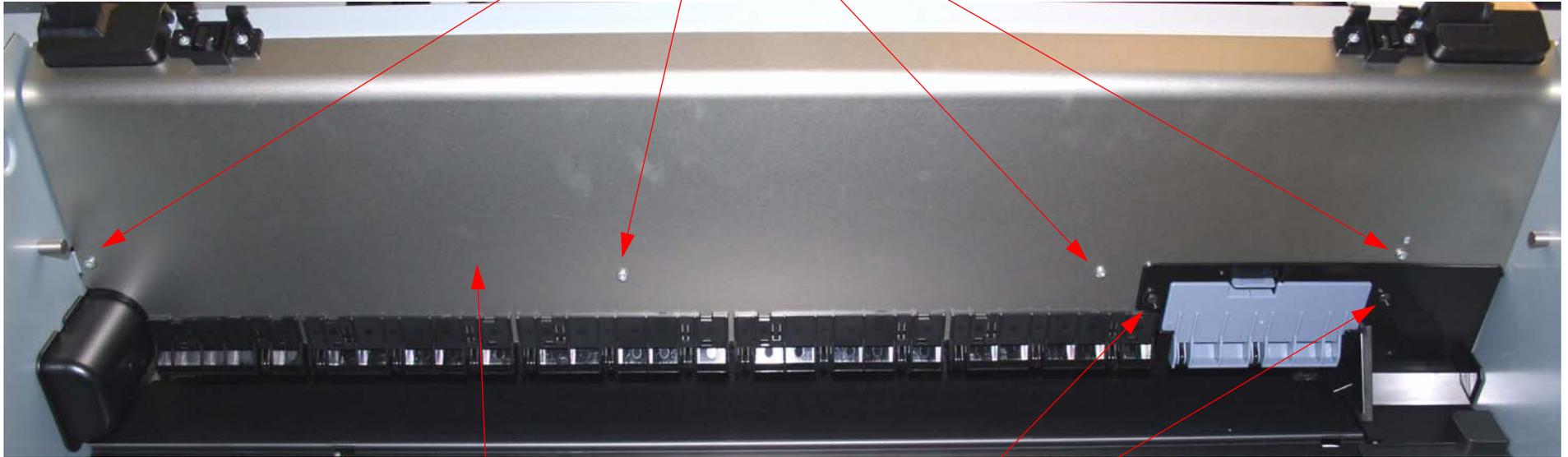
3. Remove **3 Screws**.



Remove **3 Screws**.

4. Remove the **Cutter Assembly Cover**.

1. Remove **4 Screws**.



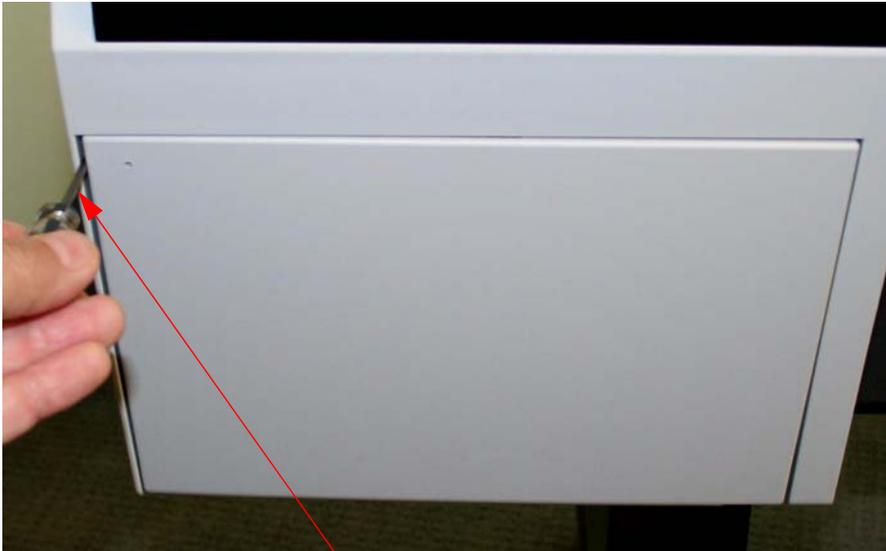
2. Remove **2 Screw** and the **Black Plastic Cover**.



3. Remove the **Cutter Assembly Cover**.

Cover (Left Side) Removal

1. Open the **Left Ink Bay Door**.

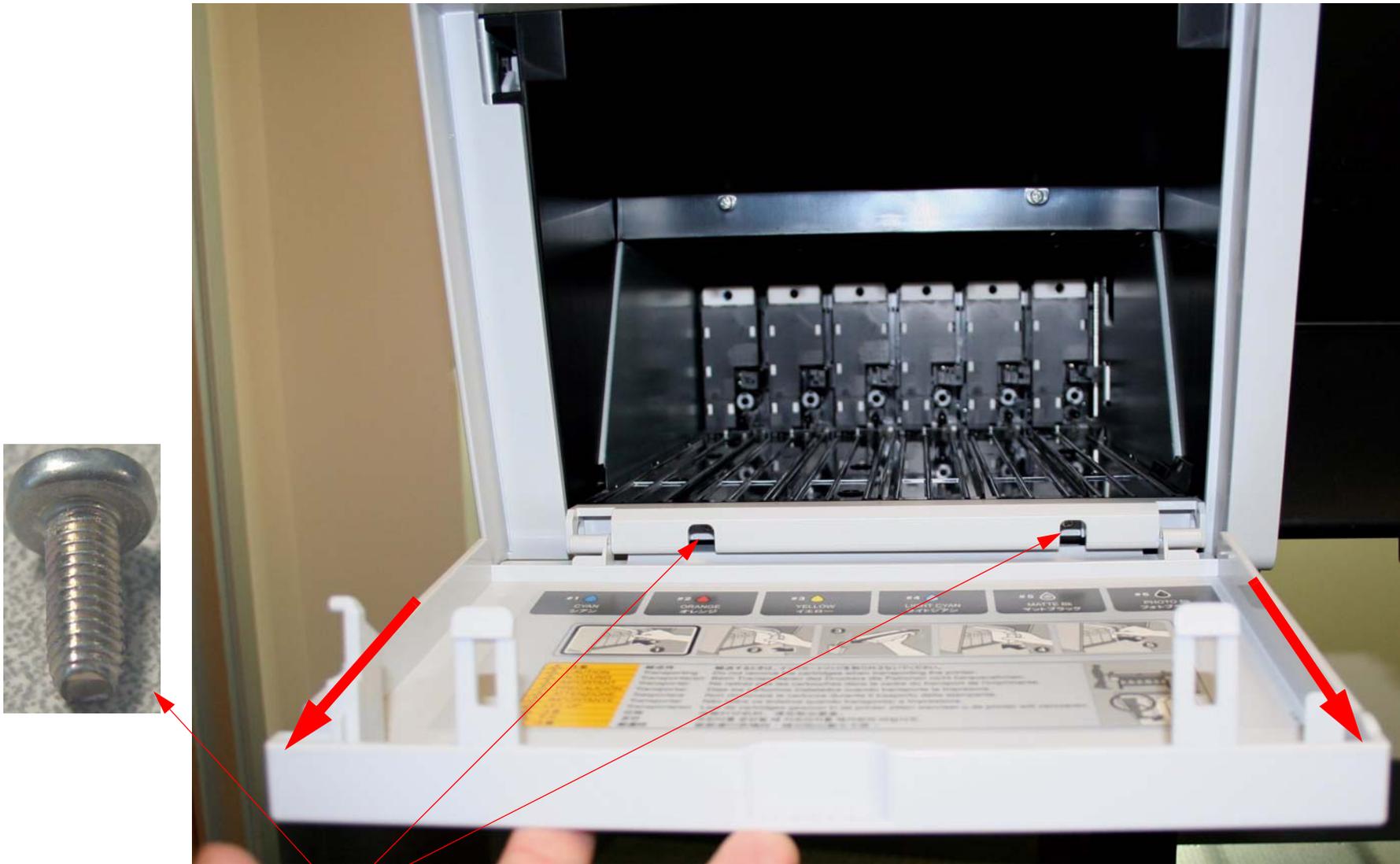


1. Place a flat blade screwdriver as shown.



2. Push gently to the right to open the **Left Ink Door**.

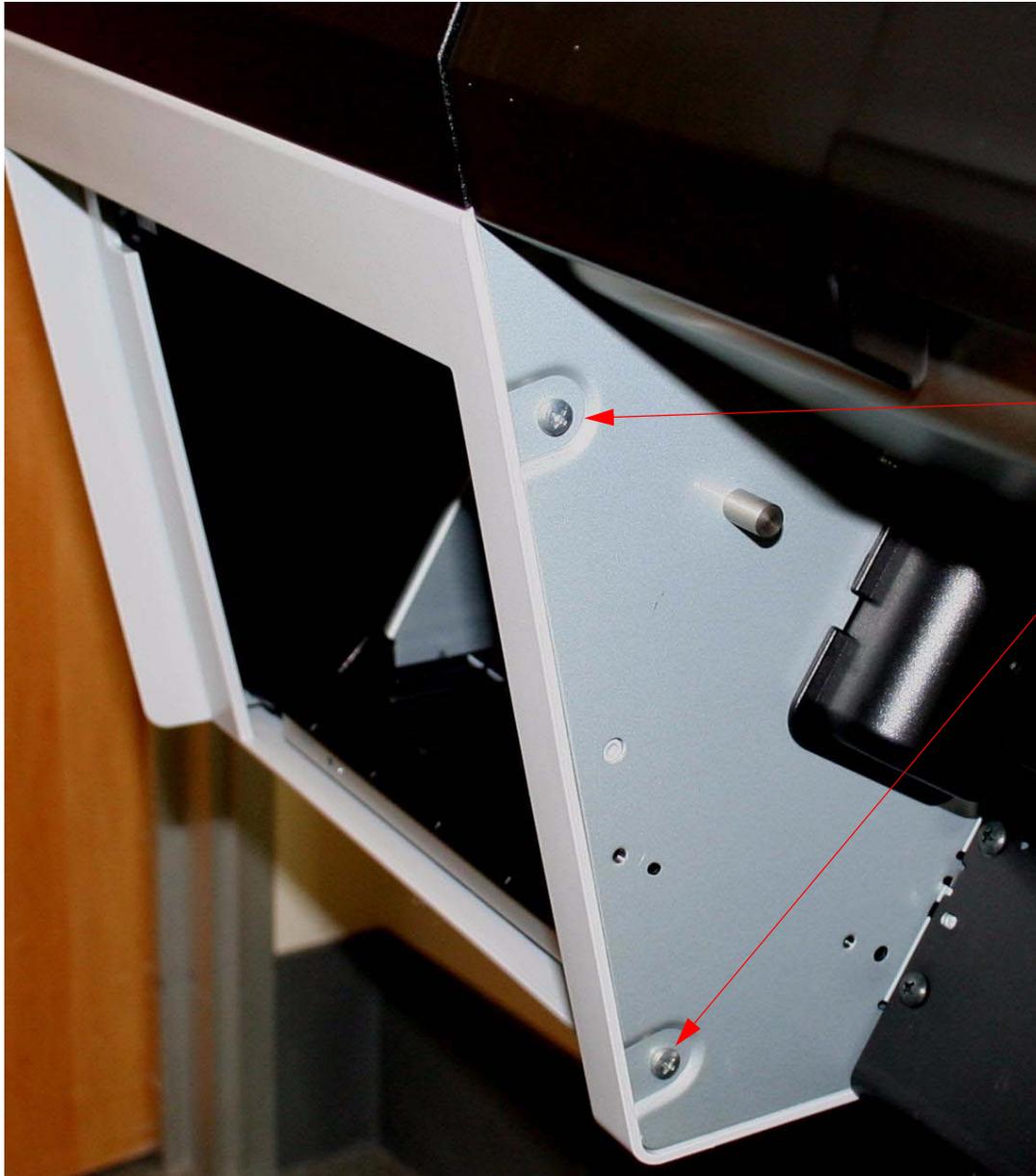
2. Remove the **Left Ink Bay Cover**.



1. Remove the **2 Screws** that fasten the **Left Ink Bay Cover**.

2. Remove the **Left Ink Bay Cover** by pulling straight out.

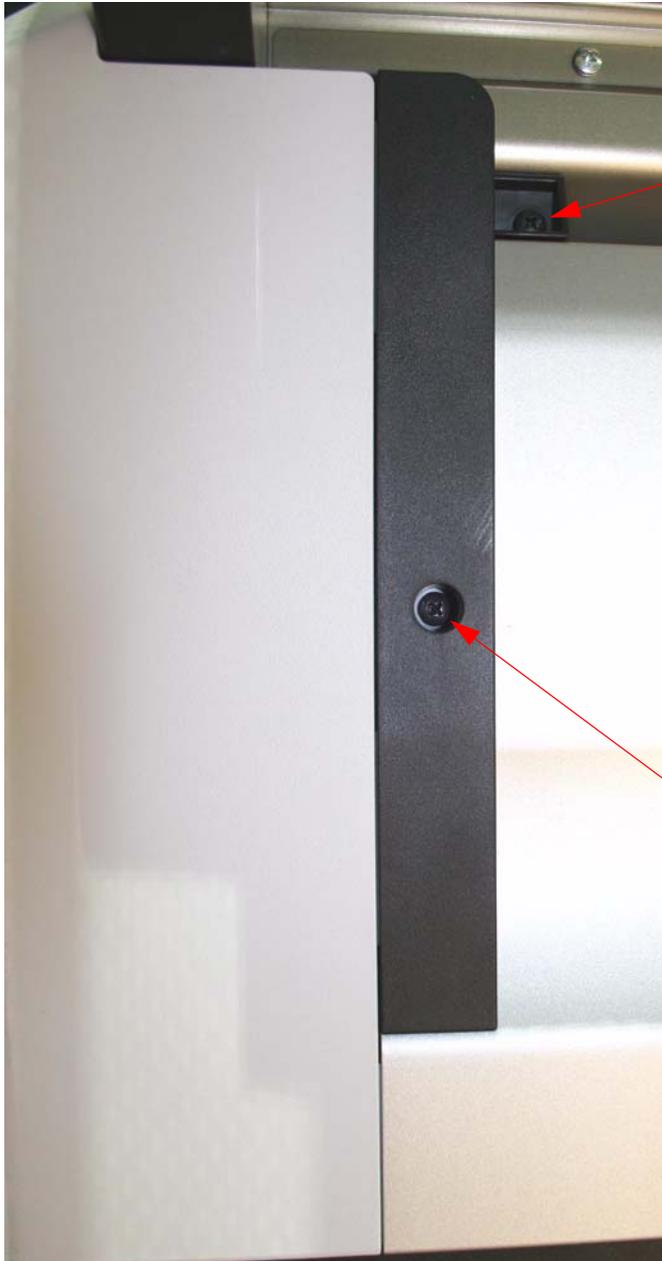
3. Remove **2 Screws** that fasten the inside of the **Left Side Cover** to the **Printer**.



Remove **2 Screws**.



4. Remove **2 Screws** that fastens the **Black Plastic Trim** to the top of the **Left Side Cover**.



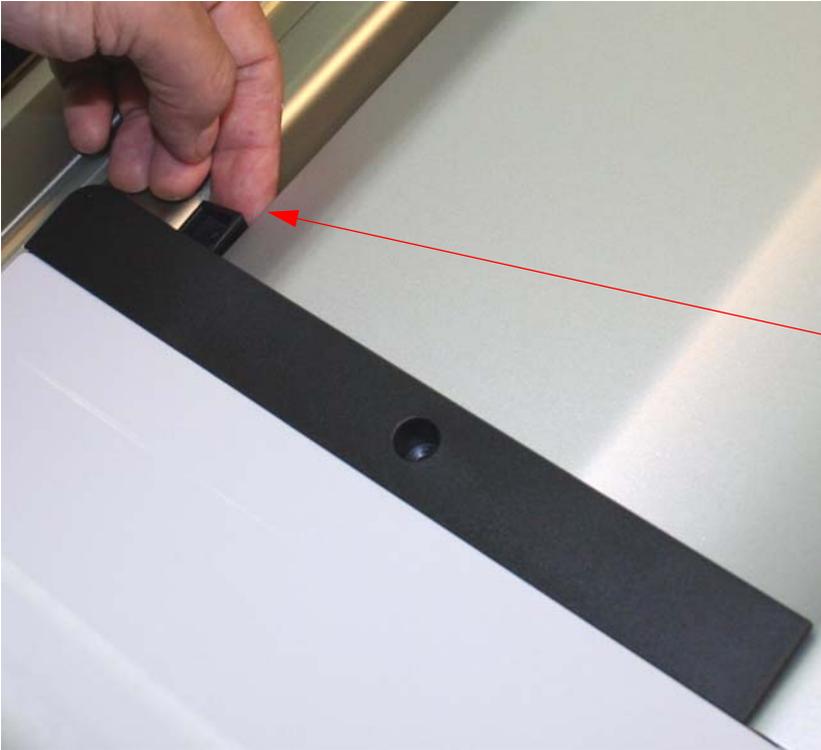
1. Remove **1 Screw**.



2. Remove **1 Screw**.



5. Remove the **Black Plastic Trim**.

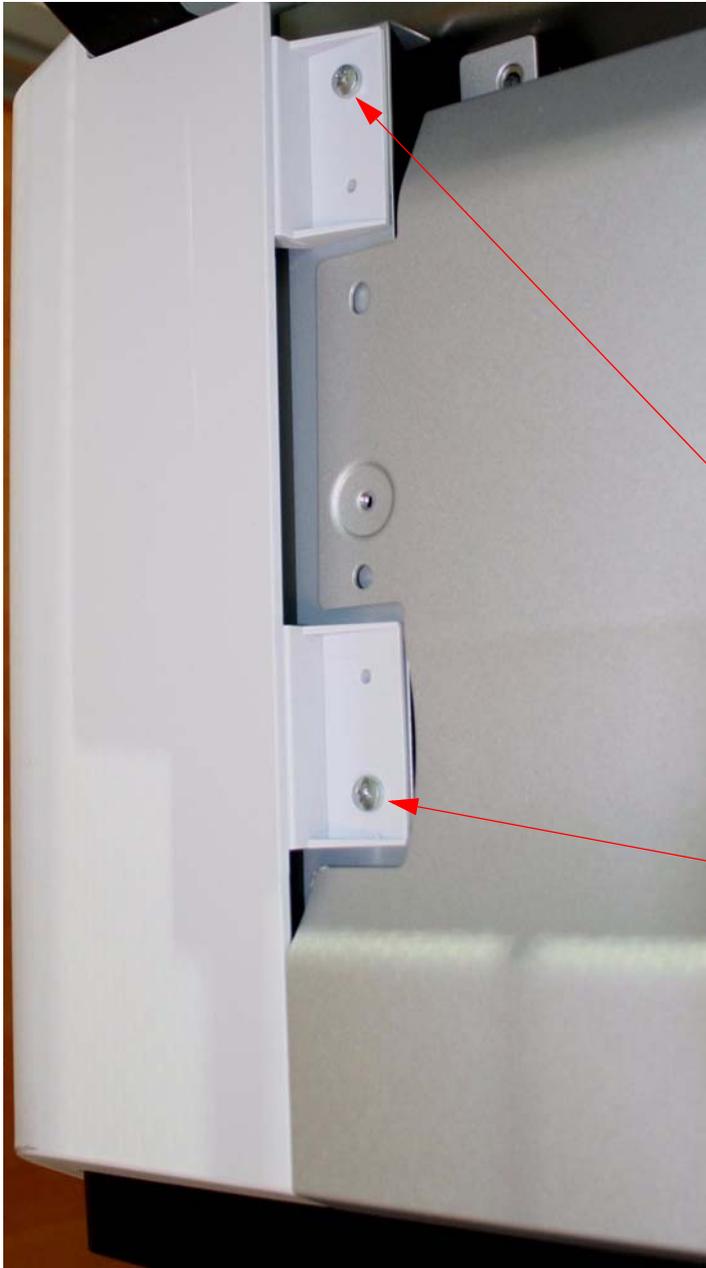


1. Lift here.

2. Pull towards the center of the **Printer**.



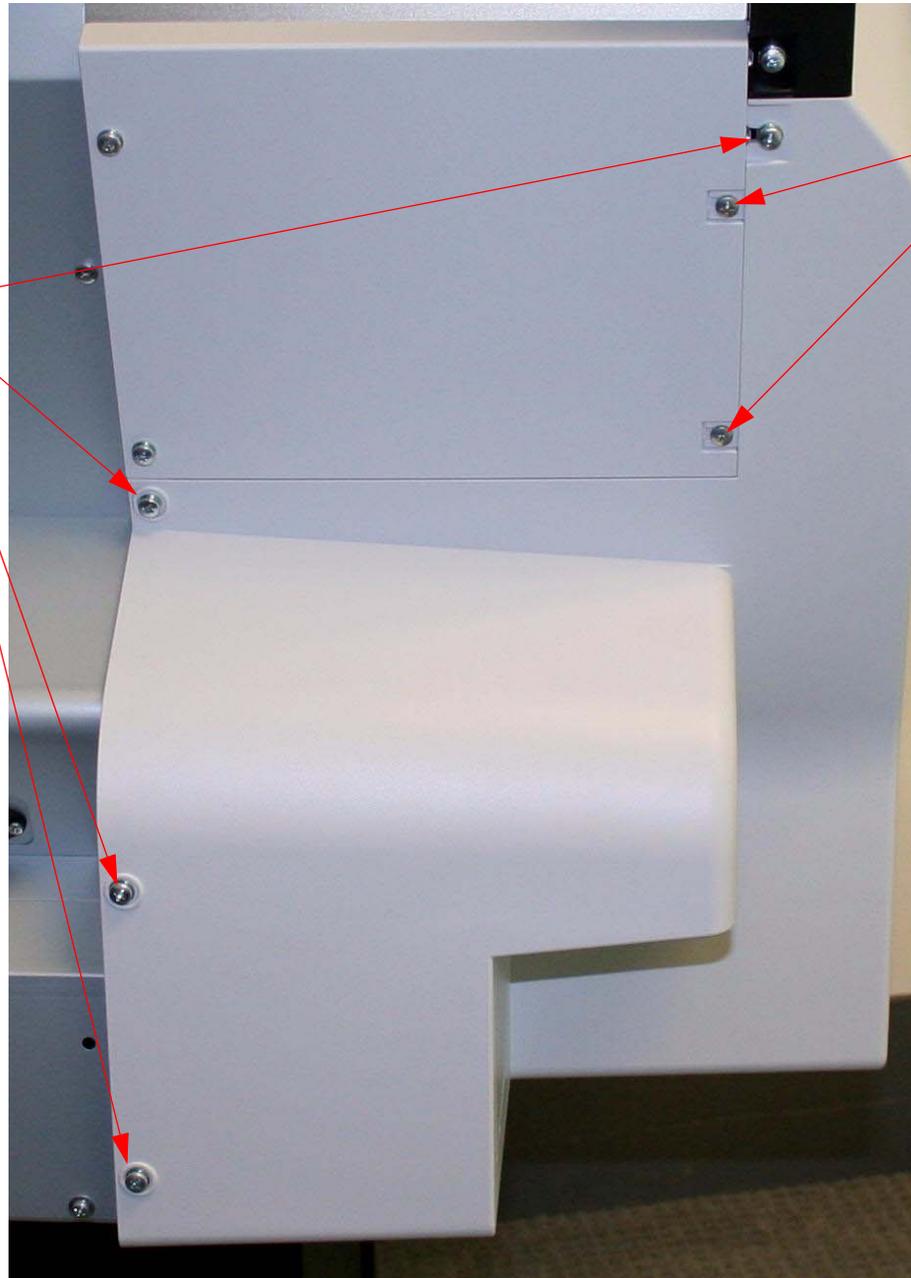
6. Remove **2 Screws** that fastens the top of the **Left Side Cover** to the **Printer**.



Remove **2 Screws**.

7. Loosen **6 Screws** that fasten the **Left Side Cover** to the back of the **Printer**.

1. Remove **4 Screws**.



2. Remove **2 Screws**.



8. Slide off the **Left Side Cover**.



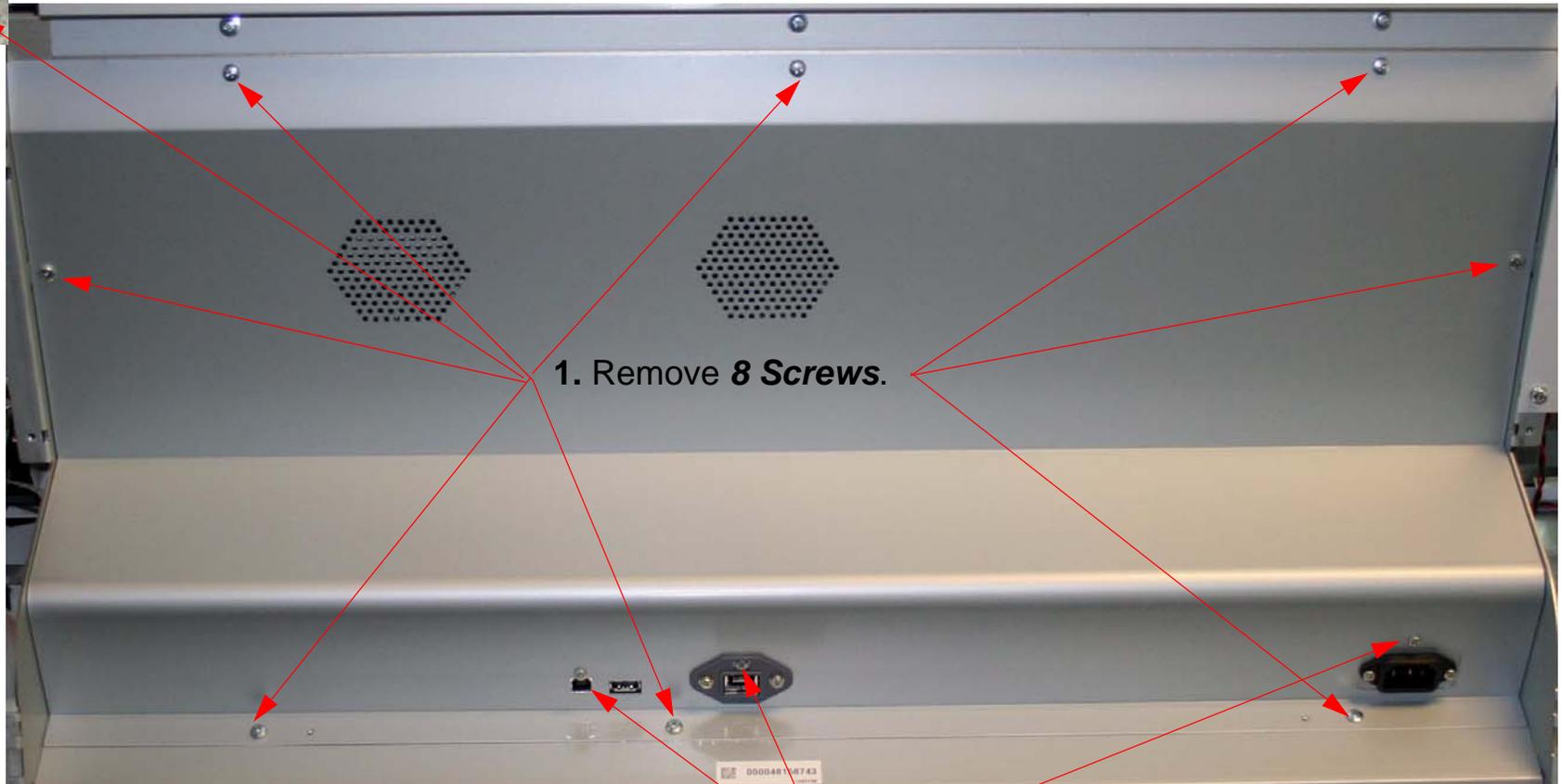
1. **On a 9900**, slide out the **Left Maintenance Cartridge**.

2. Slide off the **Left Side Cover**.

Cover (Rear) Removal

1. Remove the **11 Screws** that fasten the **Rear Cover** to the **Printer**.

Note: The 9900 requires the removal of more Screws.

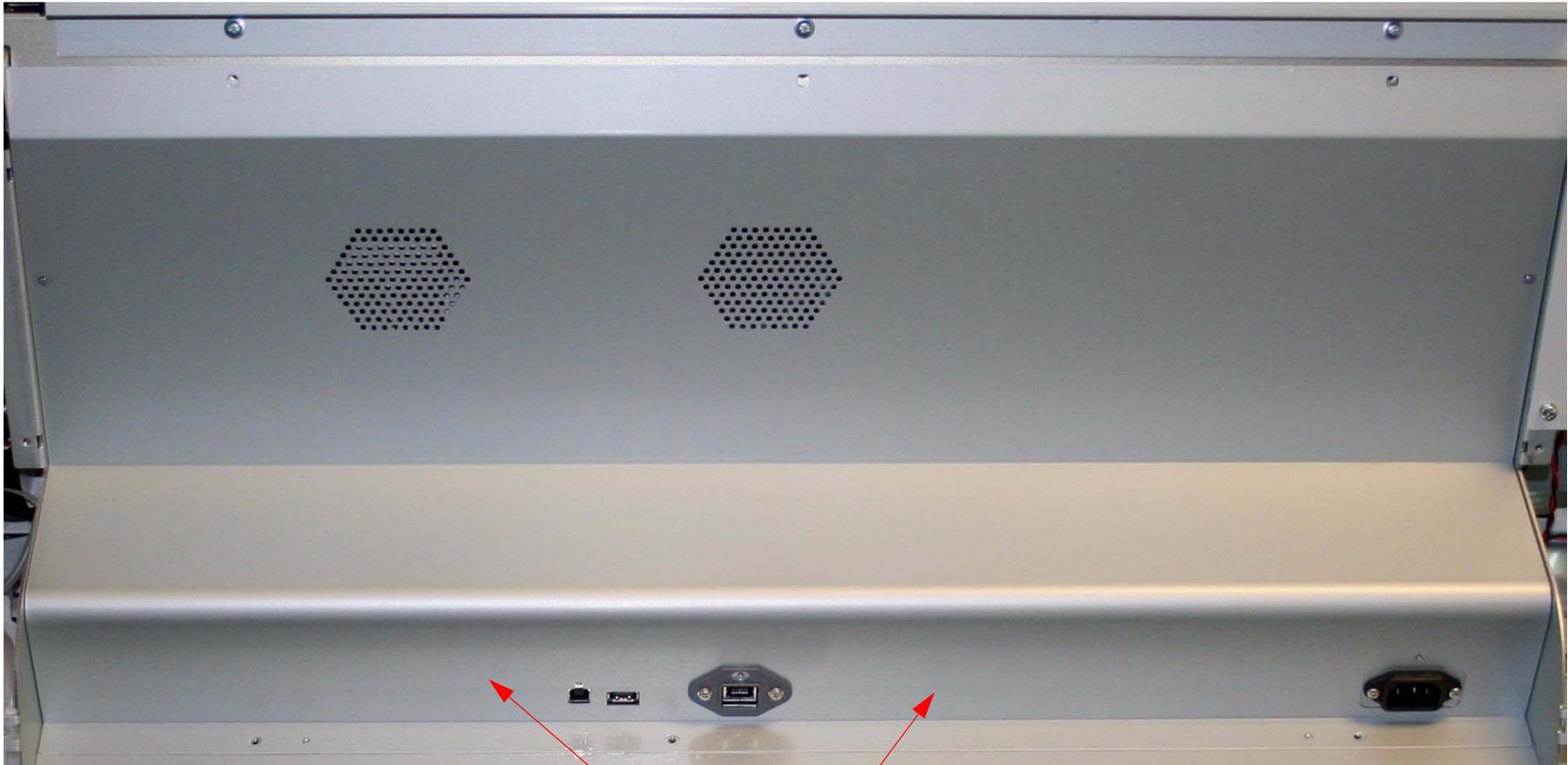


1. Remove **8 Screws**.

2. Remove **3 Screws**.



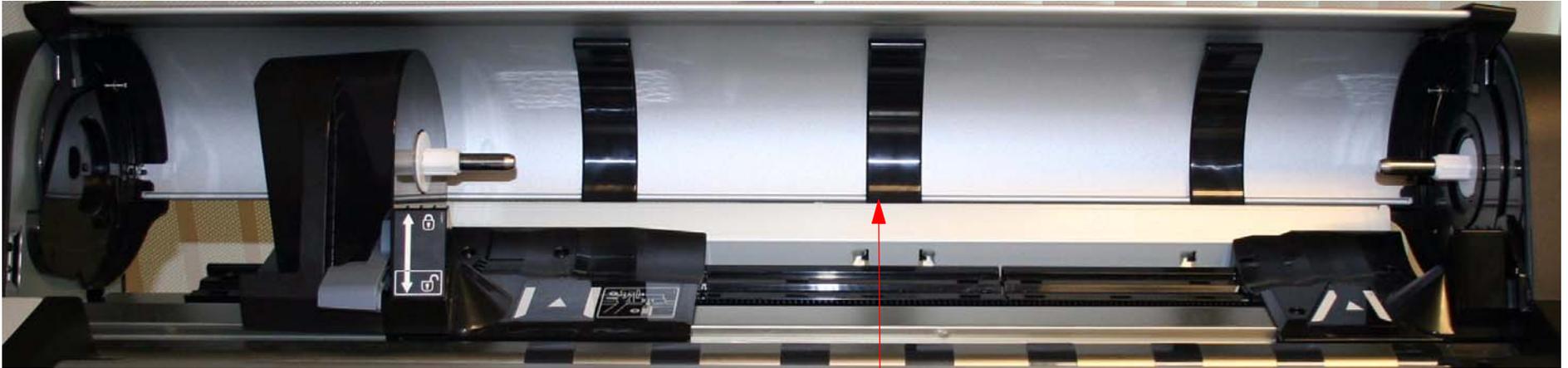
2. Remove the **Rear Cover**.



Remove the **Rear Cover**.

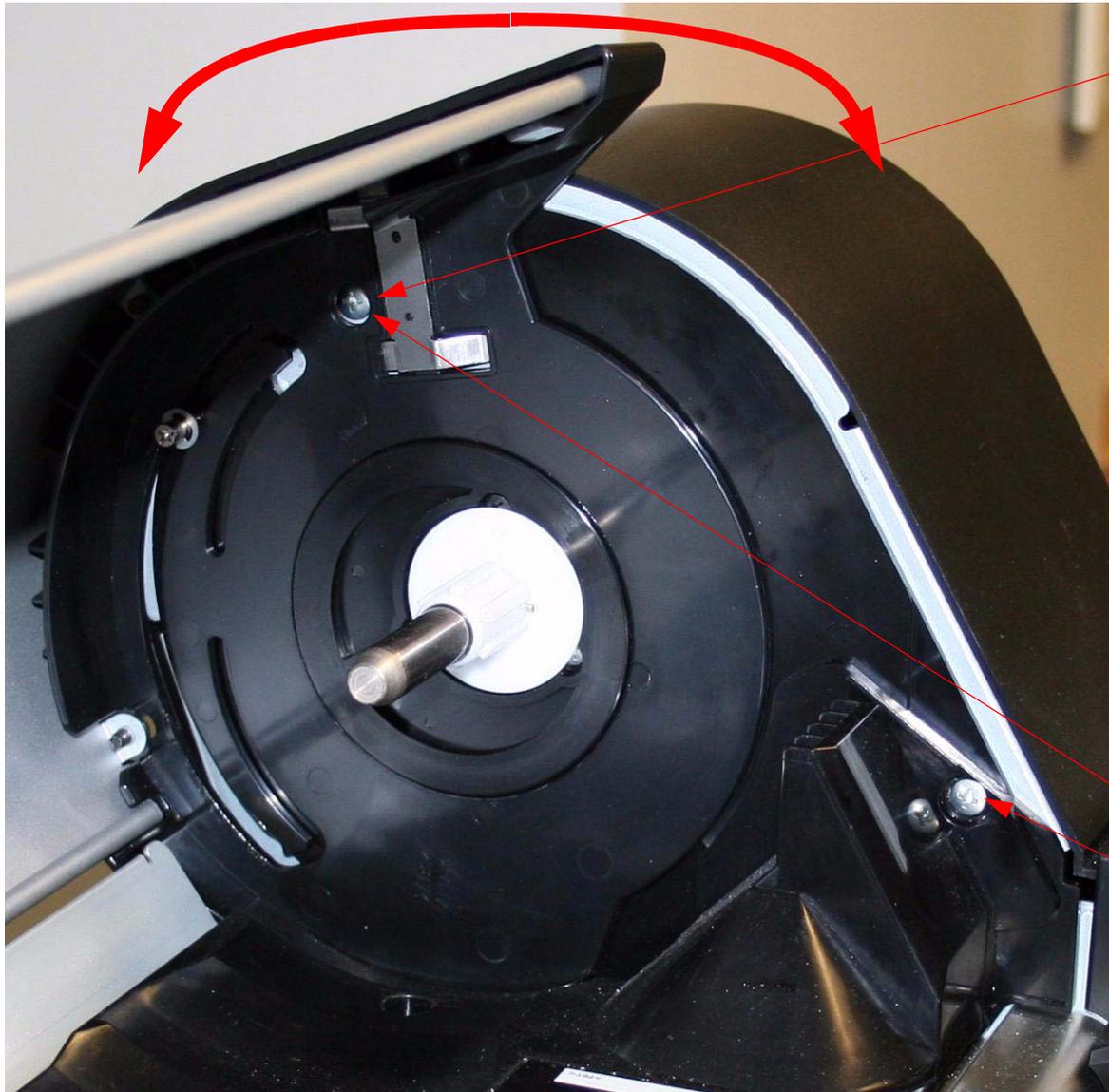
Cover (Rewind Assembly) Removal

1. Remove the **Cover (Right Side)**.
2. Remove the media and the **Media Holders**.



Remove the media and the **Media Holders**.

3. Rotate the **Media Cover** to expose **1 Screw**, and remove **2 Screws**.



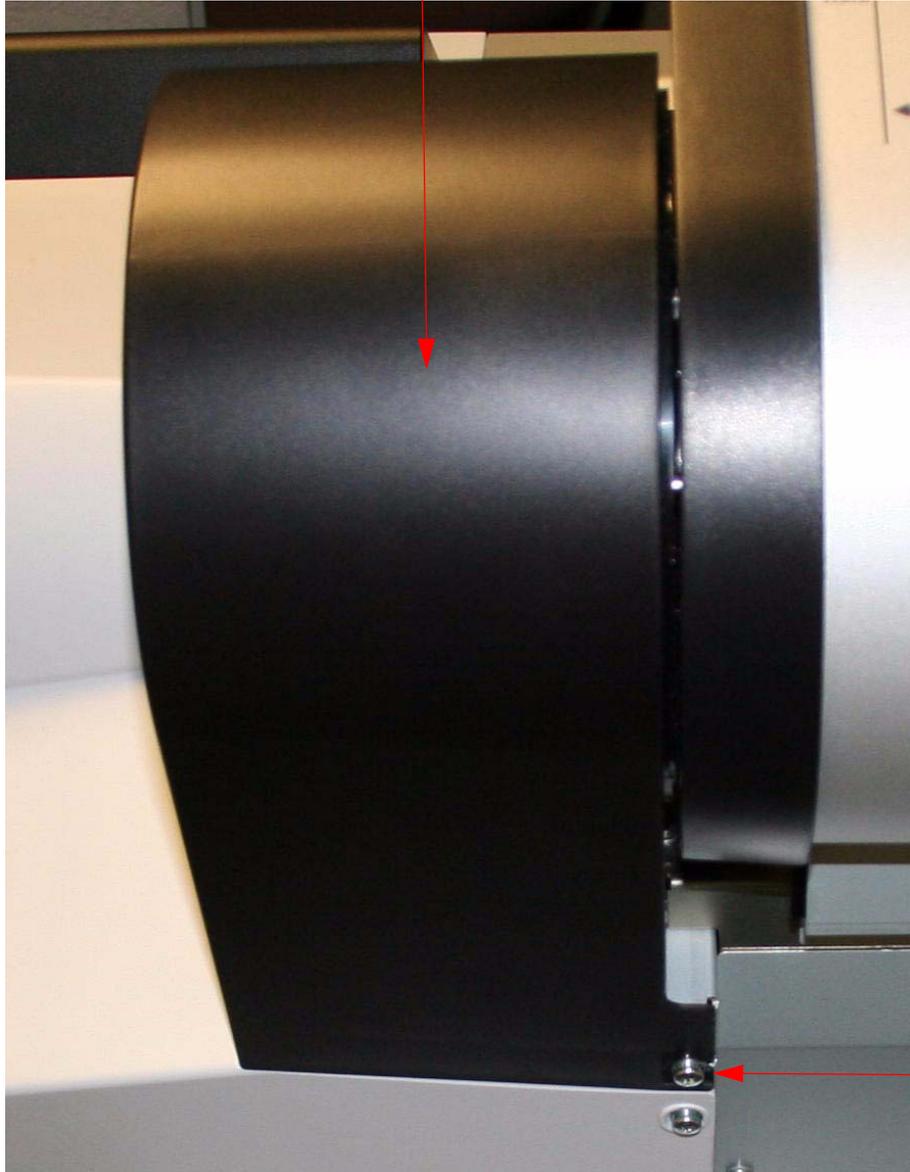
1. Rotate the **Media Cover** to expose **1 Screw**.



2. Remove **2 Screws**.

4. Loosen or remove **1 Screw**, and the **Rewind Assembly Cover**.

Back of the **Rewind Assembly Cover**.



Note: This picture shows the Rewind Assembly Cover with the Right Side Cover mounted. At this point in the procedure, the Right Side Cover should be removed.

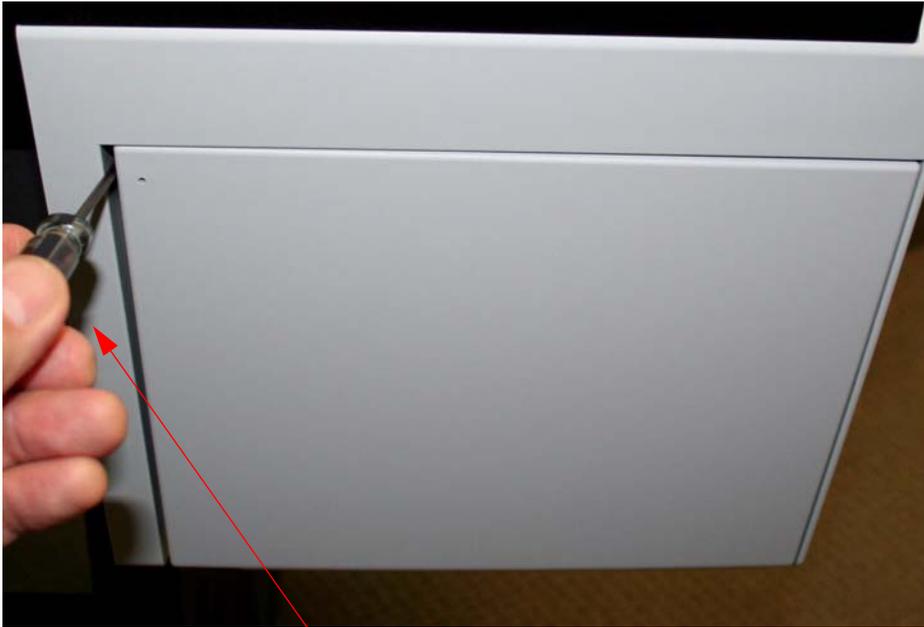


2. Loosen or remove **1 Screw**.

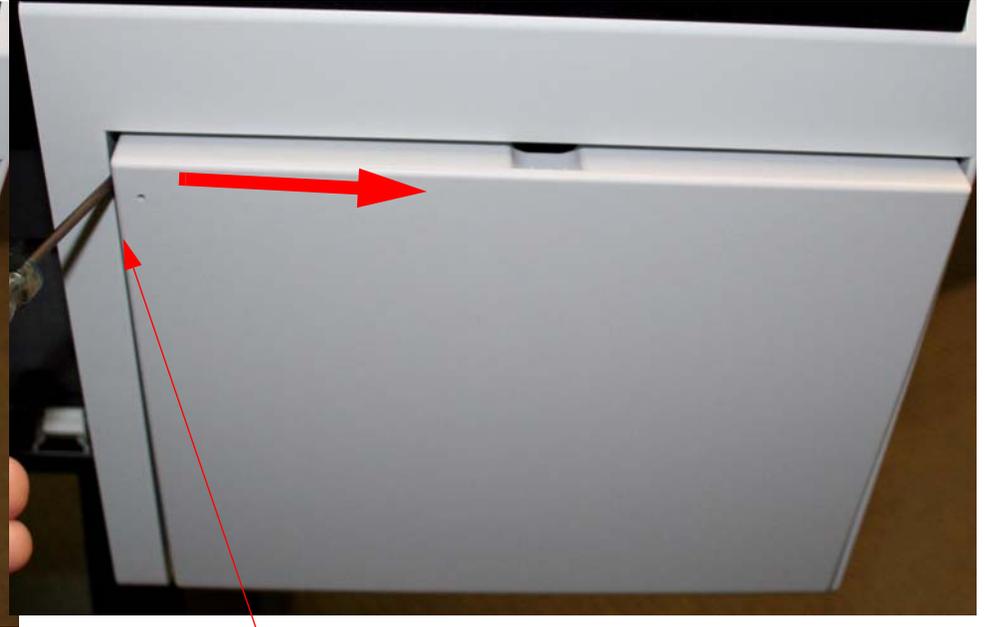
3. Remove the **Rewind Assembly Cover**.

Cover (Right Side) Removal

1. Open the **Right Ink Bay Door**.

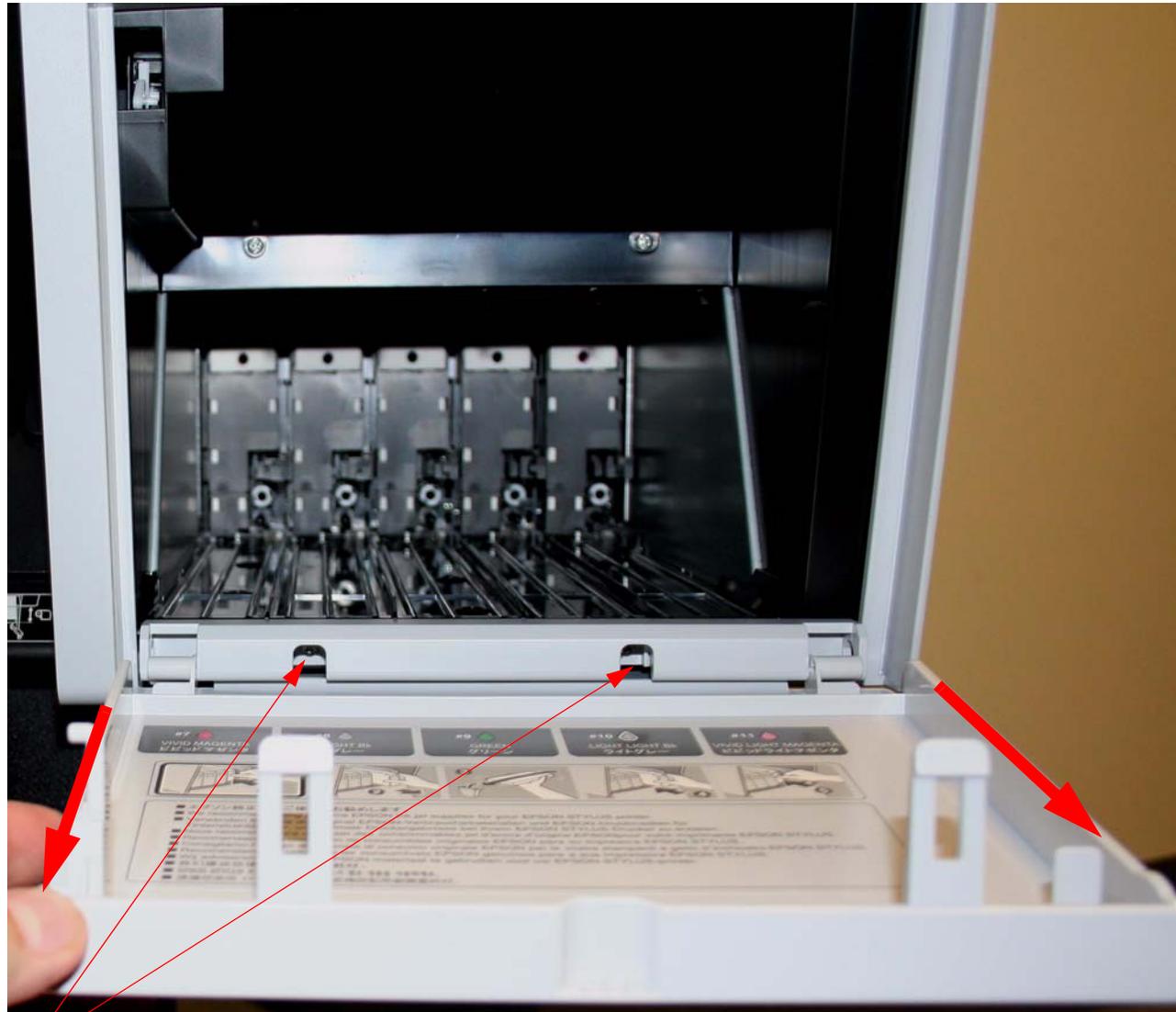


1. Place a flat blade screwdriver as shown.



2. Push gently to the right to open the **Right Ink Door**.

2. Remove the **Right Ink Bay Cover**.

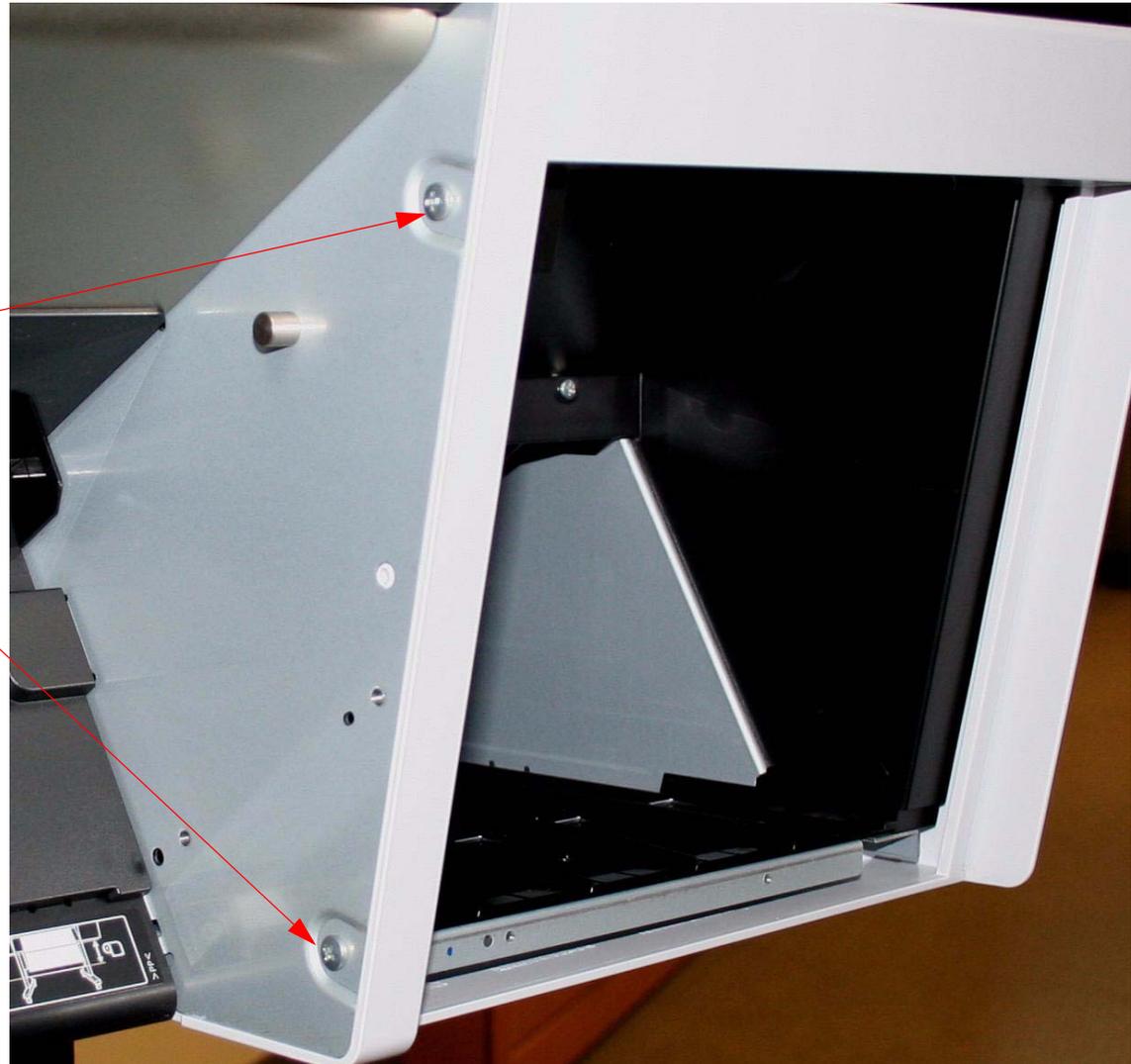


1. Remove the **2 Screws** that fasten the **Right Ink Bay Cover**.

2. Remove the **Right Ink Bay Cover** by pulling straight out.

3. Remove **2 Screws** that fasten the inside of the **Right Side Cover** to the **Printer**.

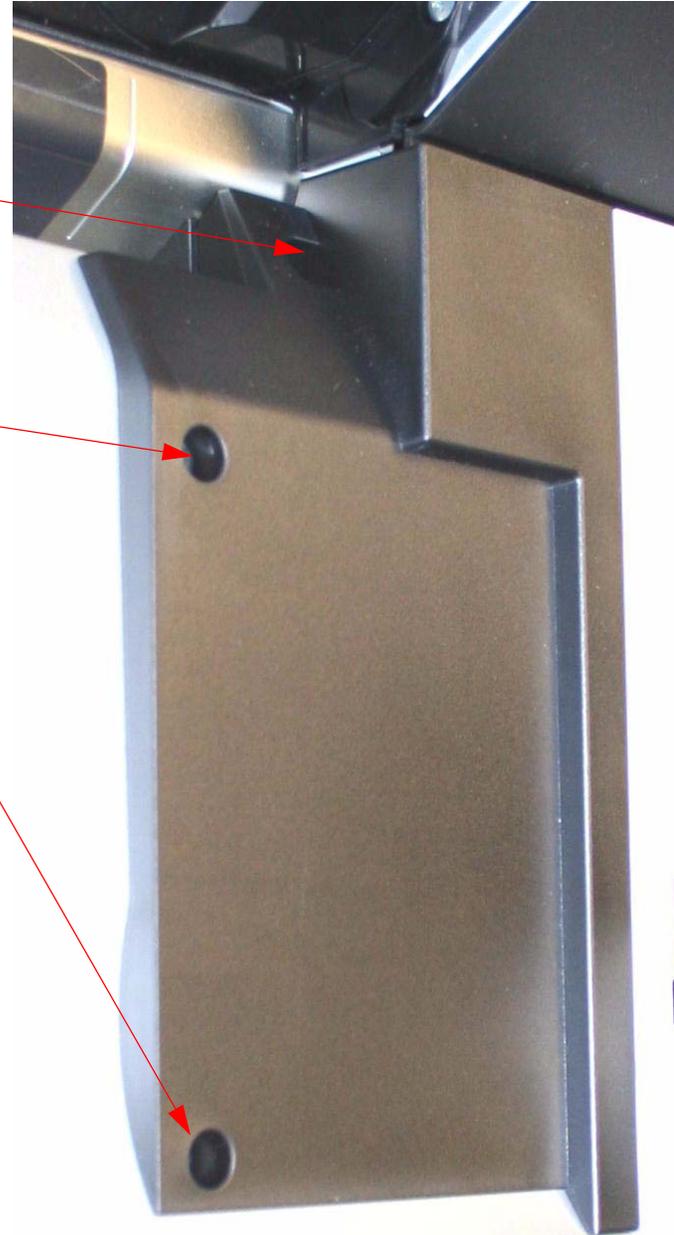
Remove **2 Screws**.



4. Remove **3 Screws** that fastens the **Black Plastic Trim** to the top of the **Right Side Cover**.



1. Remove **1 Screw**.



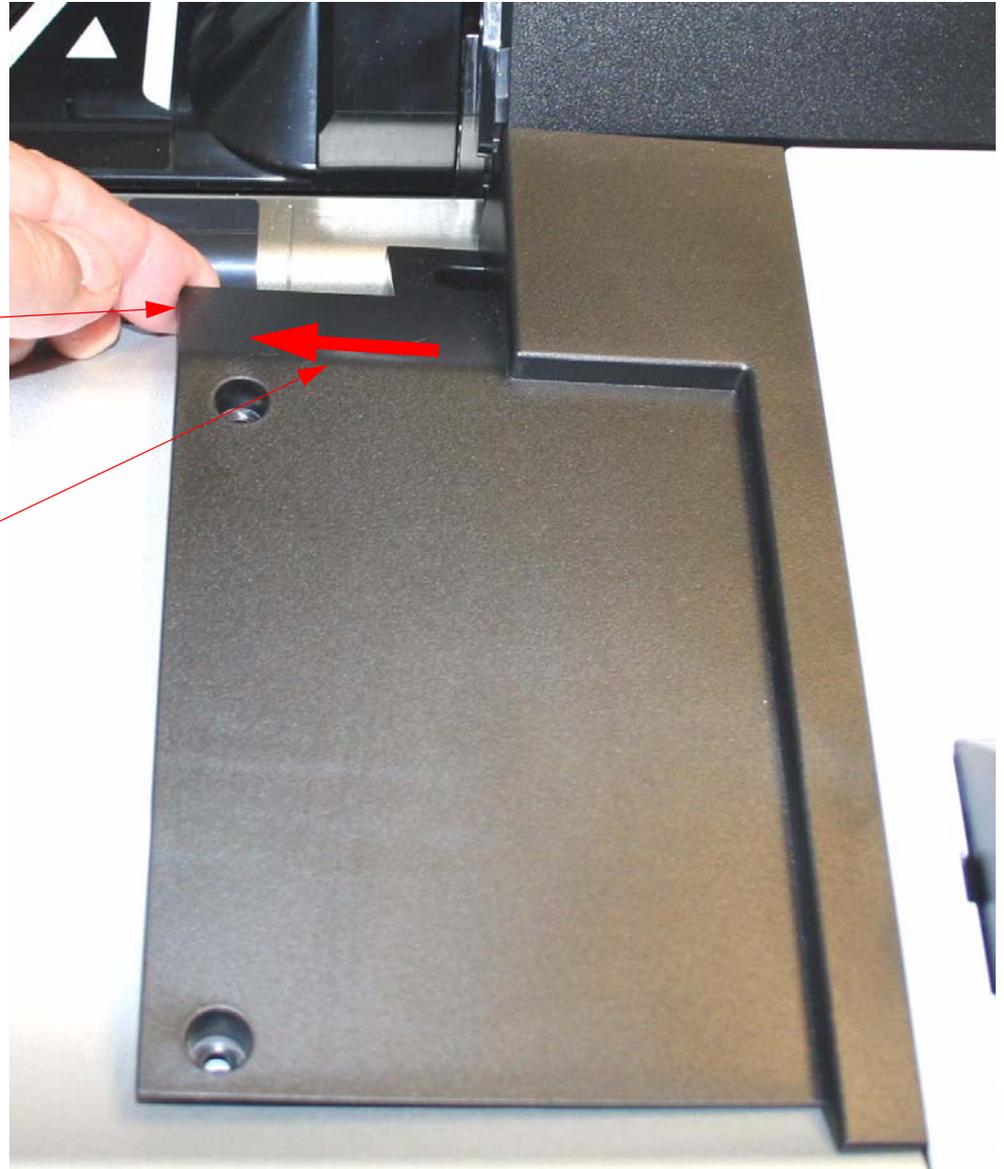
2. Remove **2 Screws**.



5. Remove the **Black Plastic Trim**.

1. Lift here.

2. Pull towards the center of the **Printer**.

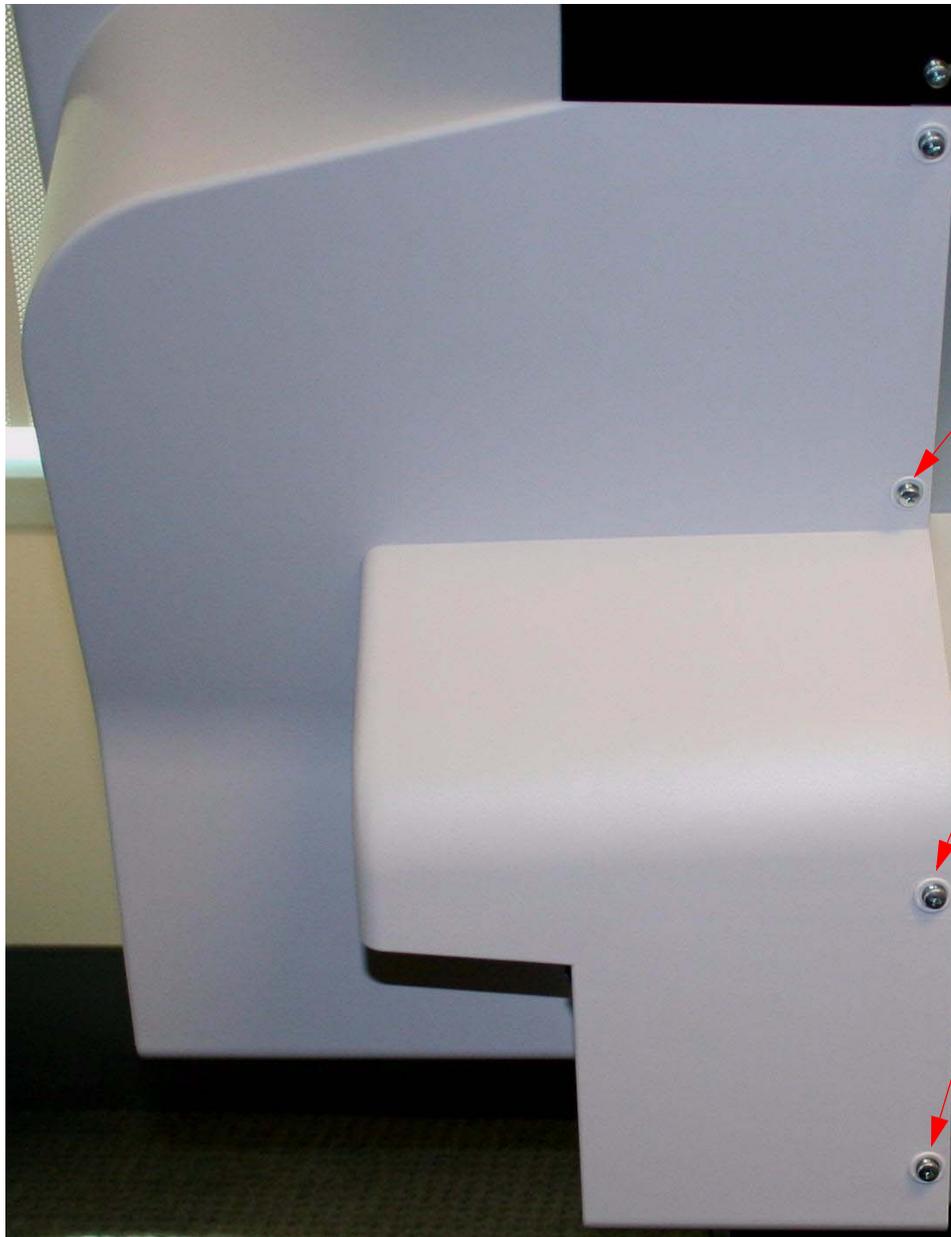


6. Remove **2 Screws** that fastens the top of the **Right Side Cover** to the **Printer**.



Remove **2 Screws**.

7. Loosen **4 Screws** that fasten the **Right Side Cover** to the back of the **Printer**.



Remove **4 Screws**.



8. Remove the **Control Panel**.

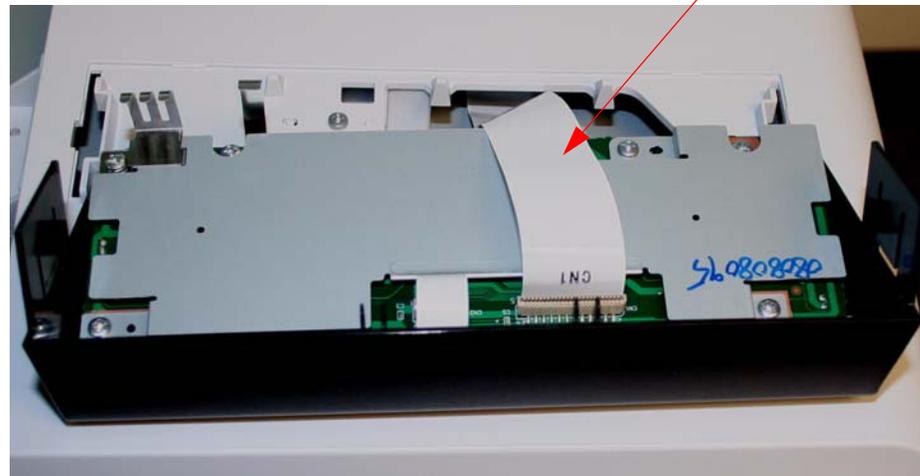


1. Release the **Left Interlock**.



2. Release the **Right Interlock**.

3. Lift the **Control Panel** and unplug the **Cable**.

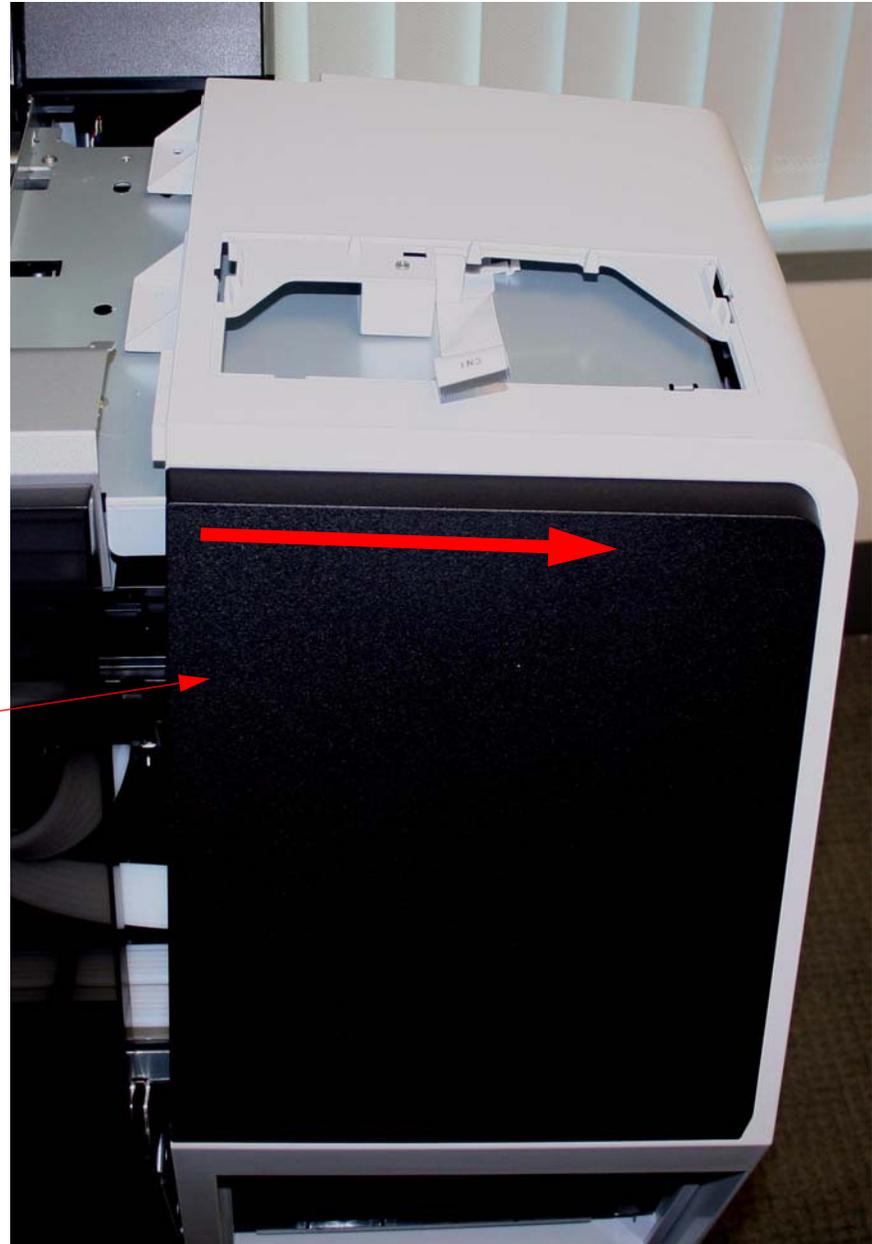


9. Slide off the **Right Side Cover**.

1. Slide out the **Right Maintenance Cartridge**.

Note: Ensure that removing the **Right Side Cover** does not damage the **Control Panel Cable**.

2. Slide off the **Right Side Cover**.



Cover (Top) Removal

1. Remove the **Cover (Left Side)**.
2. Remove the **Cover (Right Side)**.
3. Remove **1 Screw** that fastens the **Top Cover** to the top, right side of the **Printer**.

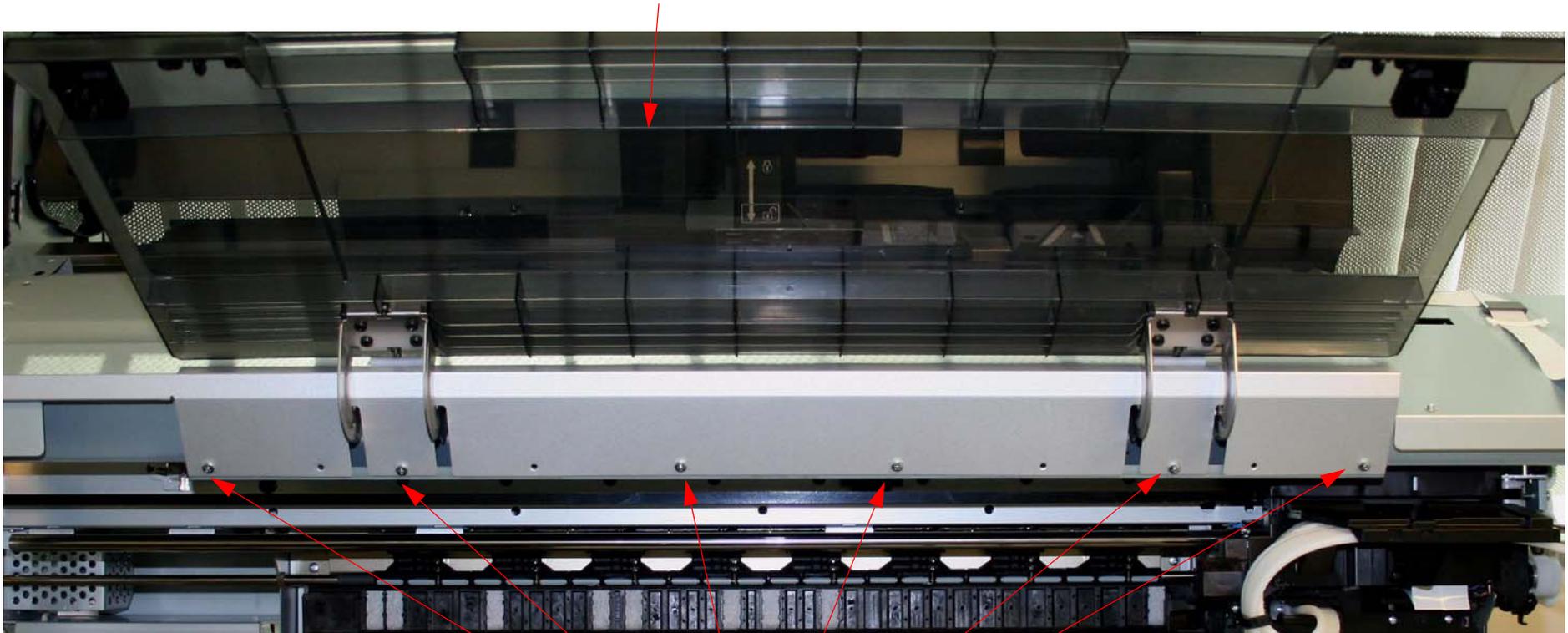


Remove **1 Screw**.



4. Remove **6 Screws** that fastens the front of the **Top Cover** to the **Printer**.

1. Lift the **Front Cover**.



2. Remove **6 Screws**.

Note: The 9900 has 7 Screws for this step.

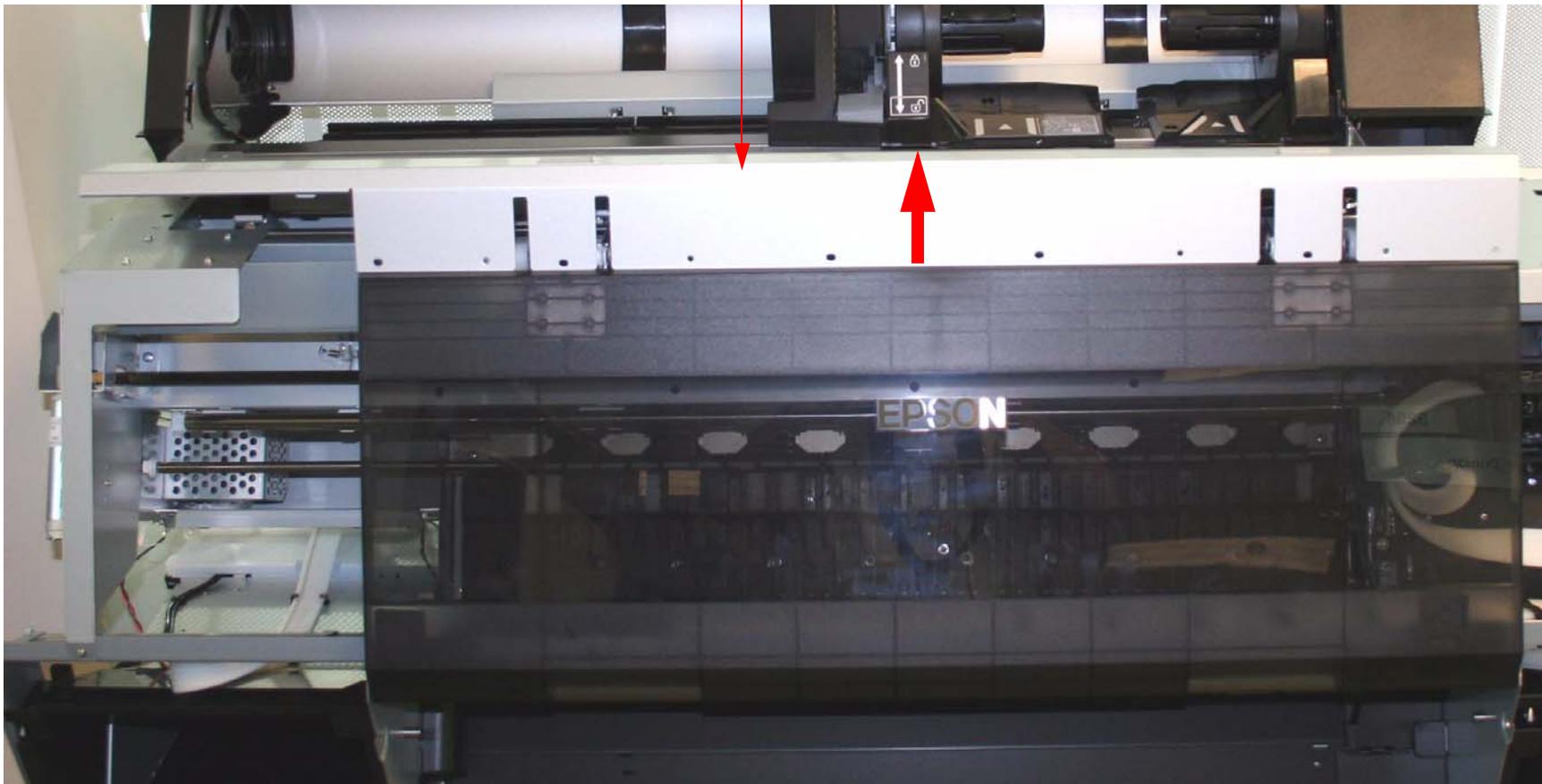
5. Close the **Cover (Front)**.



Close the **Front Cover**.

6. Remove the **Cover (Top)**.

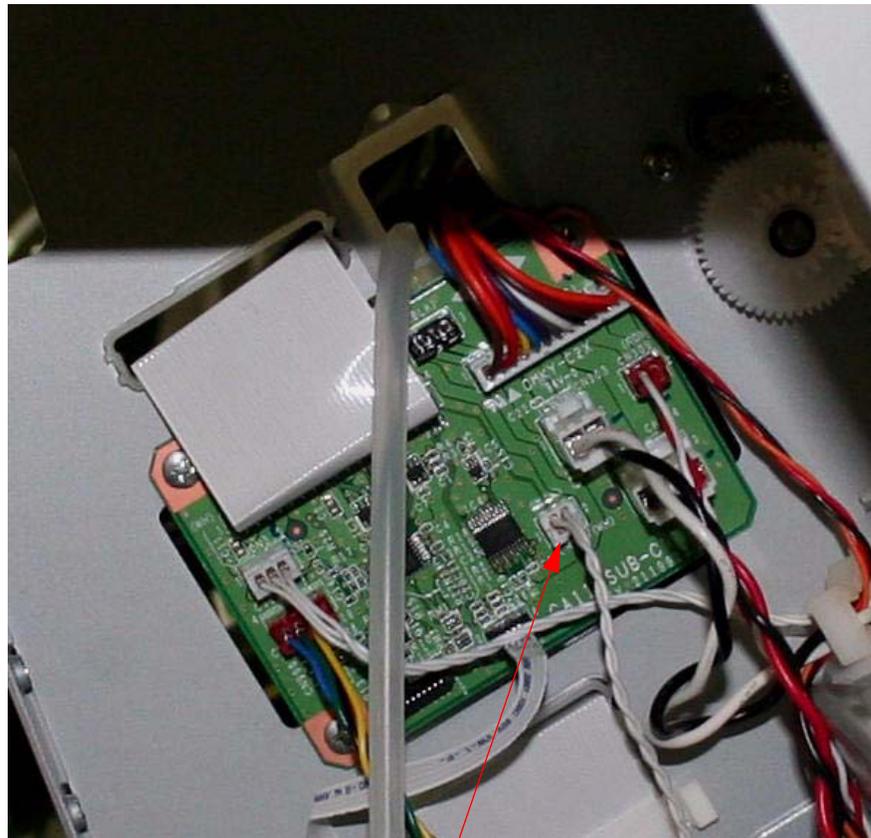
Lift up on the front of the **Top Cover** to remove it.



2. Remove the **Paper Roll Ramp**.

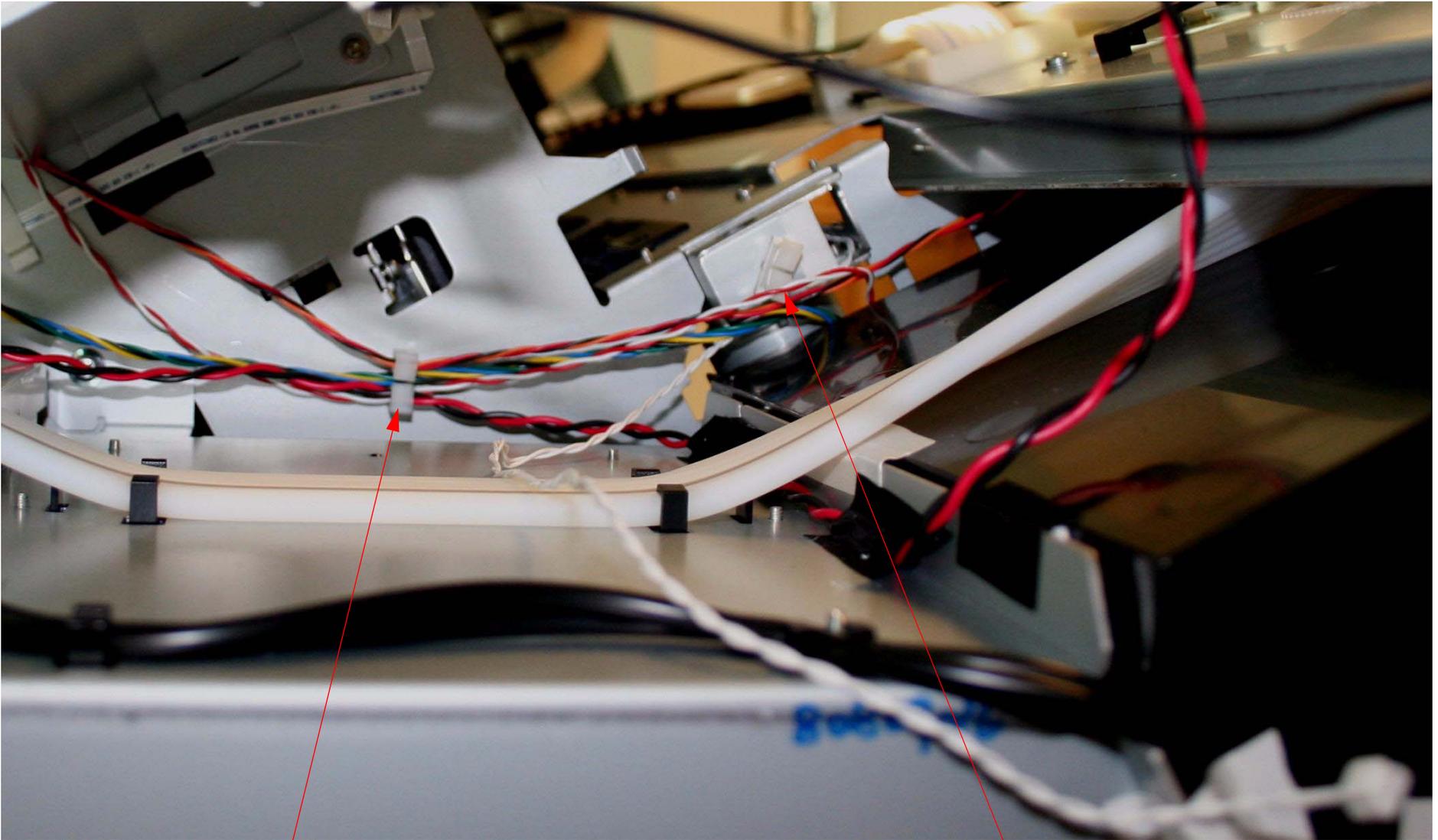
Cutter Assembly Removal

1. Remove the **Cover (Left Side)**.
2. Remove the **Cover (Right Side)**.
3. Remove the **Cover (Cutter Assembly)**.
4. Unplug **CN307** from **Sub Board C**.



Unplug **1 Connector (CN307)** from **Sub Board C**.

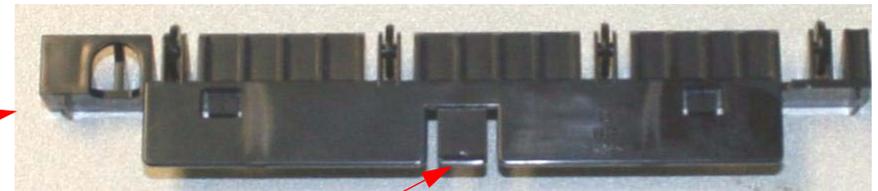
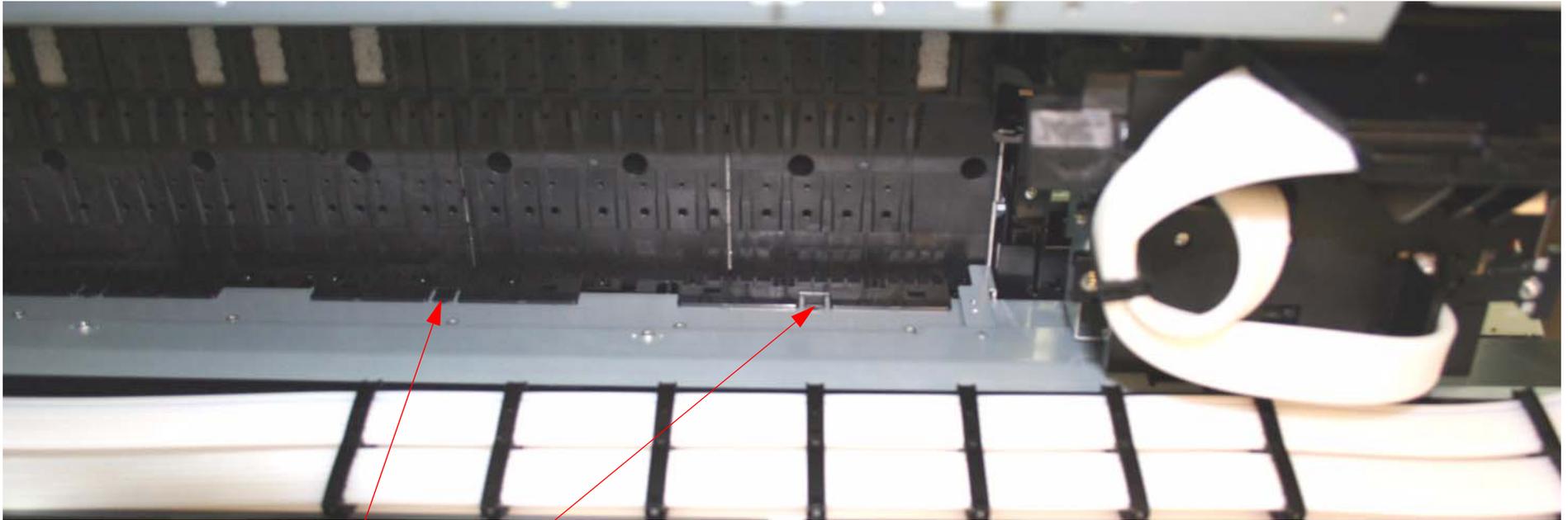
5. Free **Cables** from the **Fasteners**.



1. Free the **2 Strand White Wire (CN307)** from this **Fastener**.
2. Free **All Wires** from this **Fastener**.

6. Remove **2 Paper Guides**.

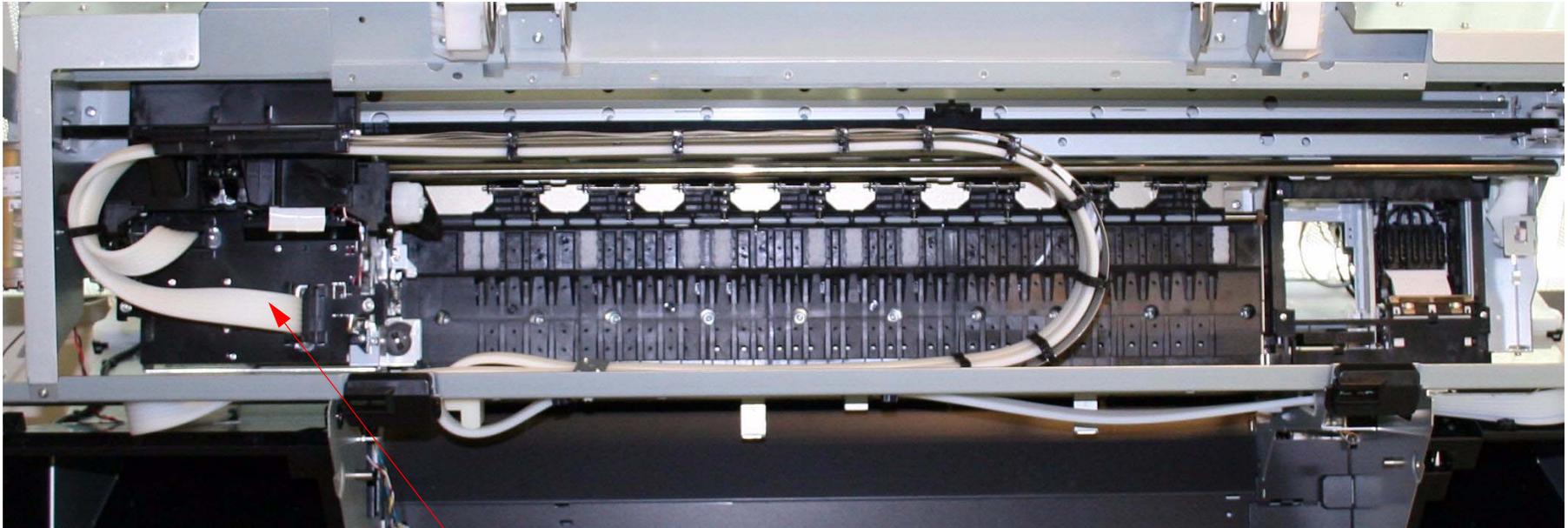
Carriage at the “capped” position.



Release **2 Interlocks** and remove **2 Paper Guides**.

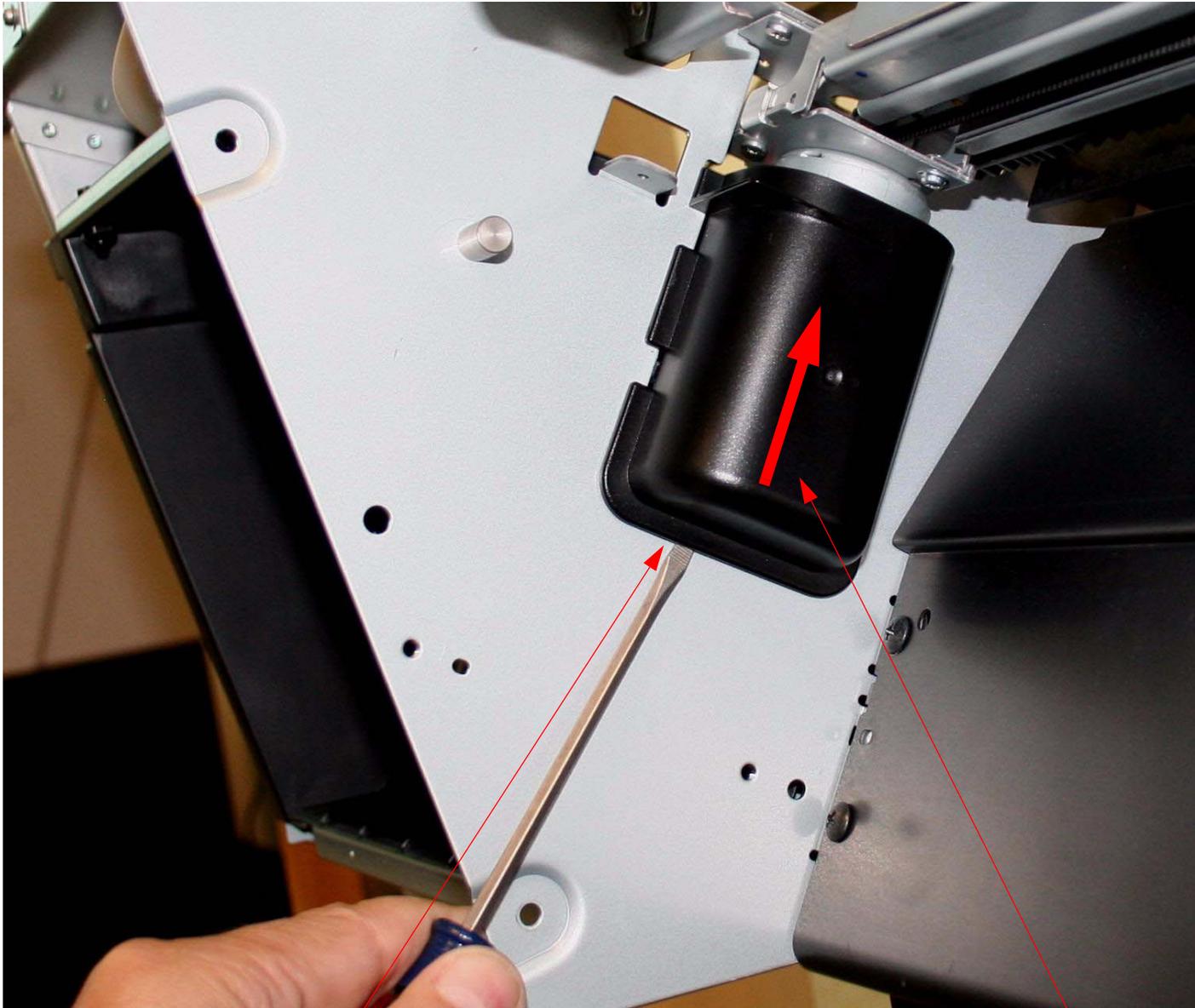
Note: This is the Interlock that holds each Paper Guide in place.

7. Move the **Carriage Assembly** fully to the left.



Move the **Carriage Assembly** fully to the left.

8. Remove the **Cutter Motor Cover**.



1. Lever up the bottom of the **Cover** to release **1 Interlock**.

2. Push the **Cover** up to remove.

9. Remove **2 Screws** that fasten the left side of the **Cutter Assembly** to the **Printer**.

View from below



Remove **2 Screws**.

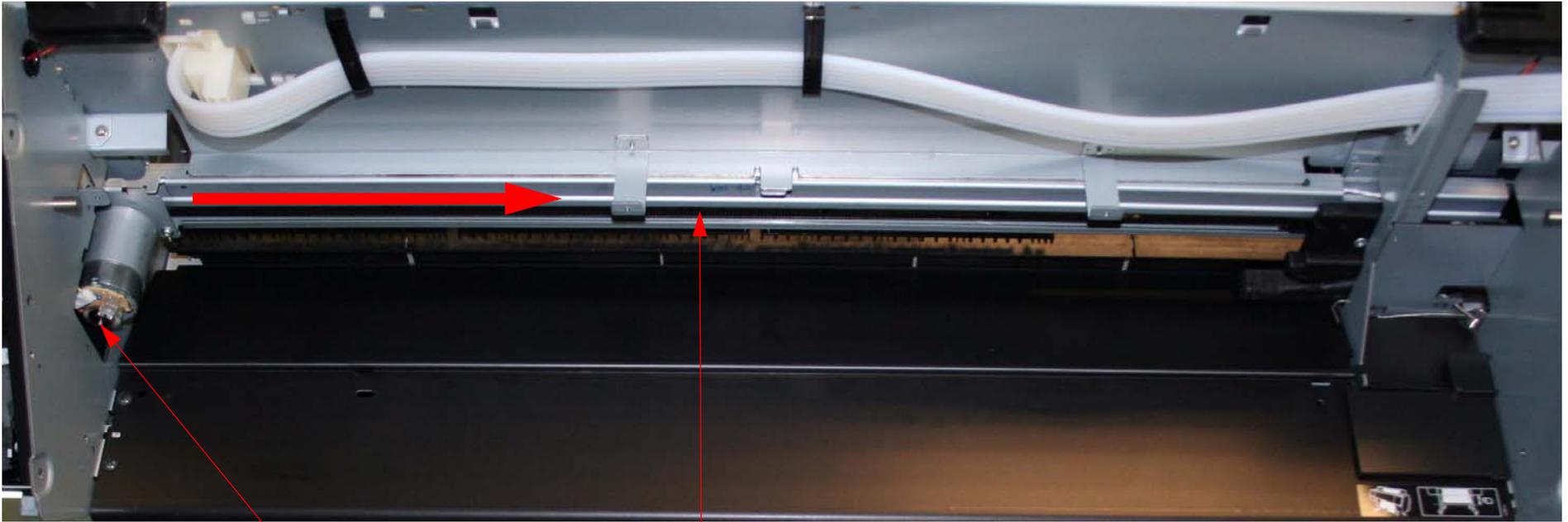
10. Remove **2 Screws** that fasten the right side of the **Cutter Assembly** to the **Printer**.



View from below

Remove **2 Screws**.

11. Shift the **Cutter Assembly** to the right and unplug the **Cutter Motor Cable**.

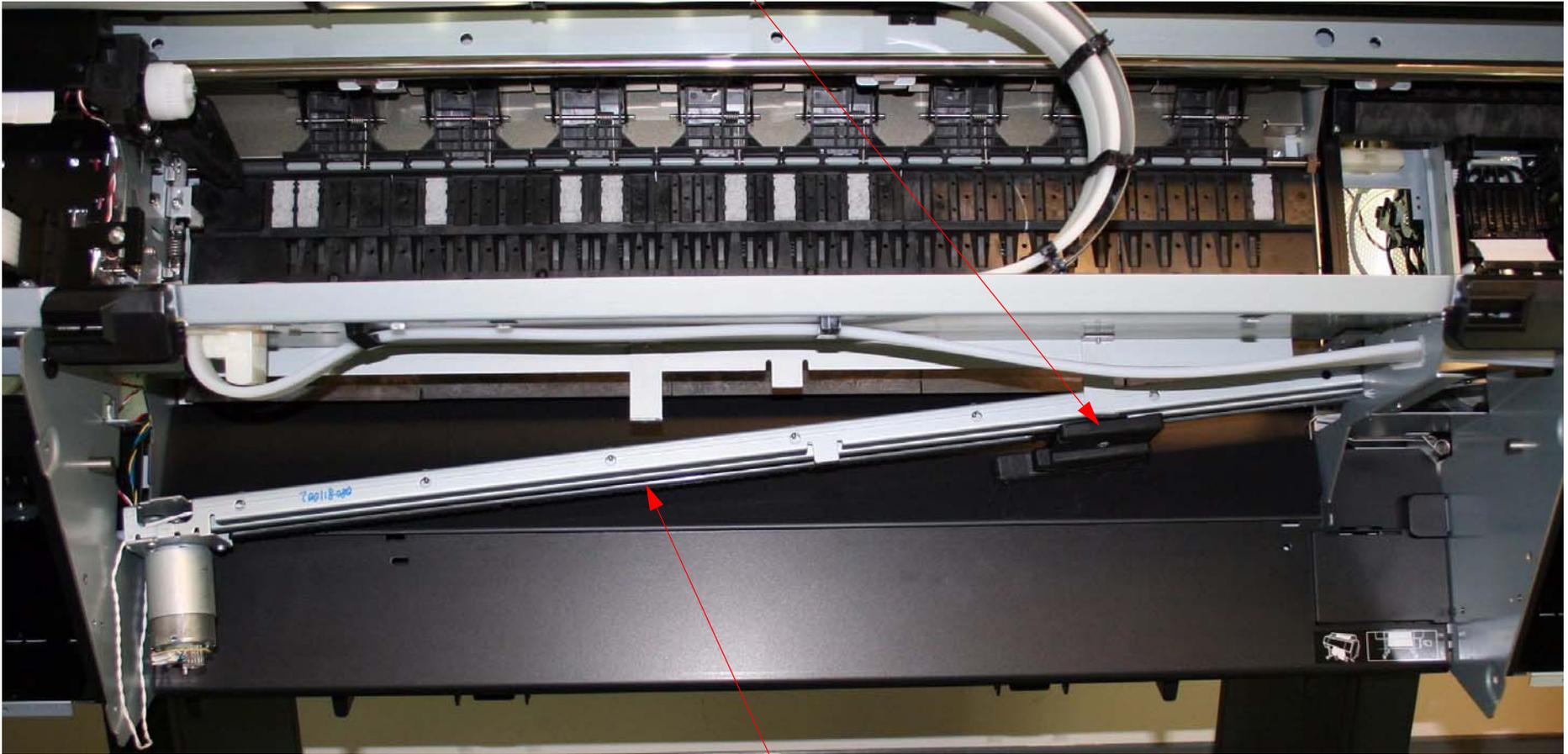


1. Shift the **Cutter Assembly** to the right.

2. Unplug the **Cutter Motor Cable**.

12. Drop the left side of the **Cutter Assembly** to remove it.

1. Move the **Cutter Blade** away from the **Side Frame**.



2. Drop the left side of the **Cutter Assembly** to remove it.

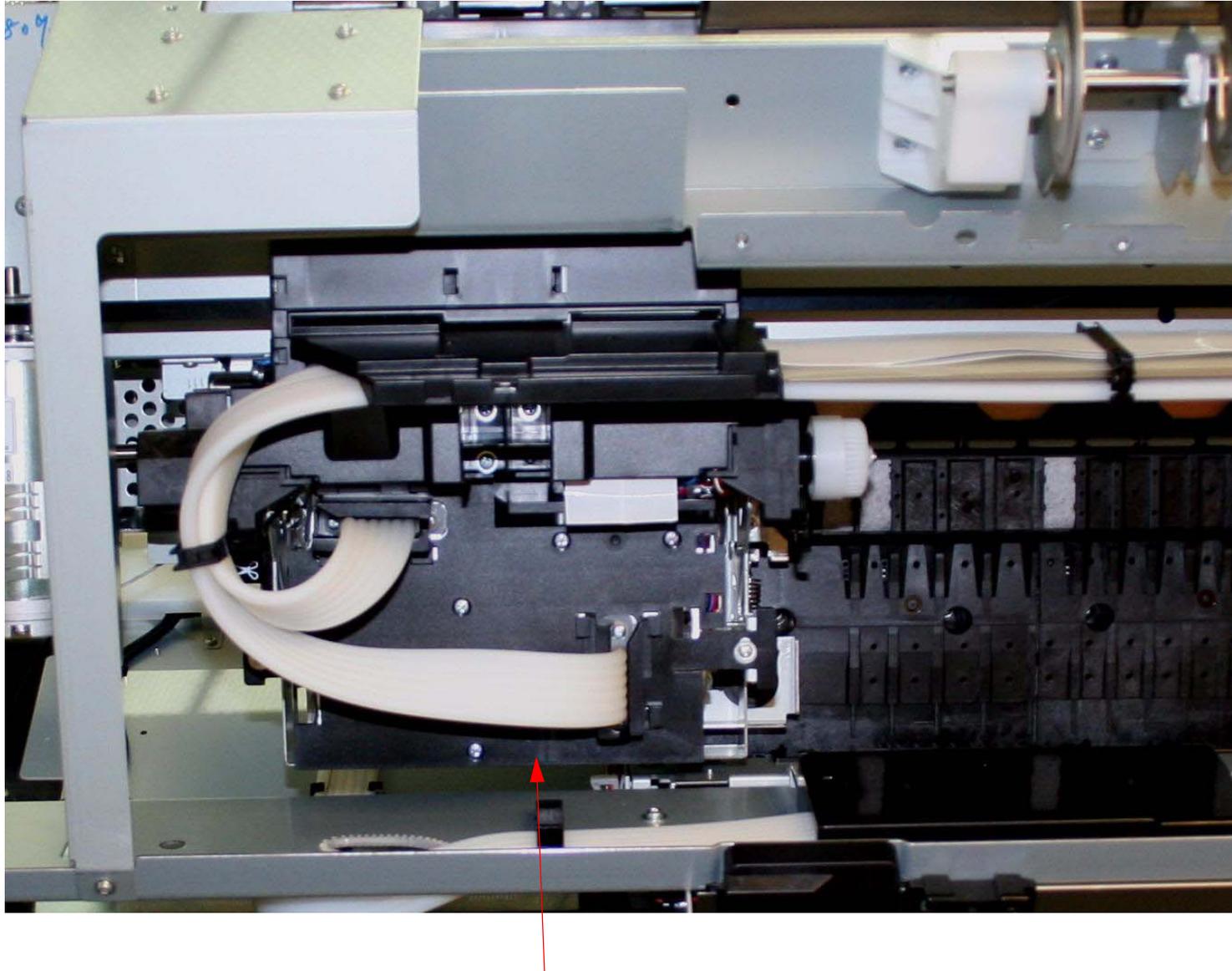
Damper (Selector) Assembly Removal

1. (**Optional**) Drain the ink from the **Printer** following the directions found in the Ink Draining Procedure chapter located in the reference section.

Note: The Ink Draining procedure uses air pressure to force the Ink out of the Ink Lines through the Print Head. Because of the nature of the hardware the ink in the Lines is replaced by pressurized air. Opening the Ink System will result in the escape of the pressurized air, and a small amount of “ink froth”. Have paper towels ready to capture the ink.

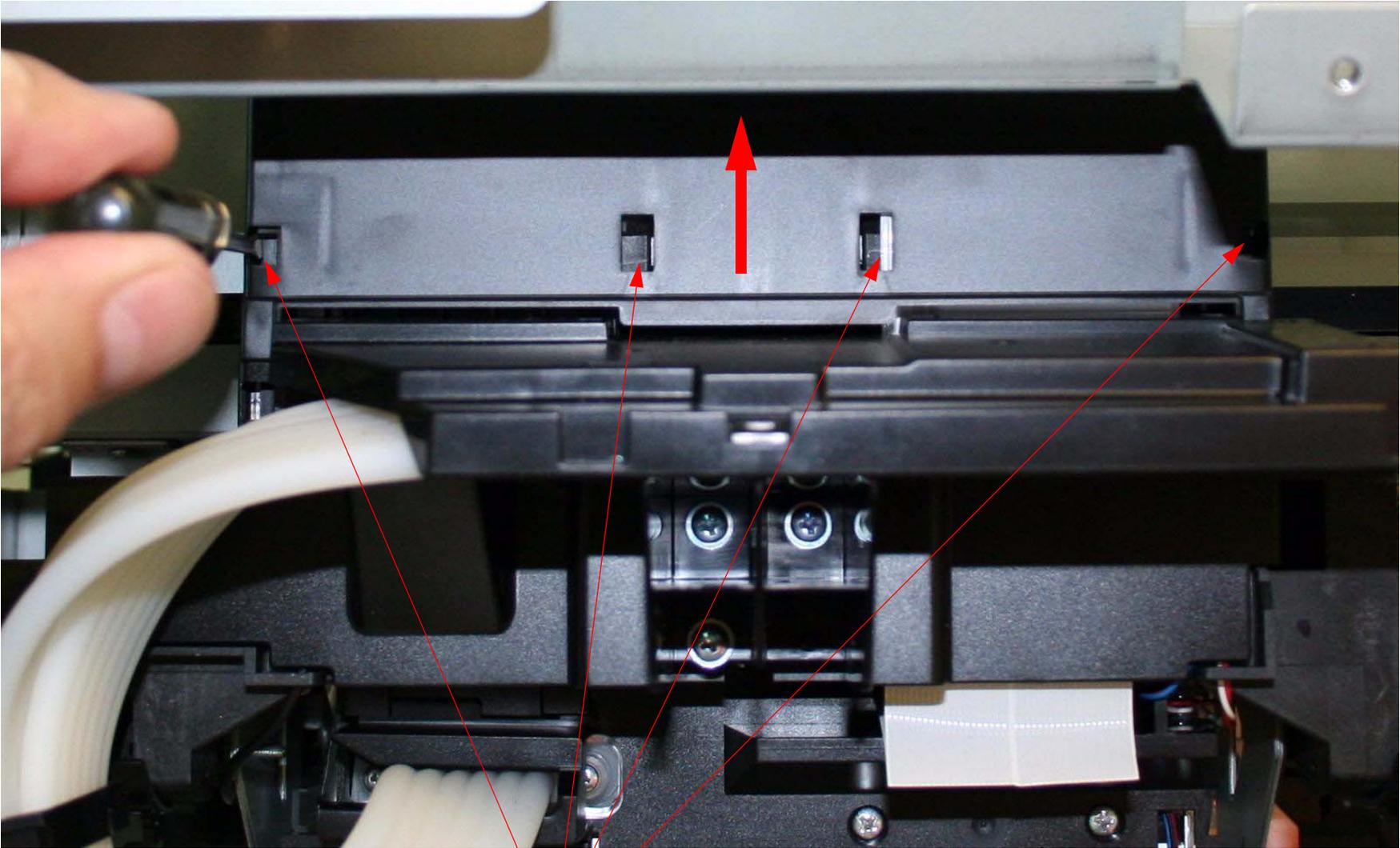
2. Remove the **Cover (Top)**.
3. Remove the **Cover (Left Side)**.
4. Remove the **Cover (Right Side)**.
5. Release the **Carriage Mechanism**, following the directions found in the Carriage Release Chapter (Auto or Manual), located in the Reference Section.
6. (If the **Ink System** is not drained) Partially remove **1 Ink Cartridge**, to ensure that the **Ink System** is un-pressurized.
7. **Unplug the Printer.**

8. Move the **Carriage Mechanism** to the left side of the **Printer**.



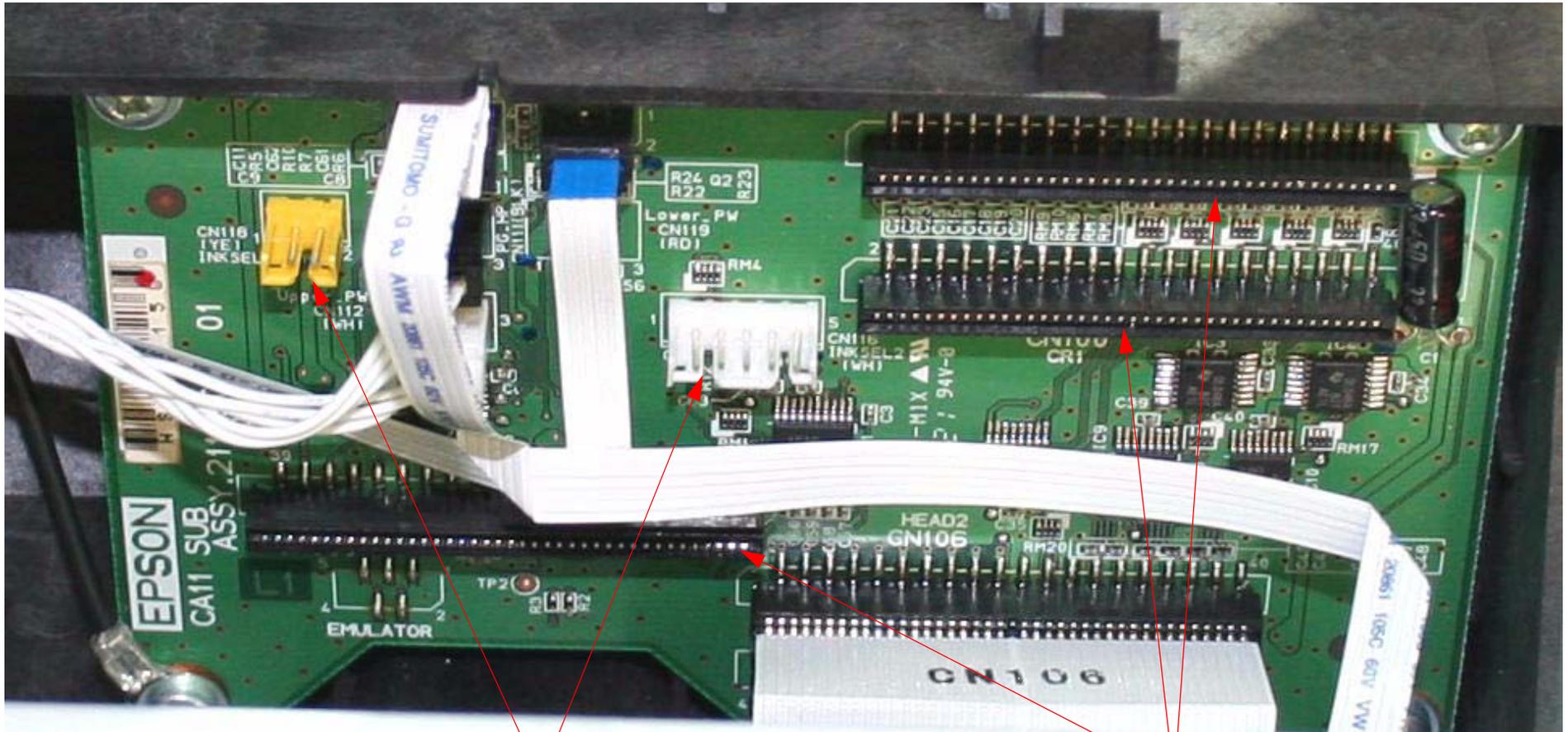
Move the **Carriage Mechanism** to the left side of the **Printer**.

9. Remove the **Carriage Board Cover**.



Working from left to right, release **4 Interlocks** and remove the **Carriage Board Cover**.

10. Unplug **2 Wired Cables** and **3 Foil Cables**.

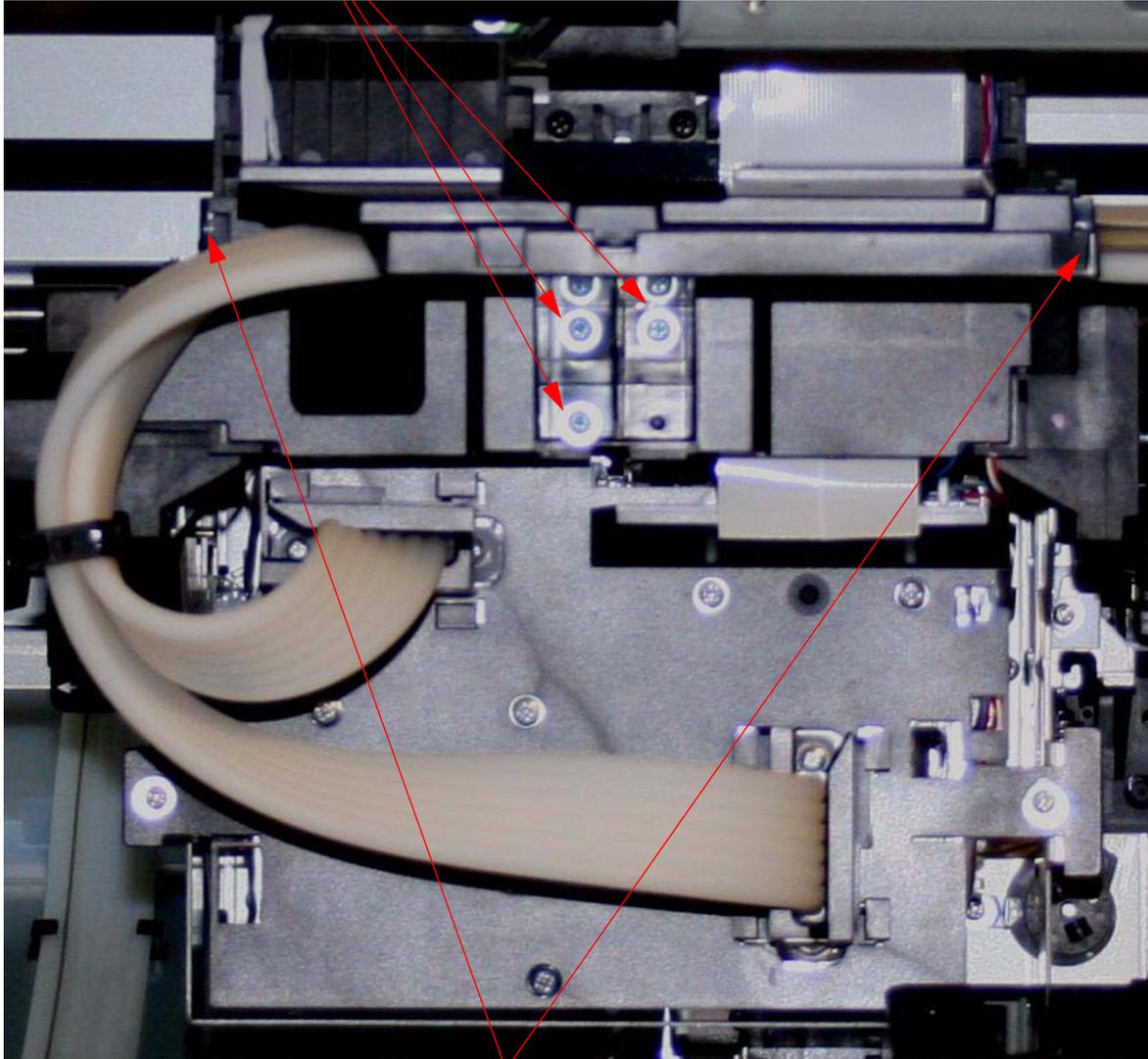


1. Unplug **2 Wired Cables**.

2. Unplug **3 Foil Cables**.

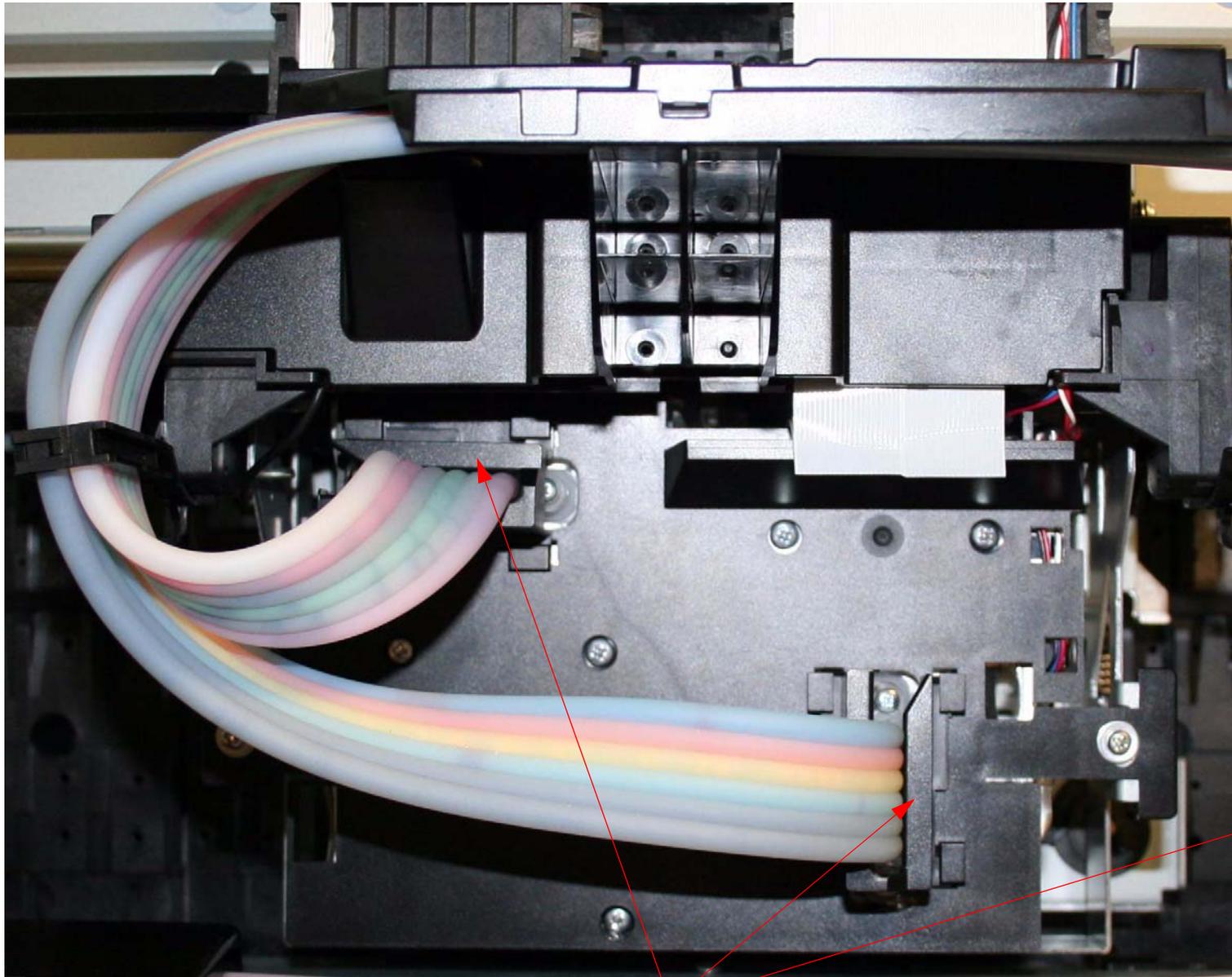
11. Remove **3 Screws**, and **2 Interlocks** that fasten the **Ink Tube Holder** to the **Carriage Assembly**.

1. Remove **3 Screws**.



2. Release **2 Interlocks**.

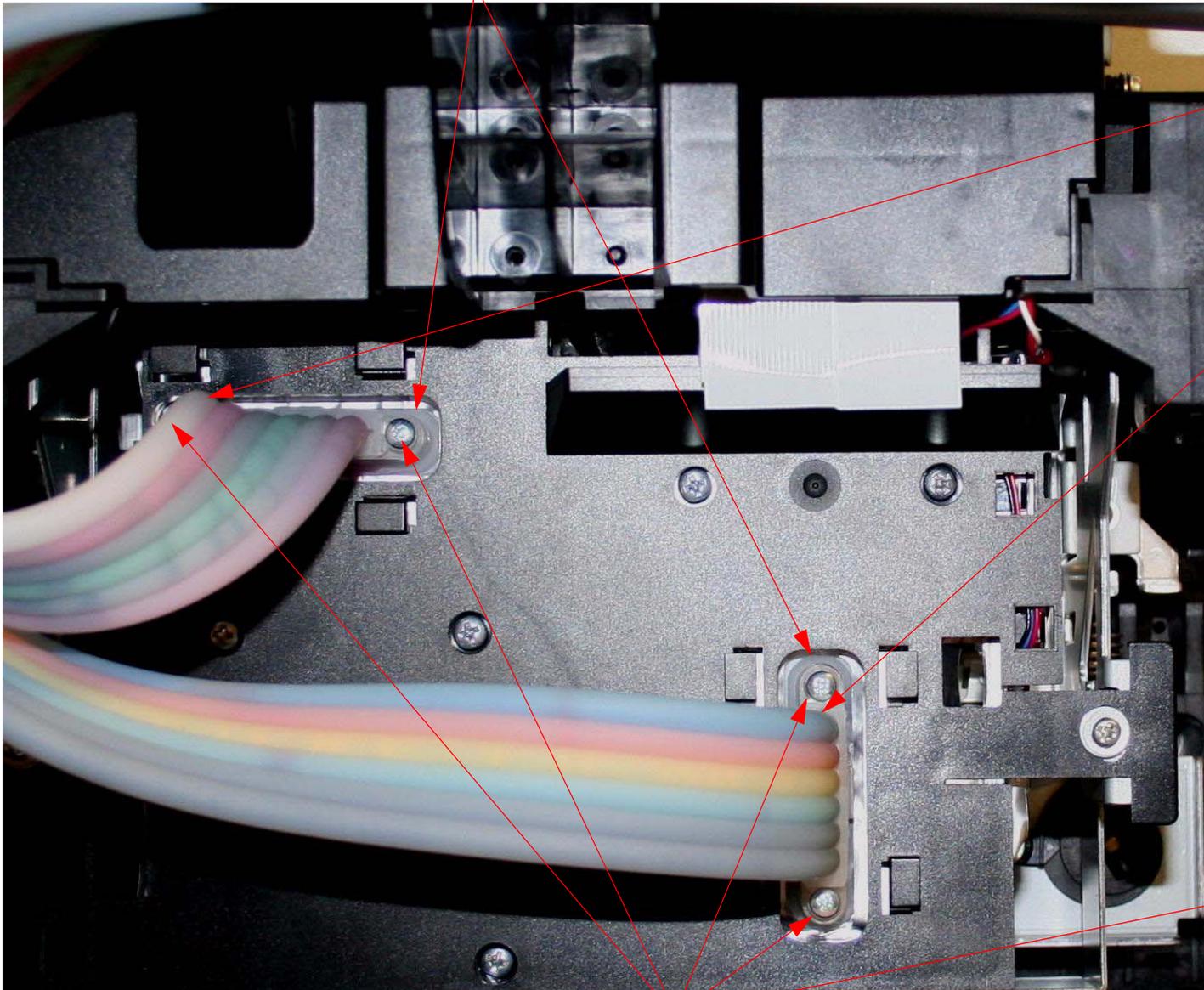
12. Remove **2 Tube Braces**.



Remove **2 Tube Braces**

13. Mark the **Tube** polarity and remove **4 Screws**.

1. Mark the **Tubes**, at these locations, to facilitate re-assembly.



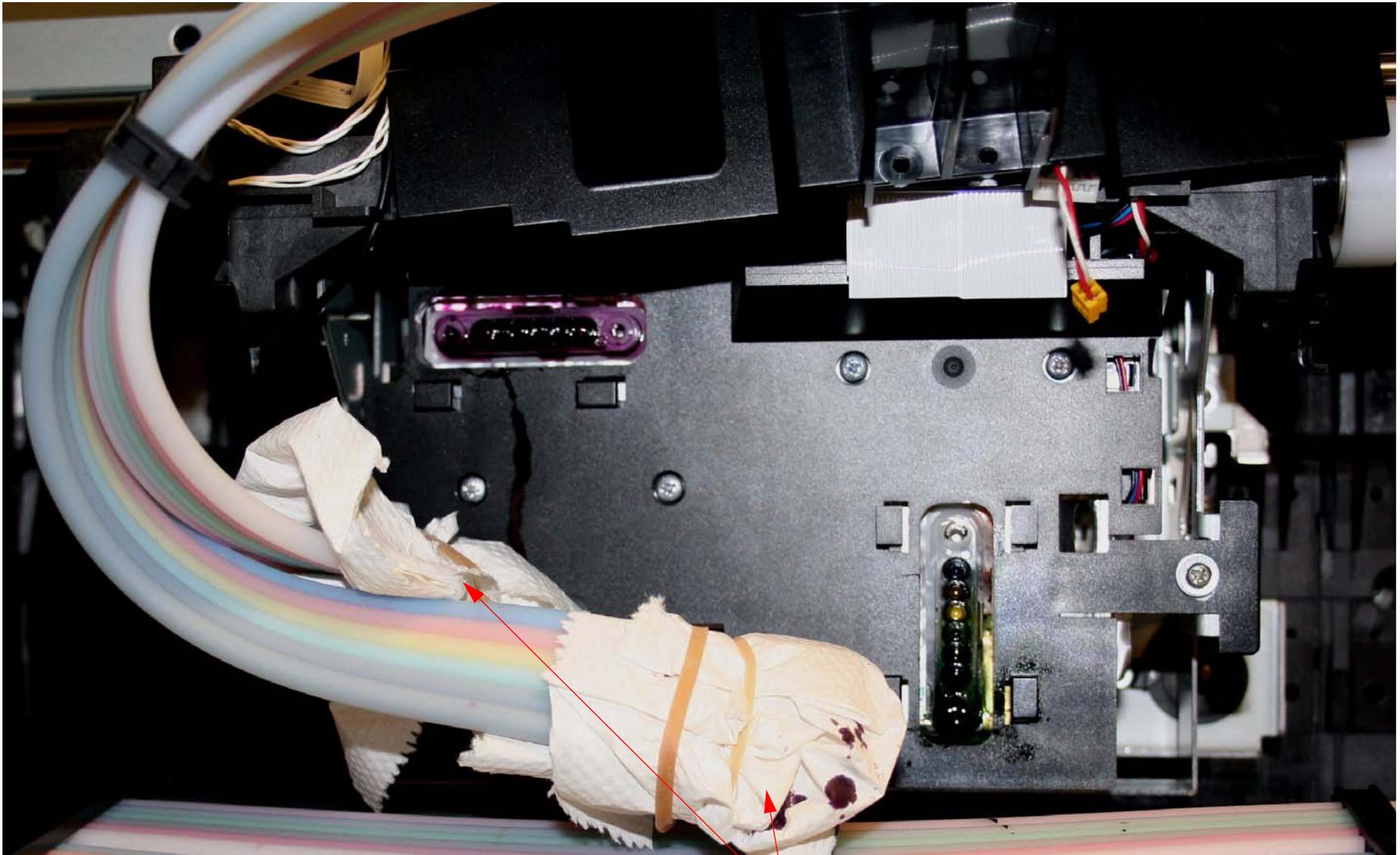
Reassembly Note:
The empty Tube is here.

Reassembly Note:
The Cyan Tube is here.



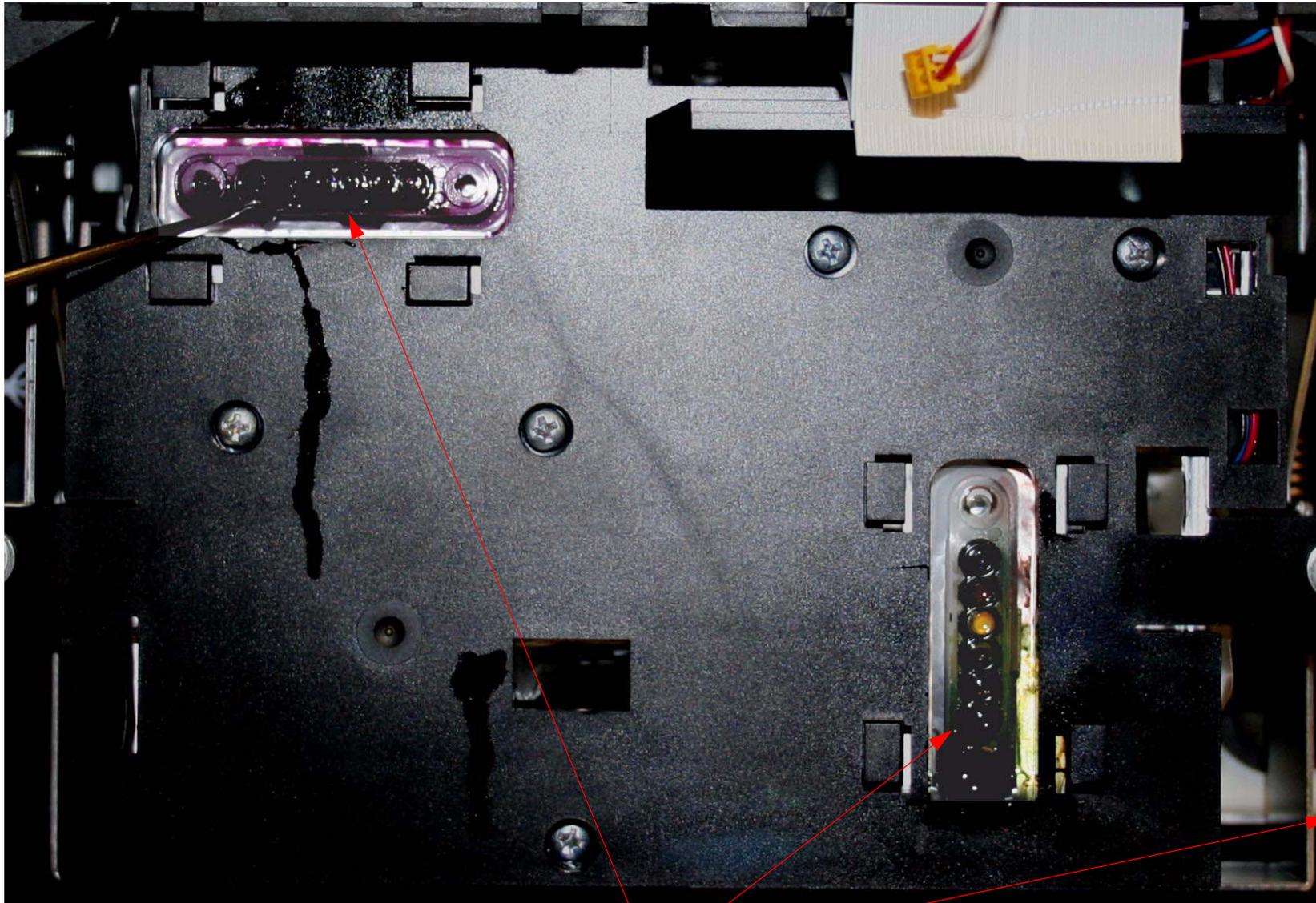
2. Remove **4 Screws**

14. Remove and protect the ***Tubes***.



Remove and protect the ***Tubes***.

15. Remove and clean **2 O-Ring Chains**.



Remove and clean **2 O-Ring Chains**.

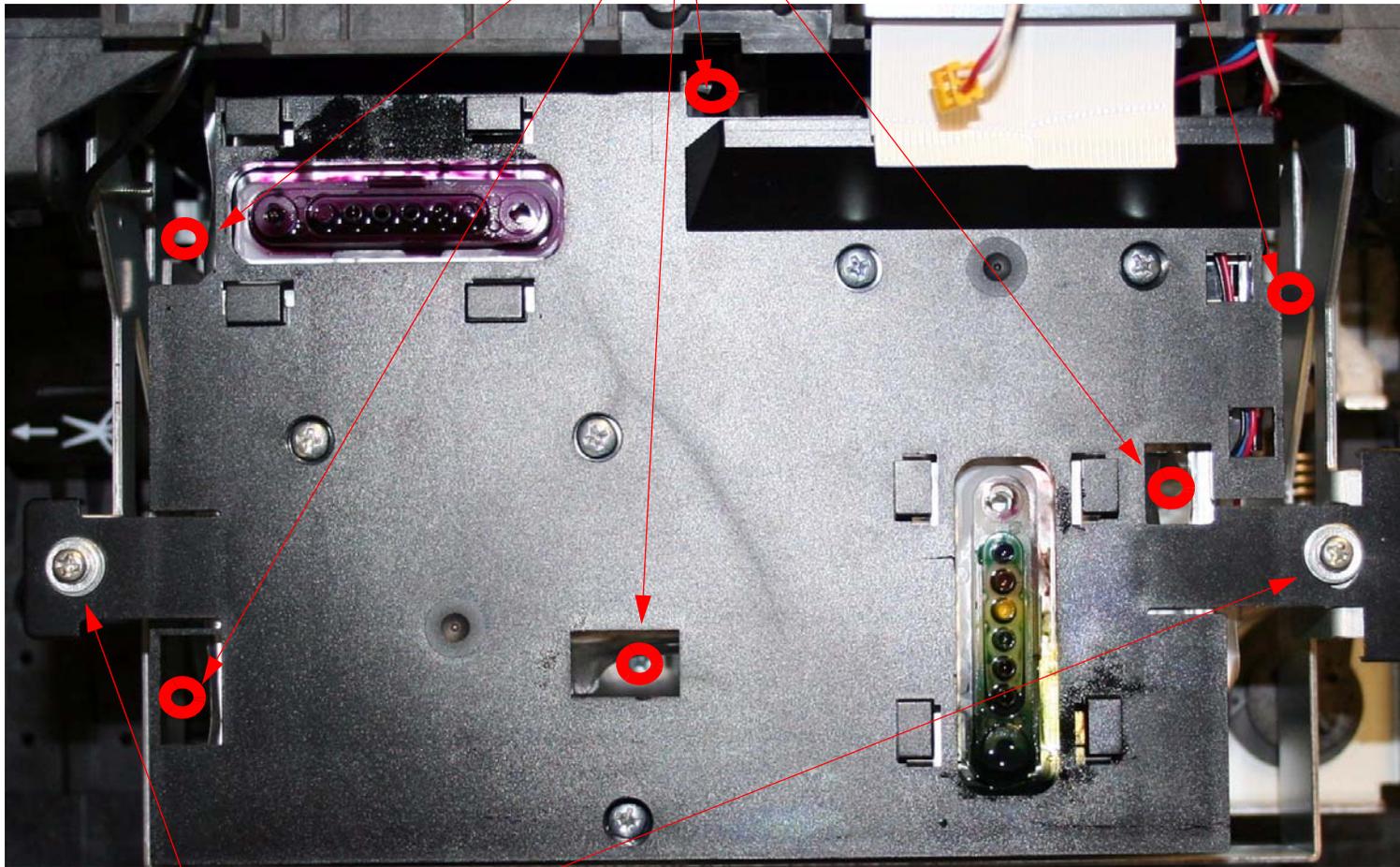
16. Remove **8 Screws** that fasten the **Damper Assembly** to the **Printer**.

1. Remove **5 Screws**.

2. Remove **1 Screw**.

3. Remove **2 Screws**.

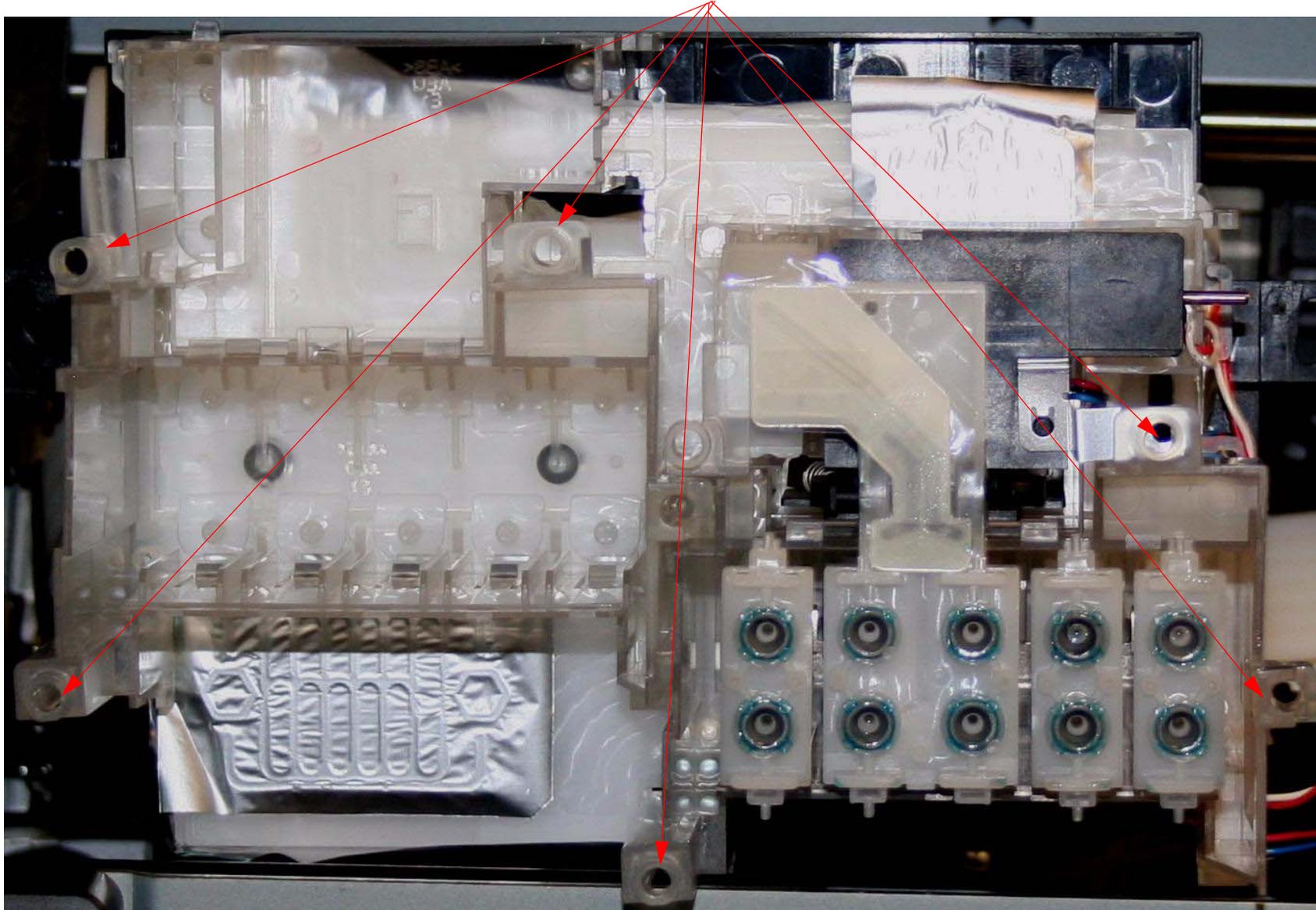
Note: See the next page for additional help in locating the correct Screws to remove in this step.



17. Additional reference for the preceding step.

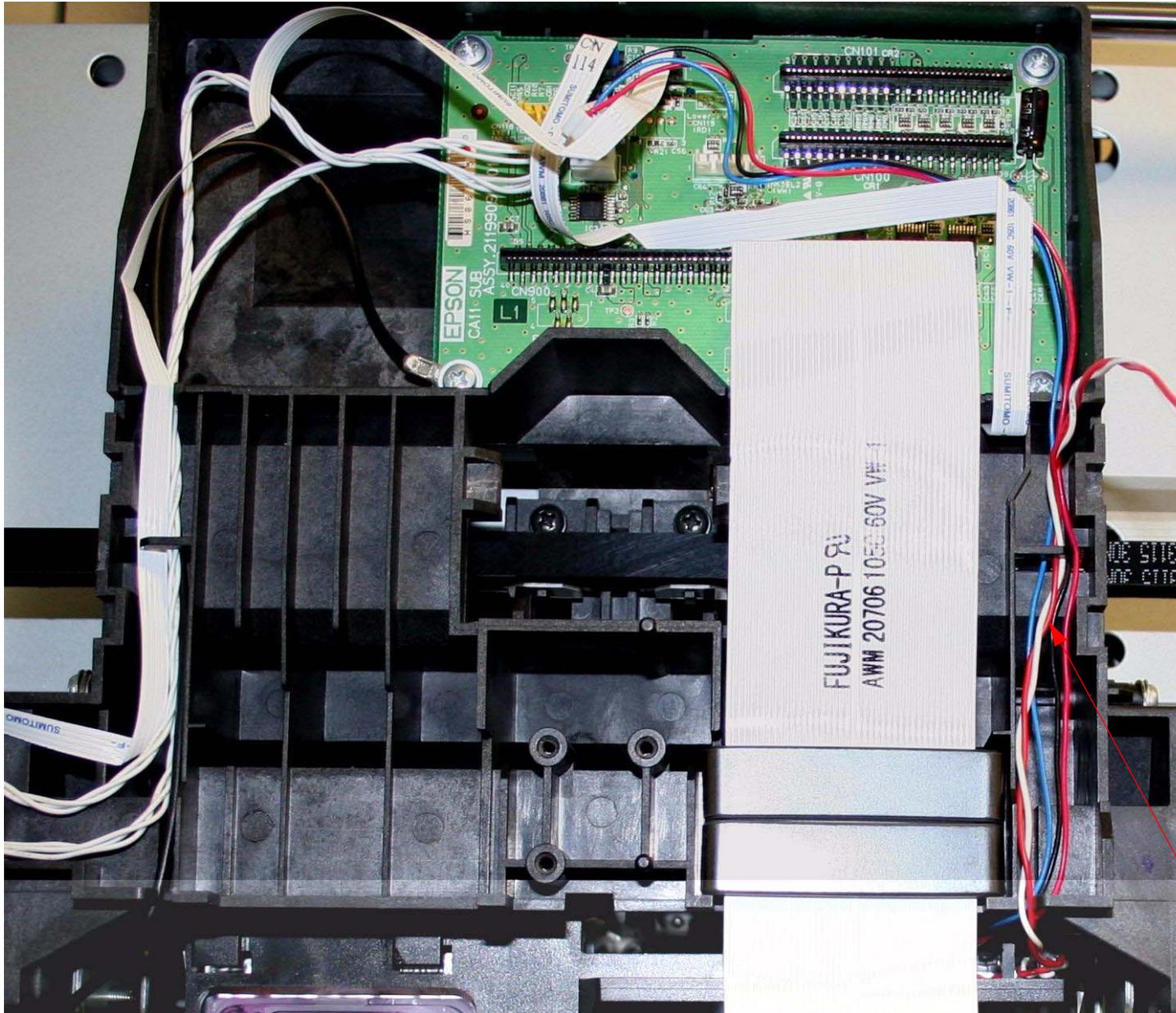
Bottom view of the **Damper Assembly**

Location of the **6 Screws**



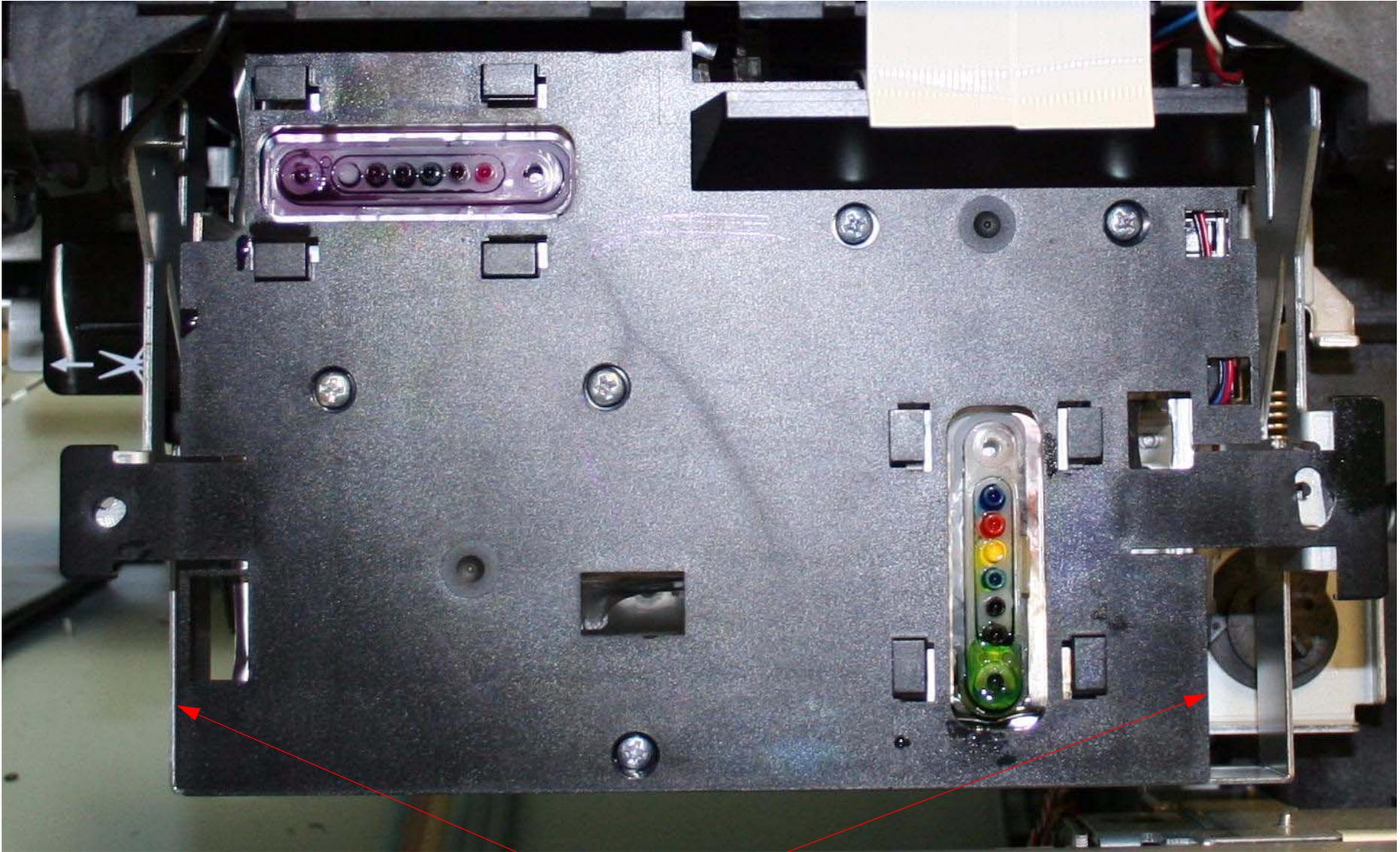
Back of the **Damper Assembly**.

18. Free the *Damper Assembly Wires*.



Free these *Wires*.

19. Remove the *Damper Assembly*.



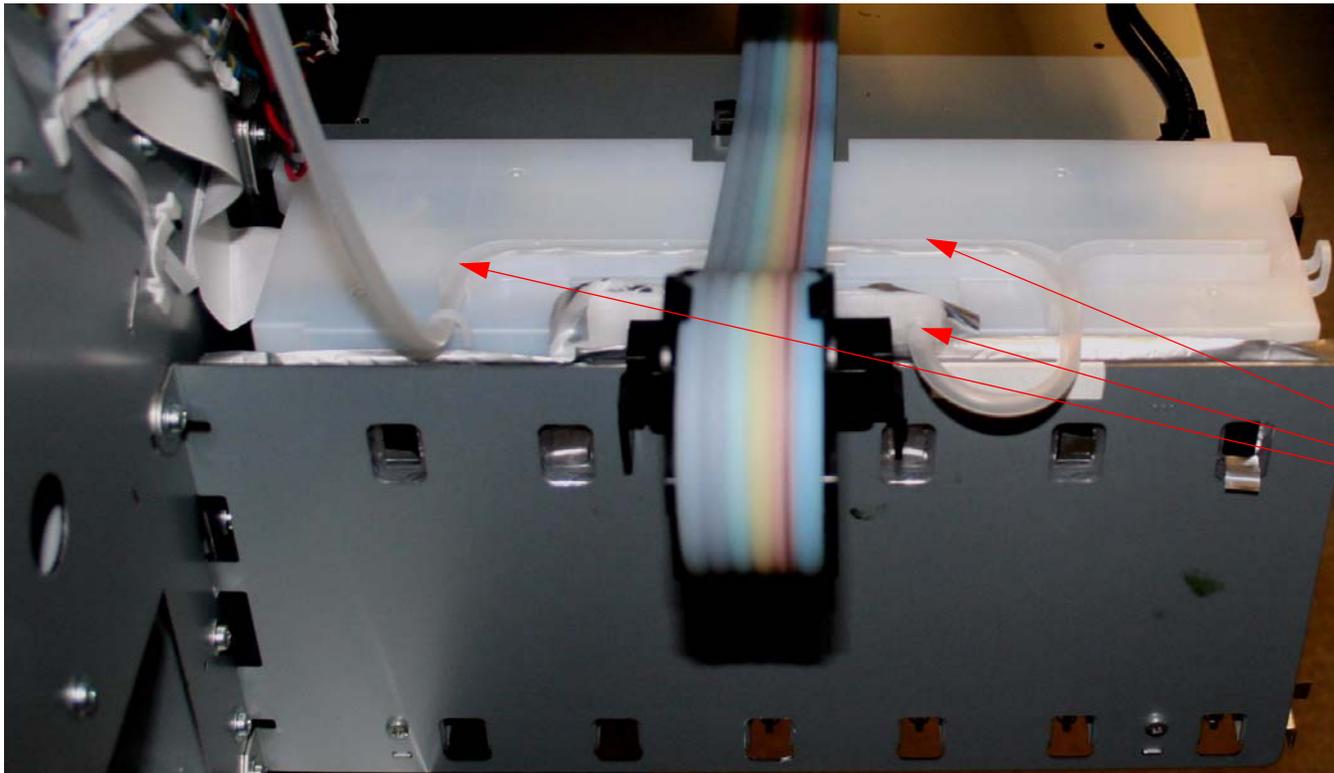
Hold the *Damper Assembly* here, and “wiggle” the *Assembly* off.

Ink Bay (Left) Removal

1. Drain the ink from the **Printer** following the directions found in the Ink Draining Procedure chapter located in the reference section.

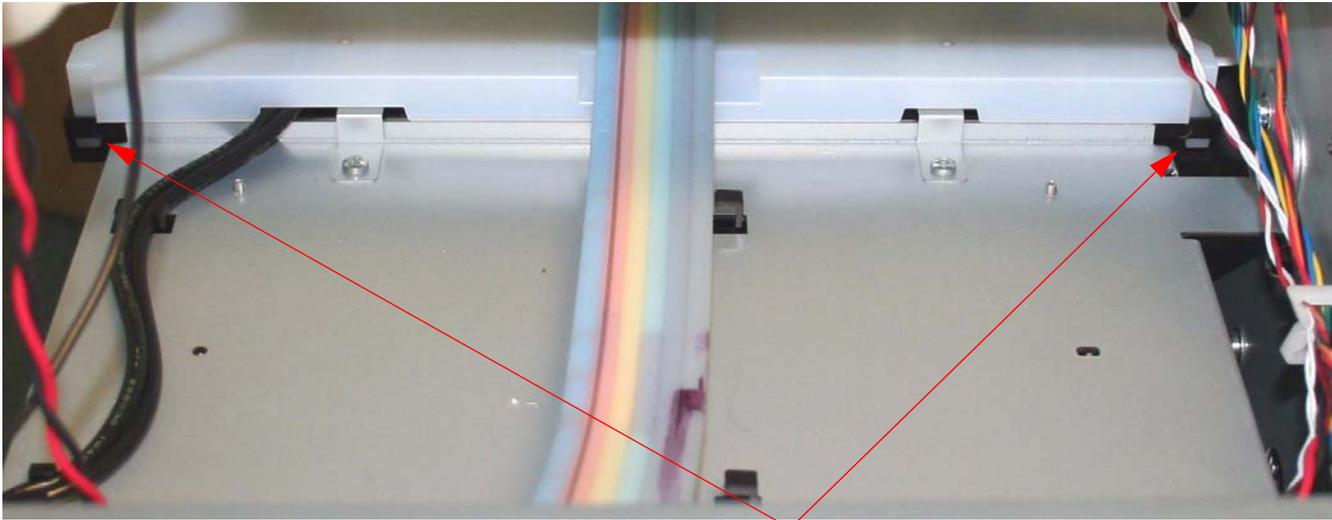
Note: *The Ink Draining procedure uses air pressure to force the Ink out of the Ink Lines through the Print Head. Because of the nature of the hardware the ink in the Lines is replaced by pressurized air. **Opening the Ink System will result in the escape of the pressurized air, and a small amount of "ink froth". Have paper towels ready to capture the ink.***

2. Remove the **Side Cover (Left)**.
3. Disconnect the **Air Pressure Line**.

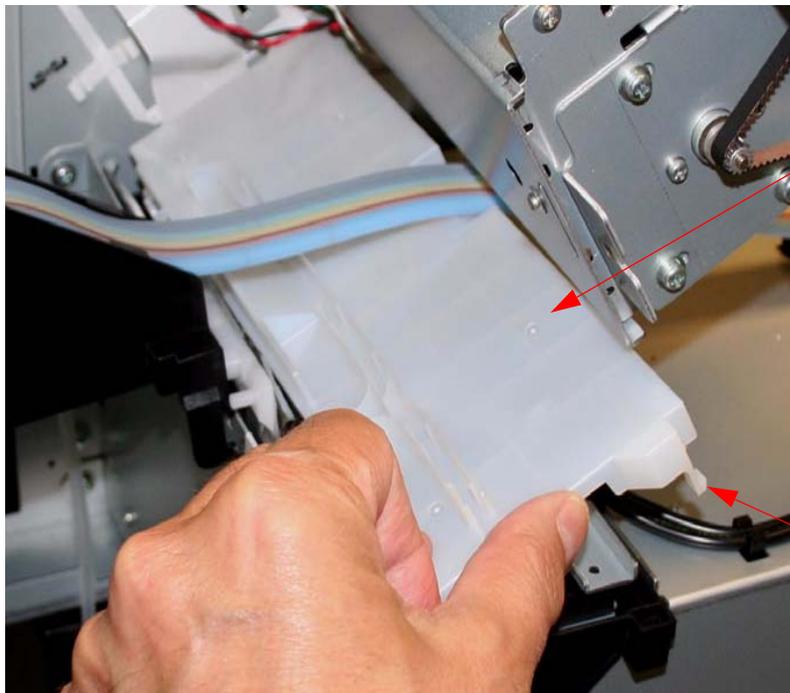


Disconnect the **Air Pressure Line**, and free it from the **Guides**.

4. Remove the **Sub Board Cover**.



1. (View from the front) Release **2 Interlocks**.

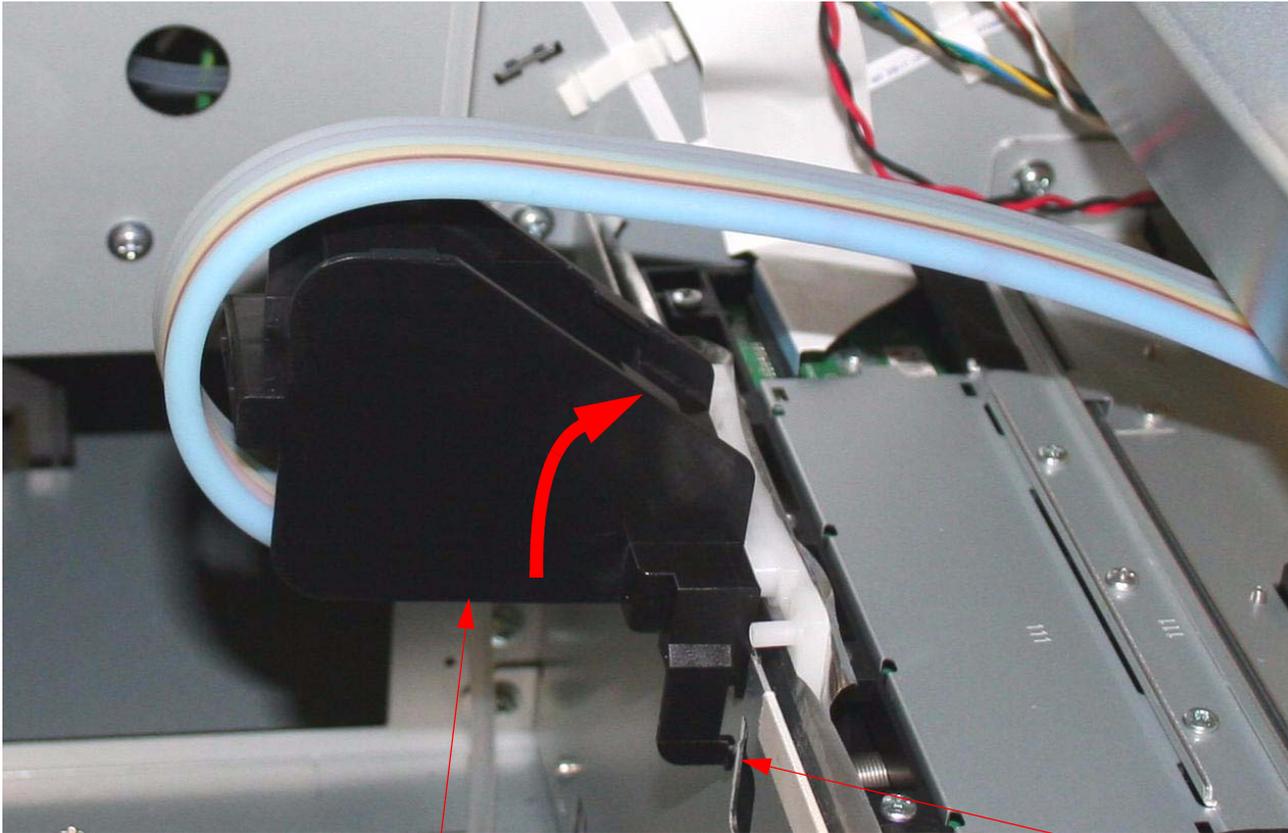


2. Lift off the **Sub Board Cover**.

Released **Interlock**.

5. Remove the ***Ink Tube Guide***.

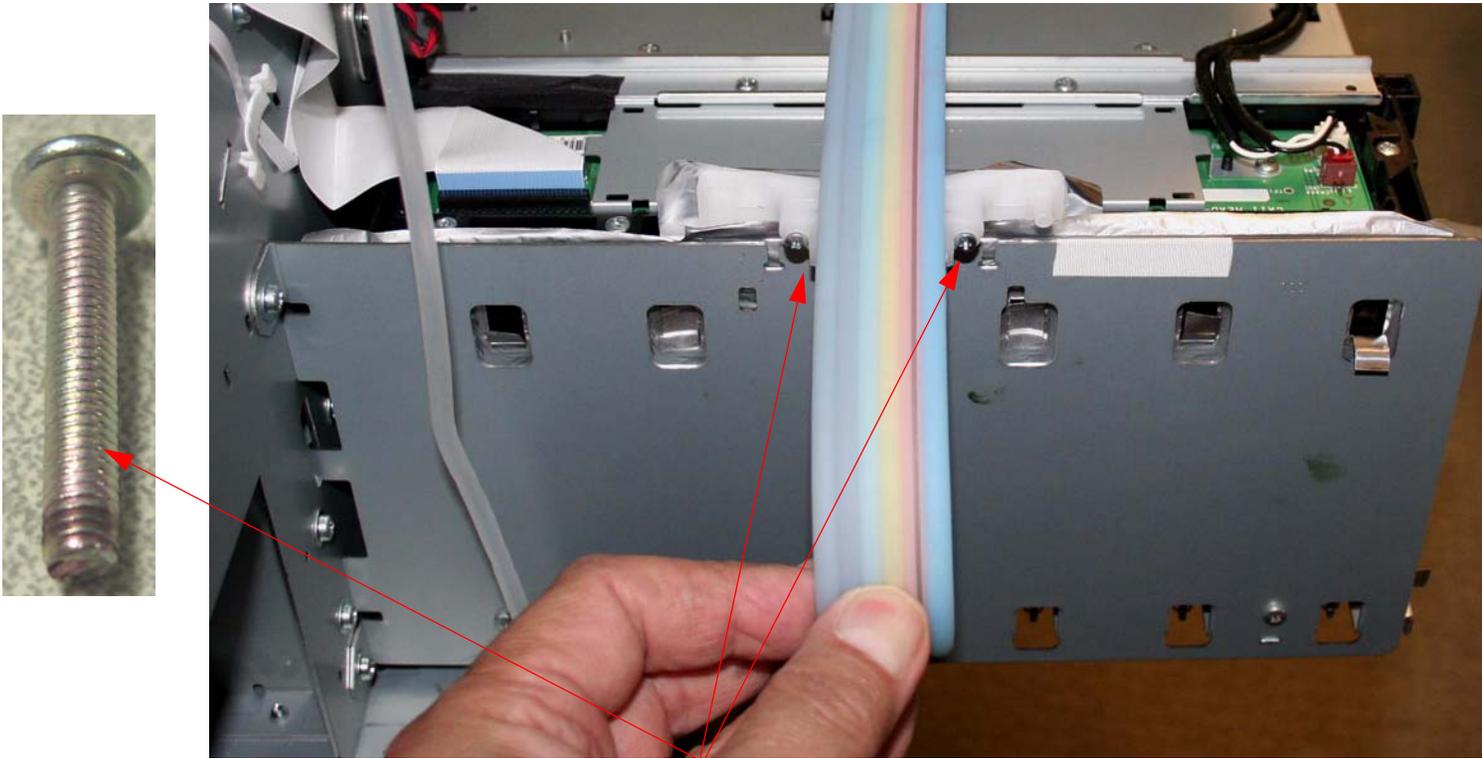
1. Free the ***Ink Tubes*** from the ***Ink Tube Guide***.



2. Squeeze in to release ***2 Interlocks***.

3. Rotate the ***Ink Tube Guide*** up to remove.

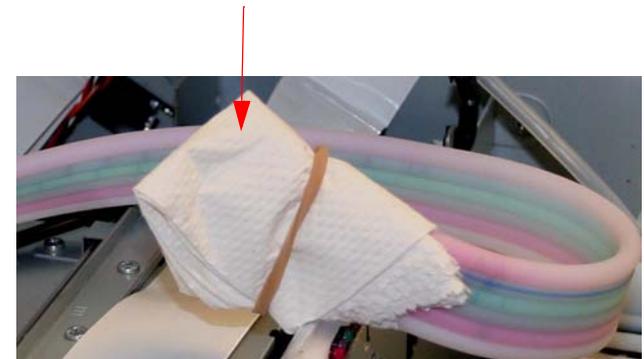
6. Disconnect the *Ink Tubes*.



1. Remove **2 Screws** and disconnect the ***Tubes***.

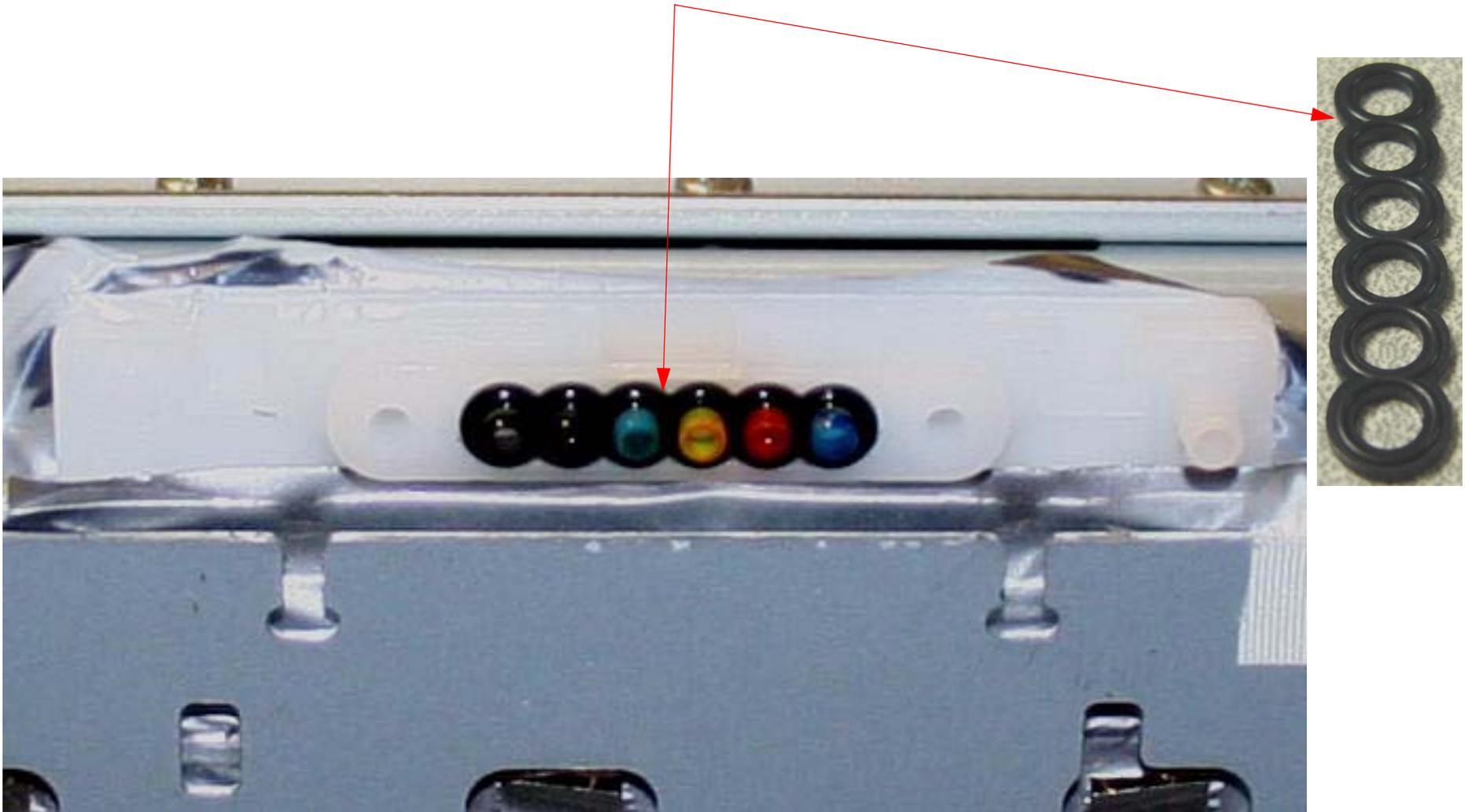
Note: *The Ink Draining procedure uses air pressure to force the Ink out of the Ink Lines through the Print Head. Because of the nature of the hardware the ink in the Lines is replaced by pressurized air. **Opening the Ink System will result in the escape of the pressurized air, and a small amount of “ink froth”.** Have paper towels ready to capture the ink.*

2. Wrap the ***Tubes***.

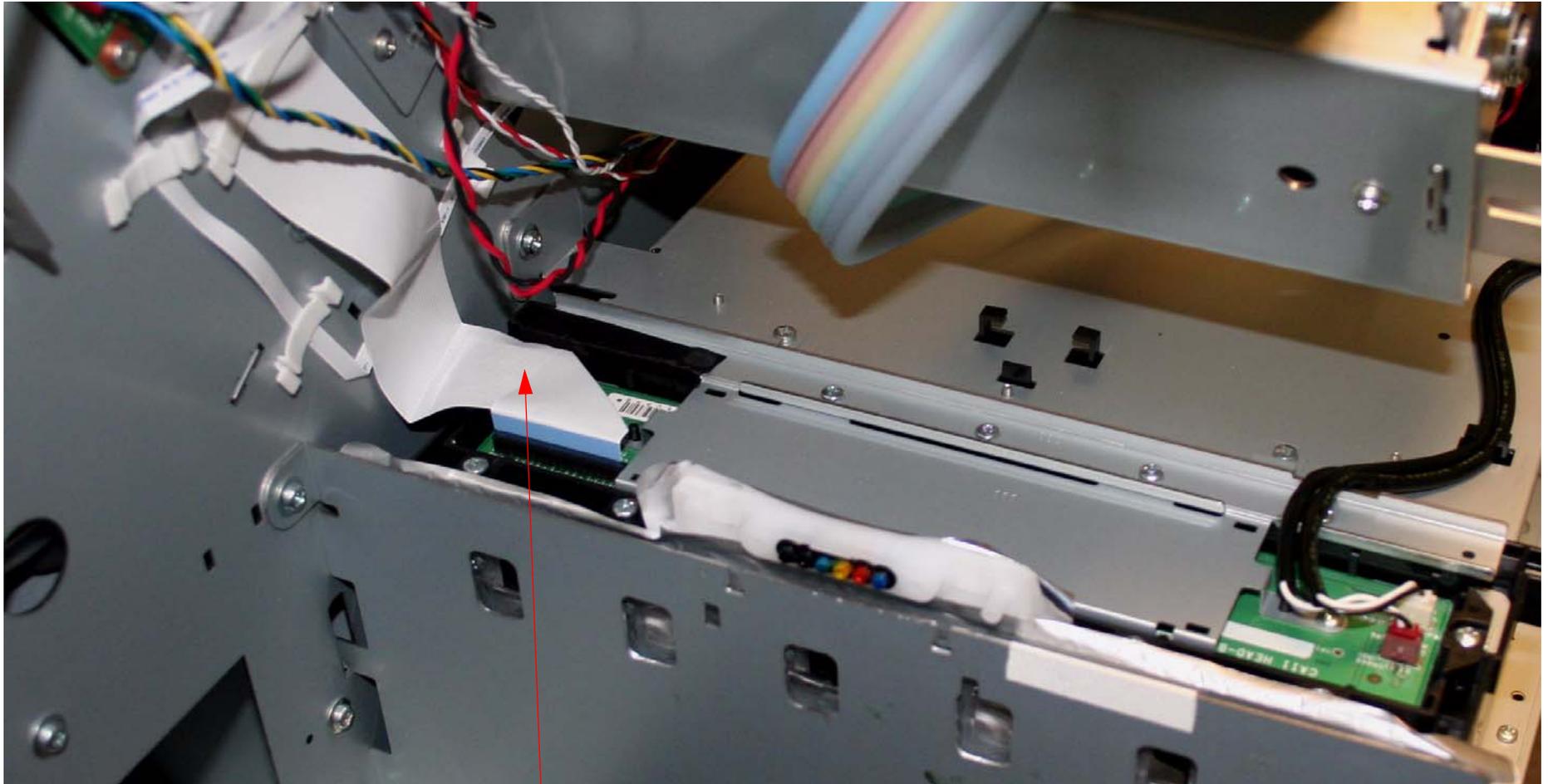


7. **Re-assembly tip.**

If replacing the **Ink Bay**, ensure that the **O-Ring Chain** is transferred to the **New Ink Bay**.

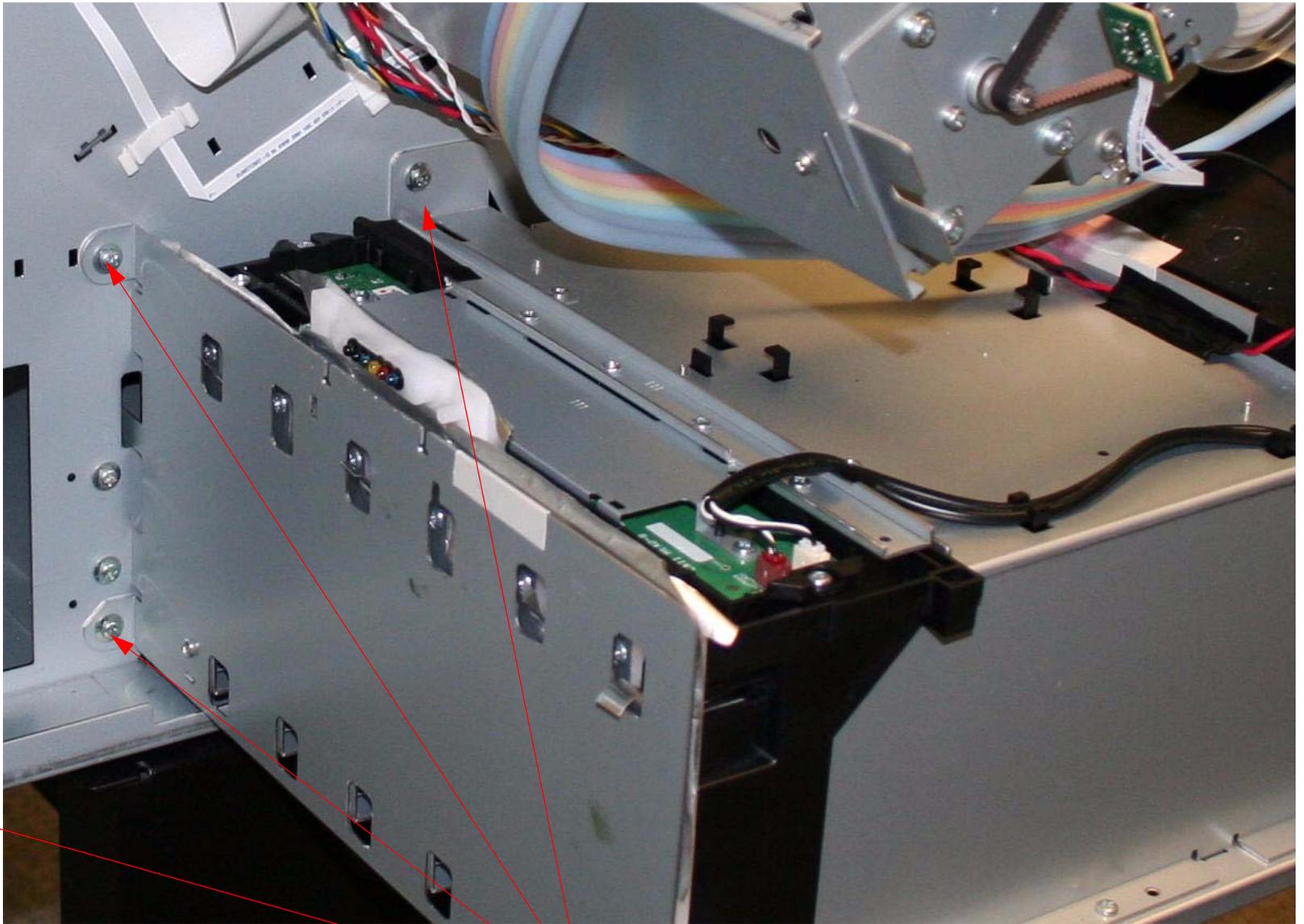


8. Disconnect the **Sub Board Cable**.



Unplug the **Sub Board Cable**.

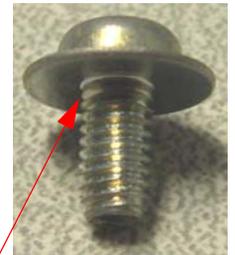
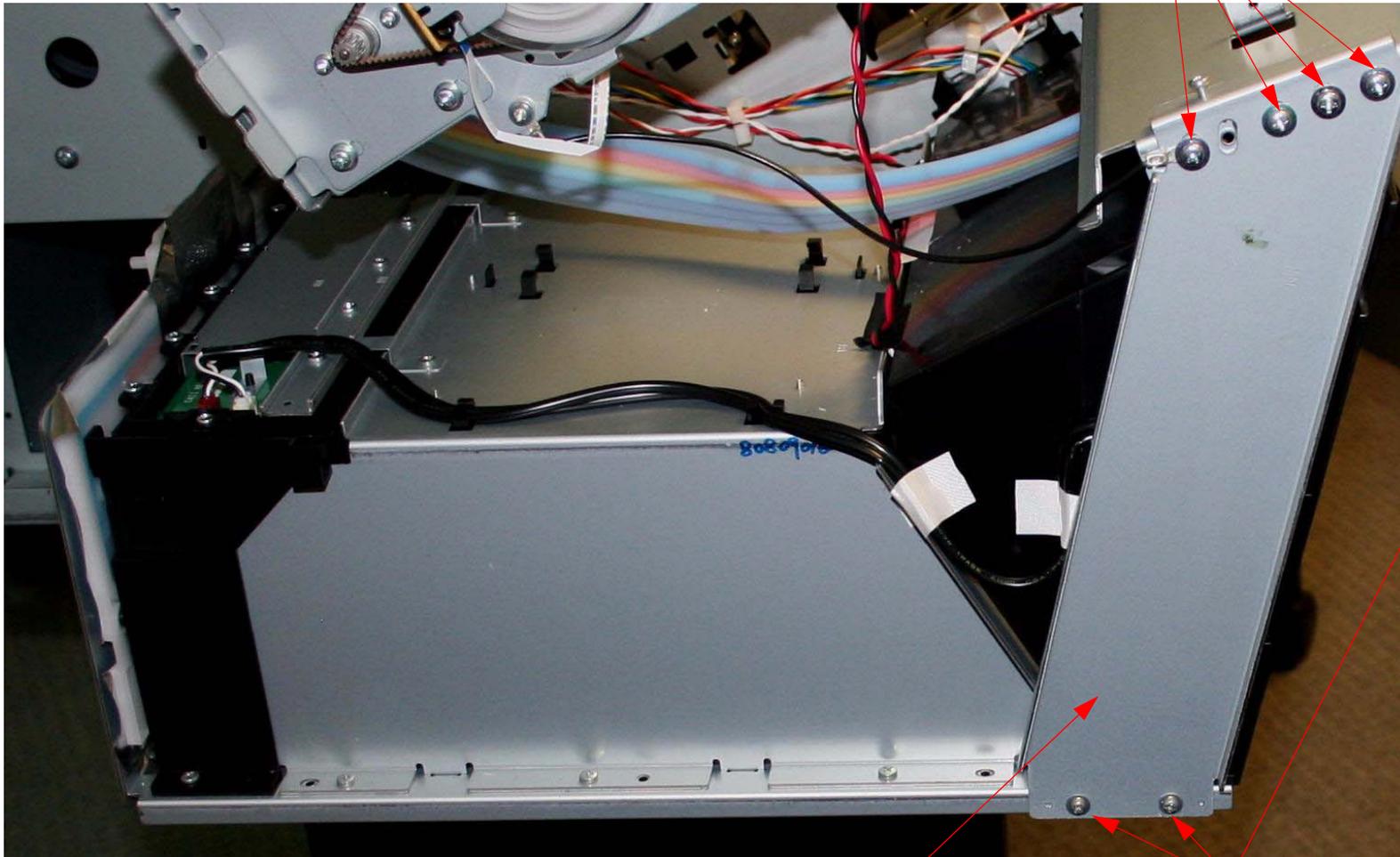
9. Remove **3 Screws**.



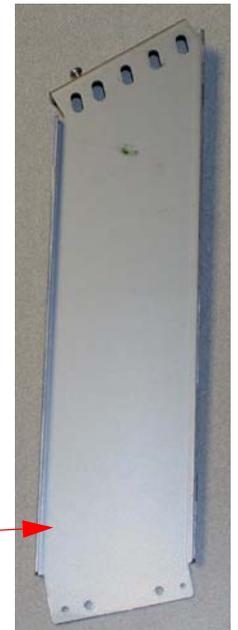
Remove **3 Screws**.

10. Remove **Six Screws** and the **Left Ink Bay Bracket**.

1. Remove **4 Screws**.



2. Remove **2 Screws**.



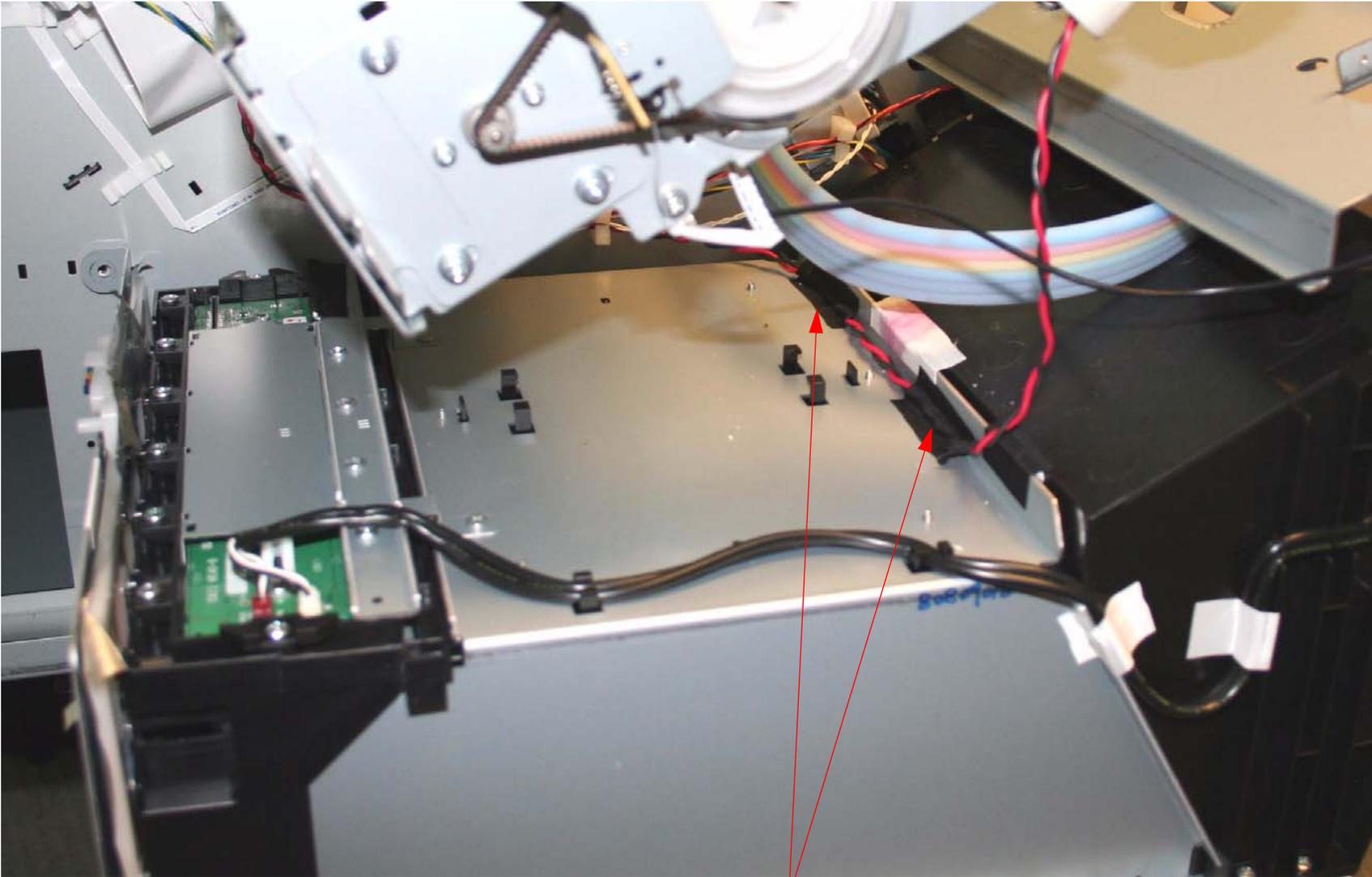
3. Remove **Bracket**.

11. Remove **1 Screw**.



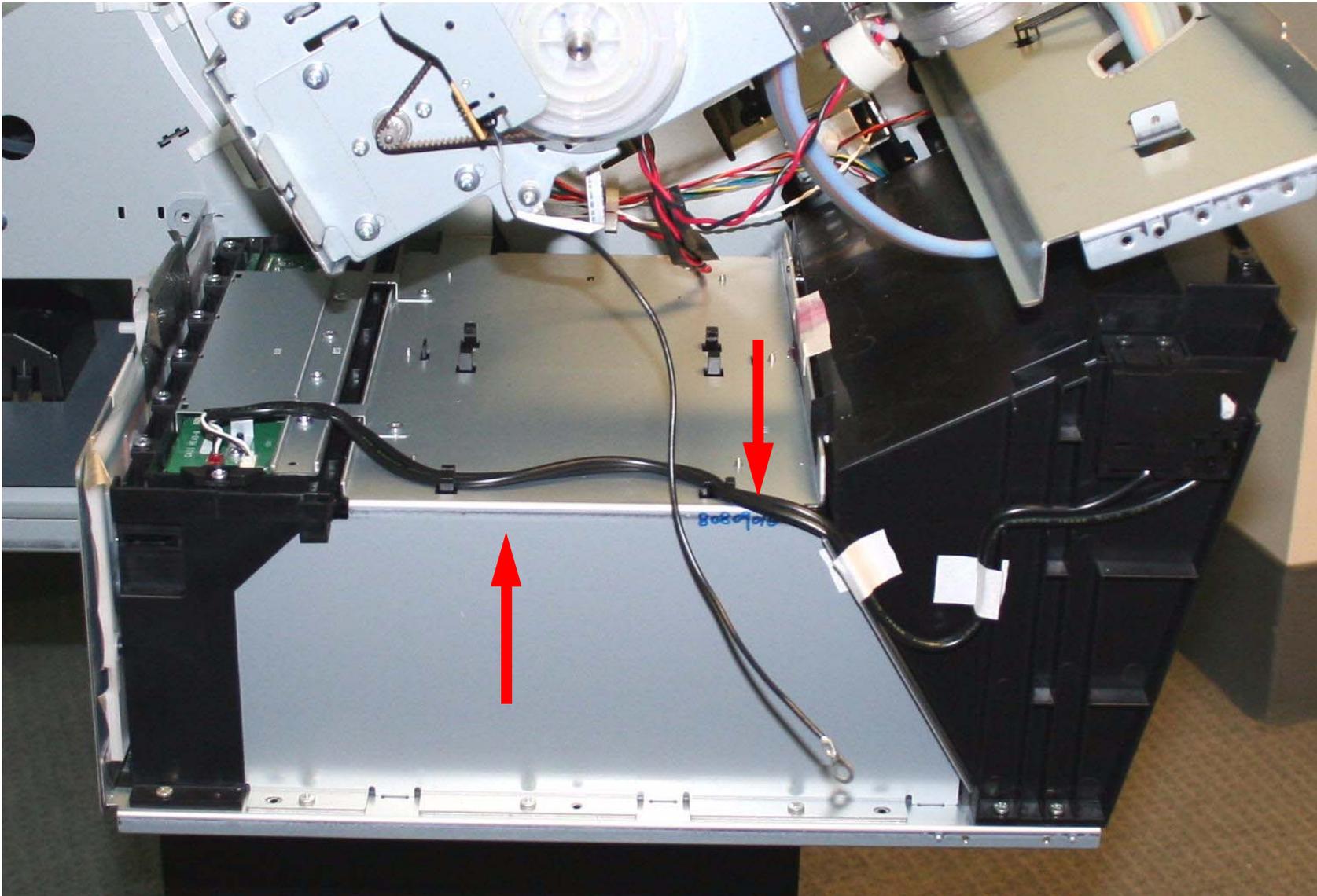
(View of the bottom) Remove **1 Screw**.

12. Free the **Carriage Motor Cable** from the **Tape** connecting it to the **Left Ink Bay**.



Free the **Tape**.

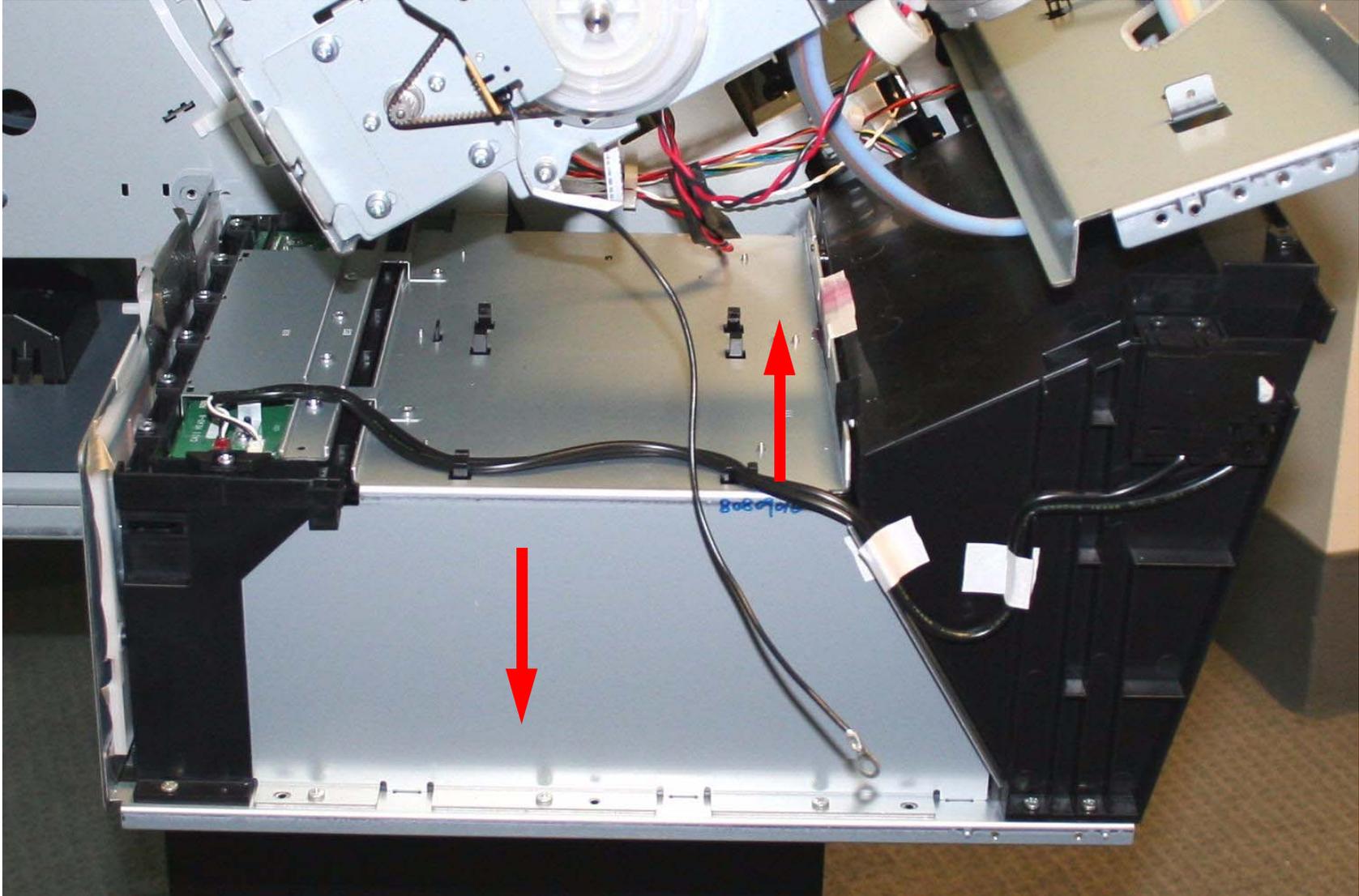
13. Remove the **Left Ink Bay**.



Lift up and out to remove the **Left Ink Bay**.

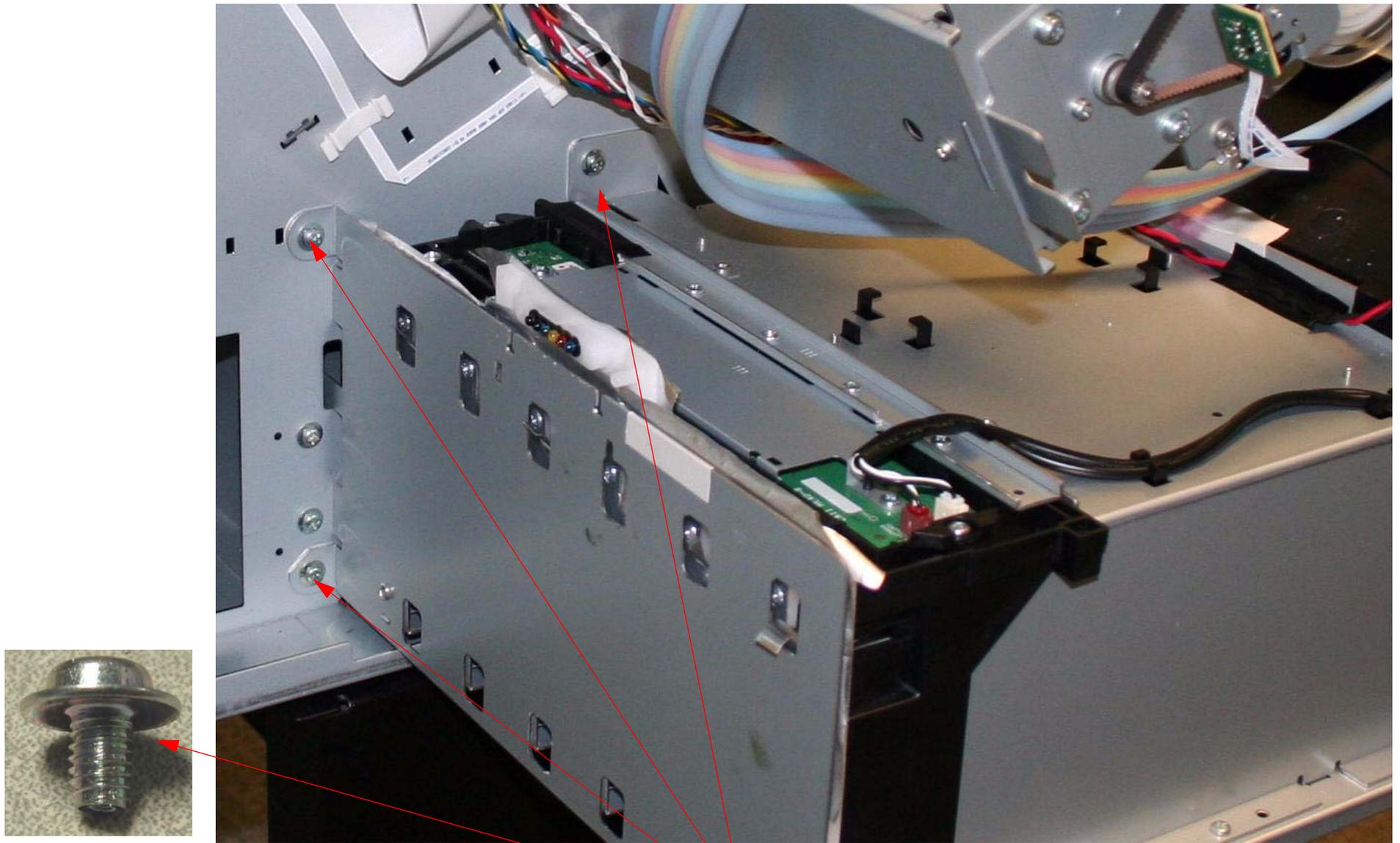
Ink Bay Installation (Left)

1. Place the **Left Ink Bay** in position.



Place the **Left Ink Bay** in position.

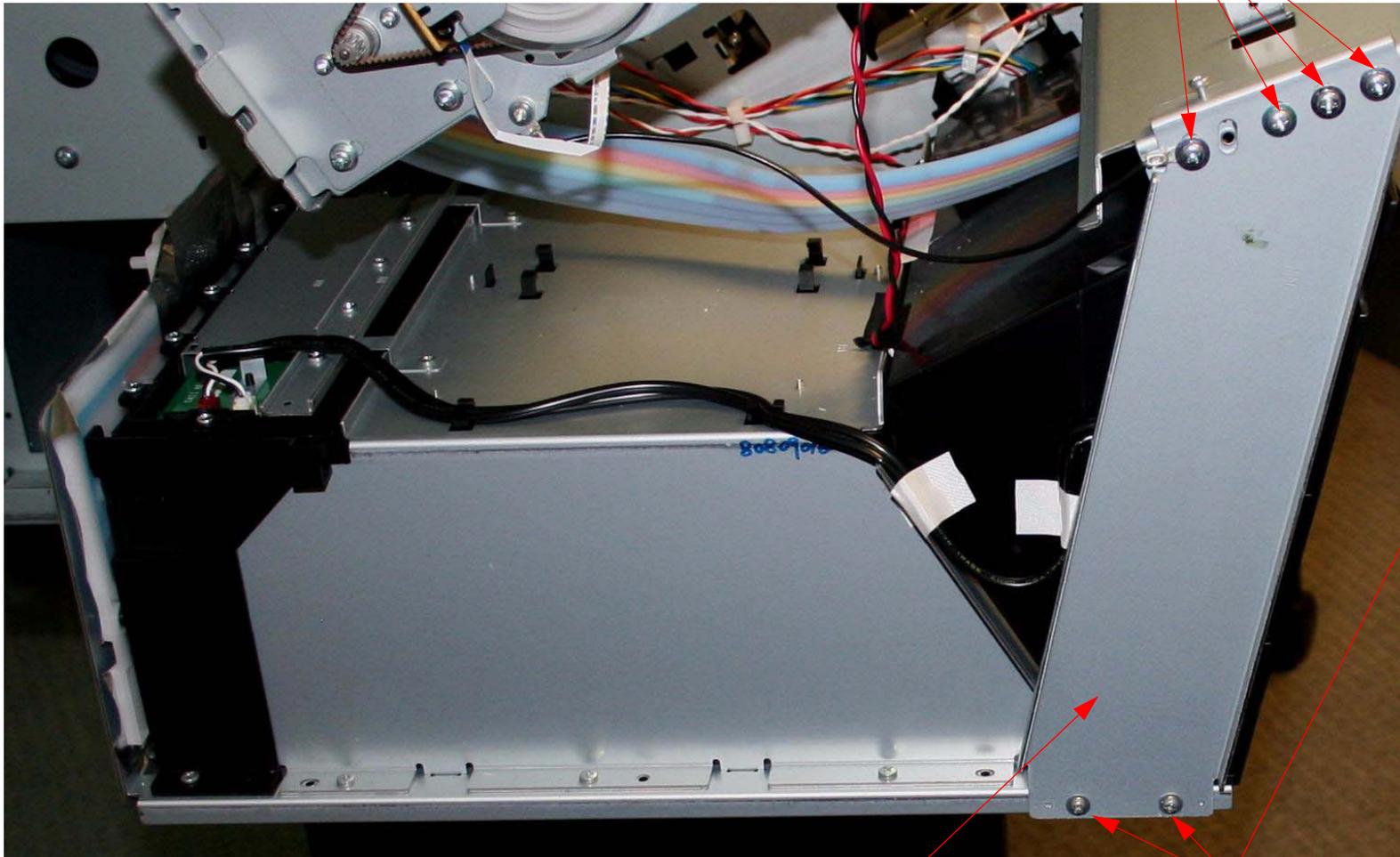
2. Install **3 Screws**.



Install **3 Screws**.

3. Install **Six Screws** and the **Left Ink Bay Bracket**.

2. Install **4 Screws**.



3. Install **2 Screws**.



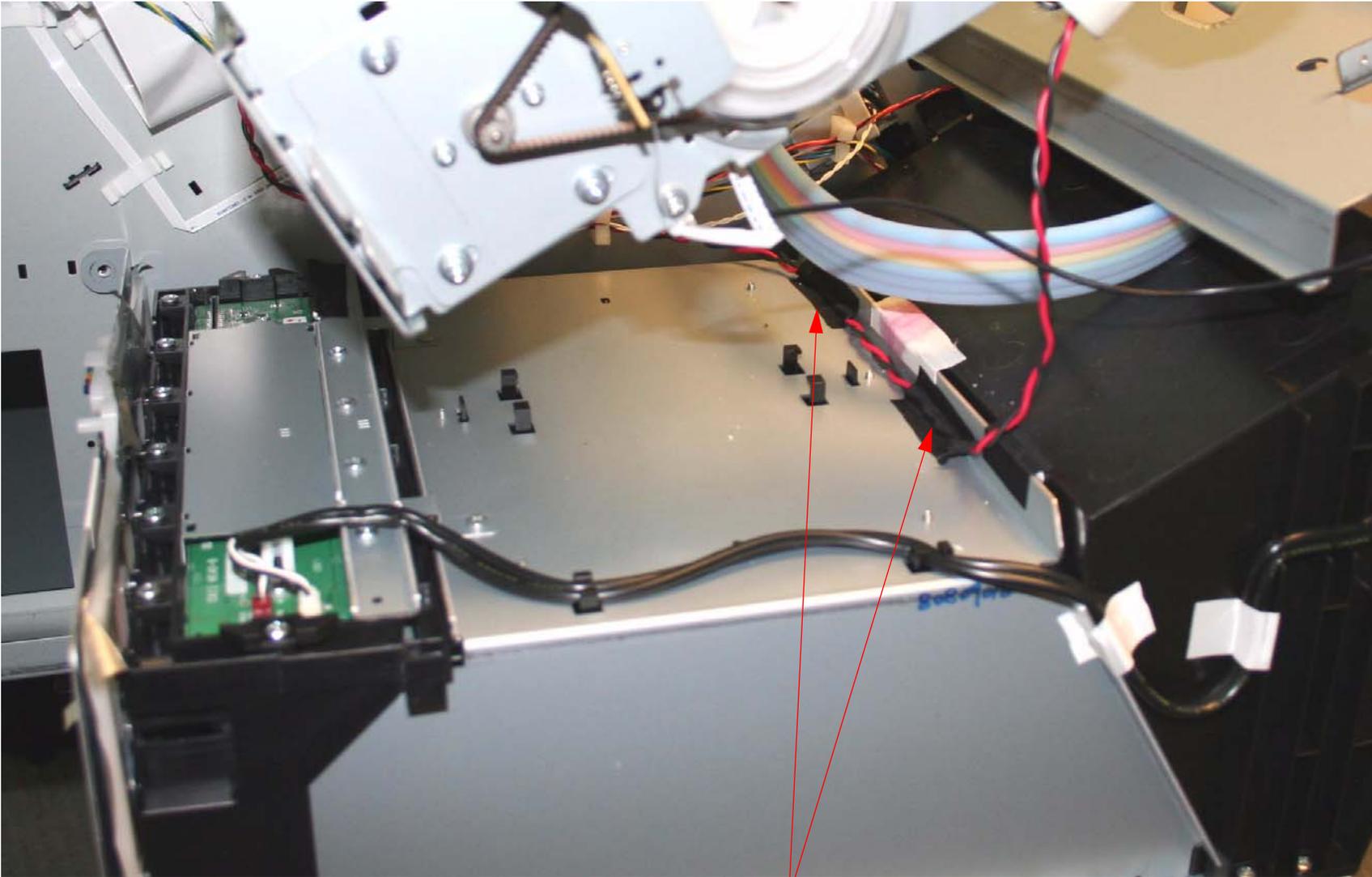
2. Place the **Bracket**.

4. Install **1 Screw**.



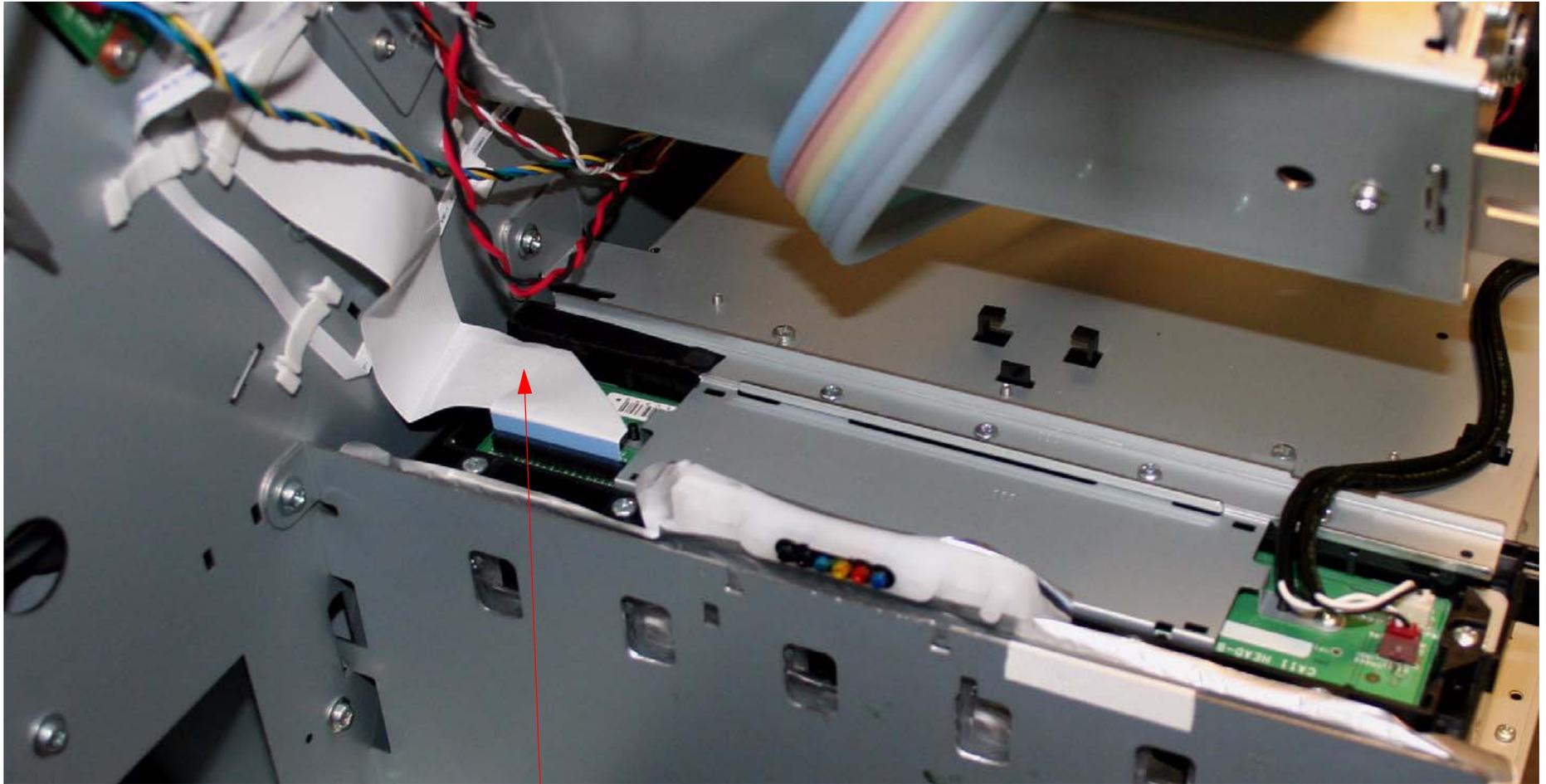
(View of the bottom) Install **1 Screw**.

5. Re-tape the **Carriage Motor Cable**, connecting it to the **Left Ink Bay**.



Re-tape the **Cables**.

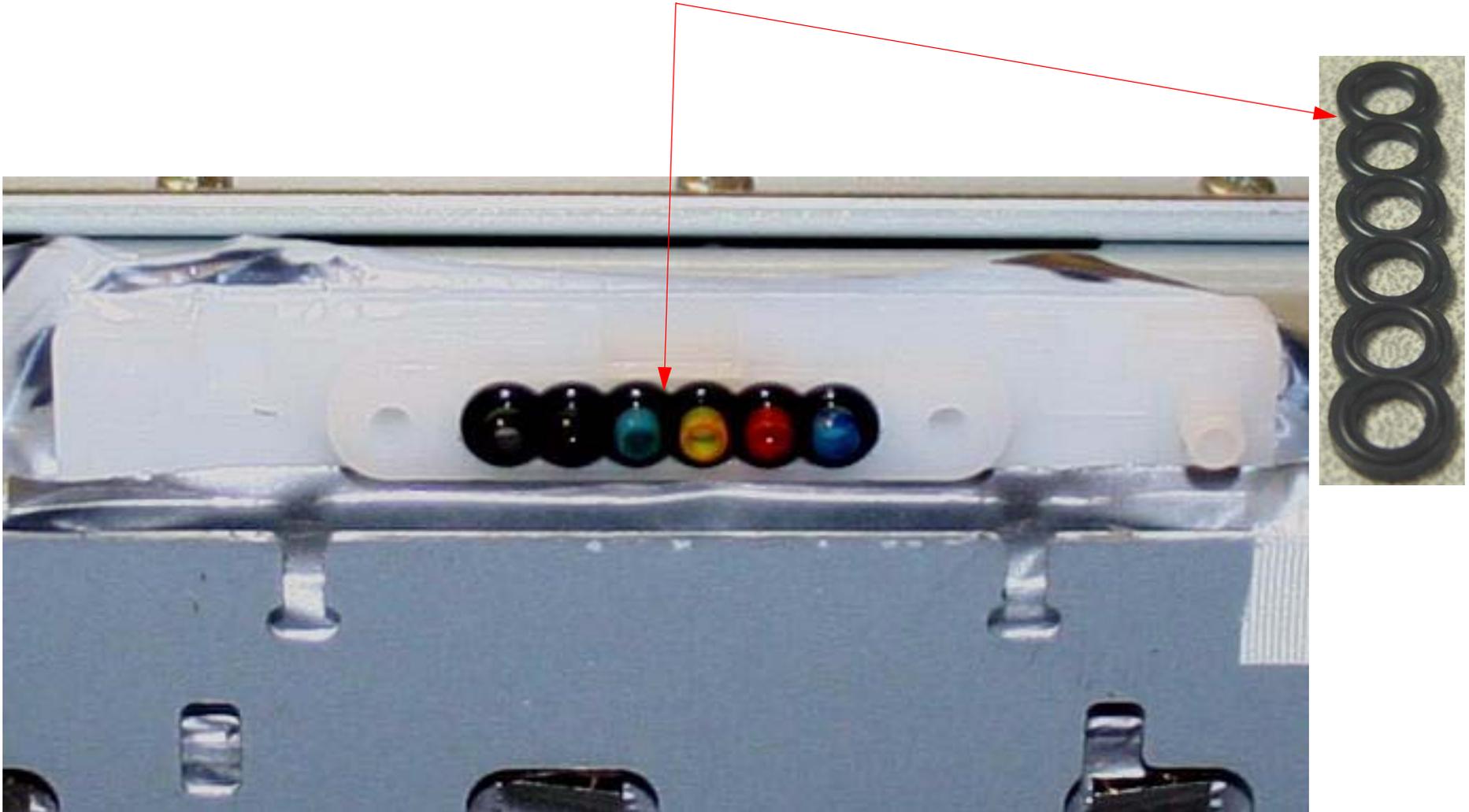
6. Connect the **Sub Board Cable**.



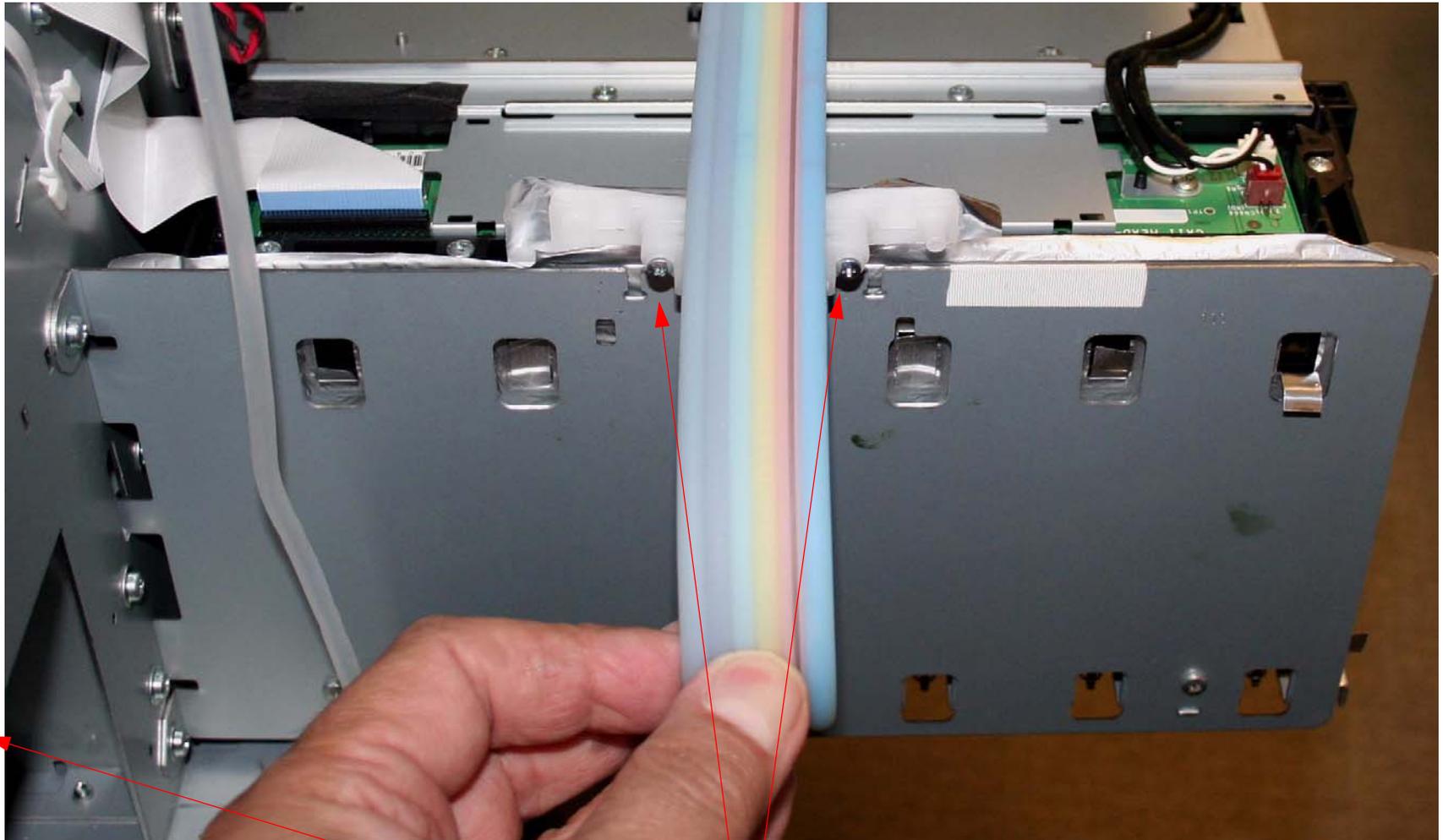
Plug in the **Sub Board Cable**.

7. Ensure that the ***Ink Bay O-Ring Chain*** is installed.

If replacing the Ink Bay, ensure that the O-Ring Chain is transferred to the New Ink Bay.

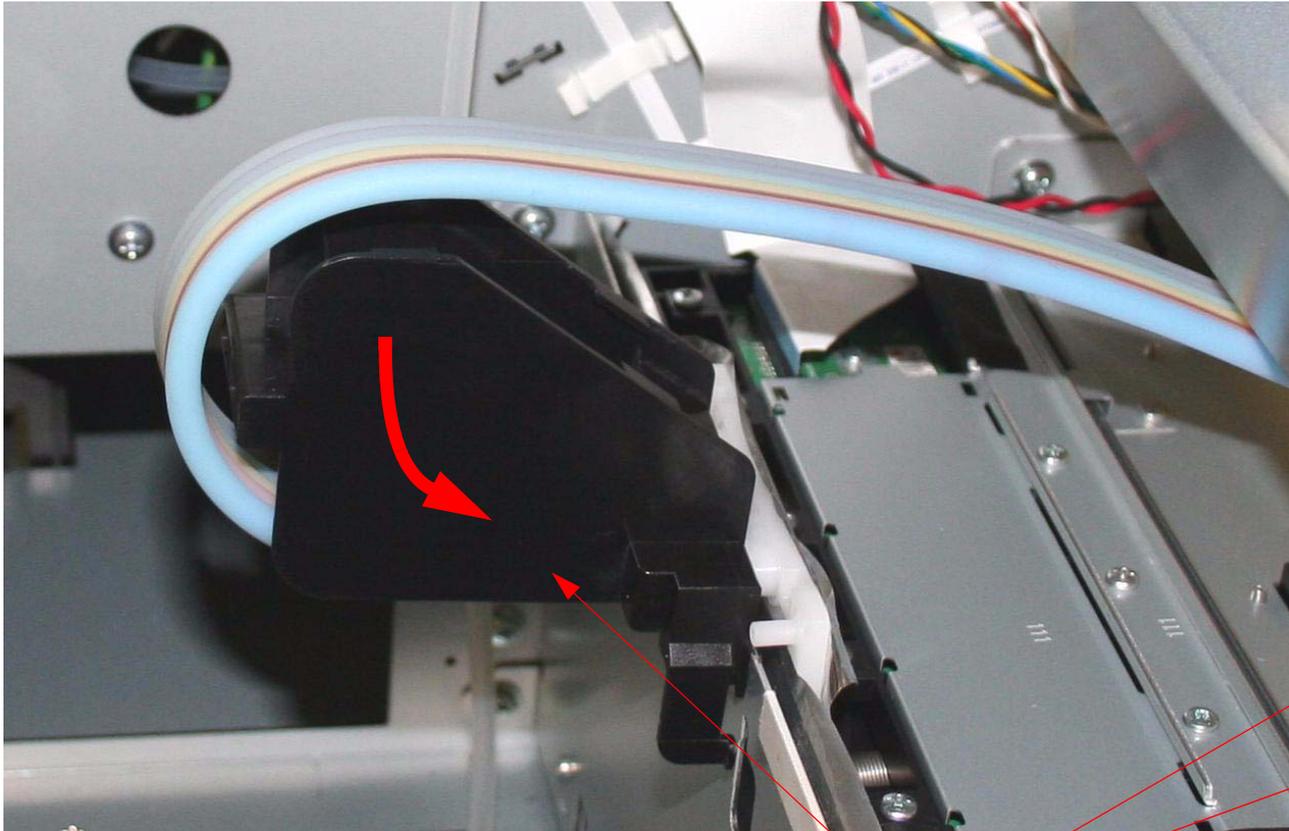


8. Connect the ***Ink Tubes***.



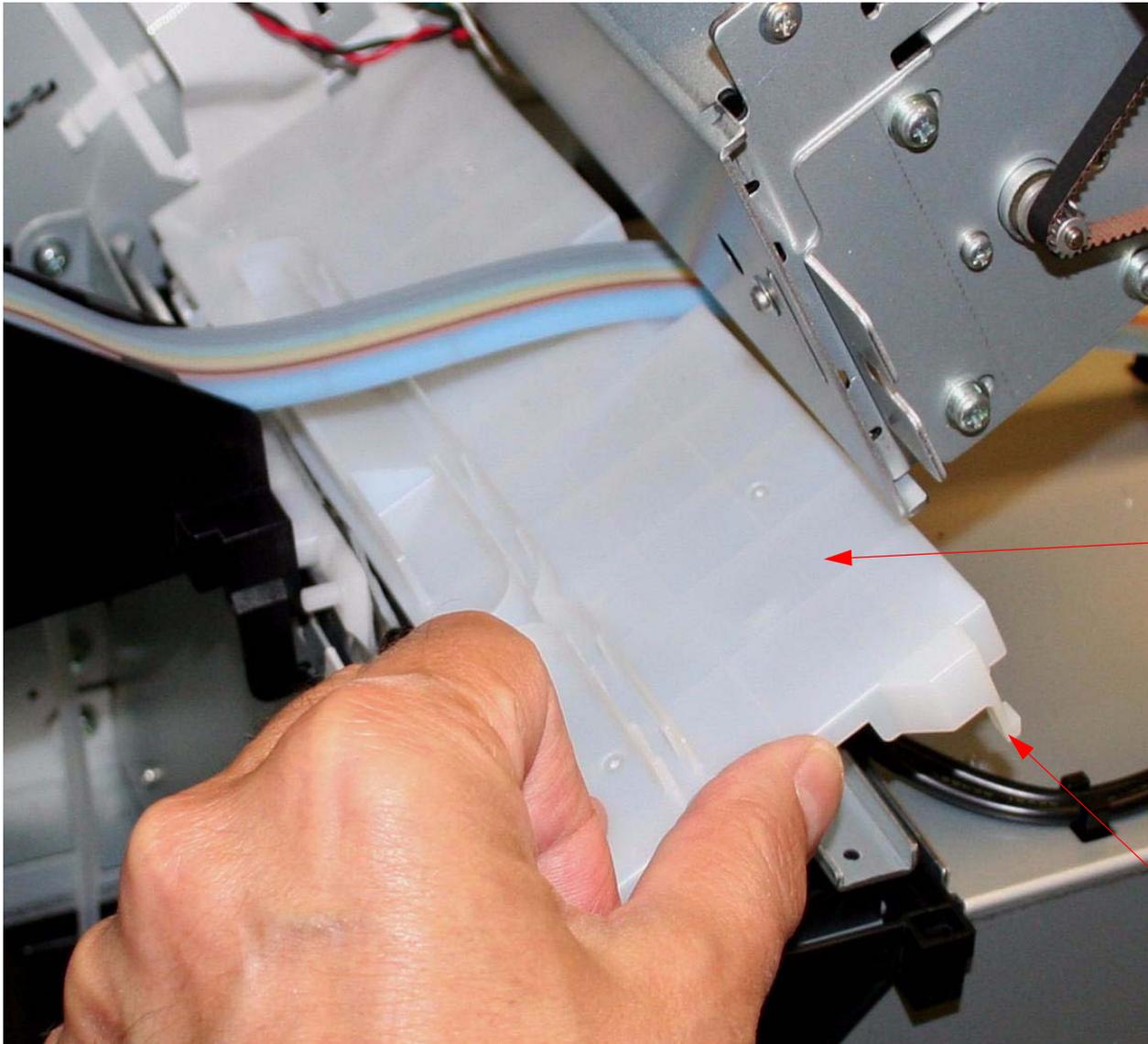
Connect the ***Tubes***, and install ***2 Screws***.

9. Install the *Ink Tube Guide*.



1. Squeeze in to release **2 Interlocks**, and rotate the **Ink Tube Guide** into position.
2. Place the **Ink Tubes** under the **Guides**.

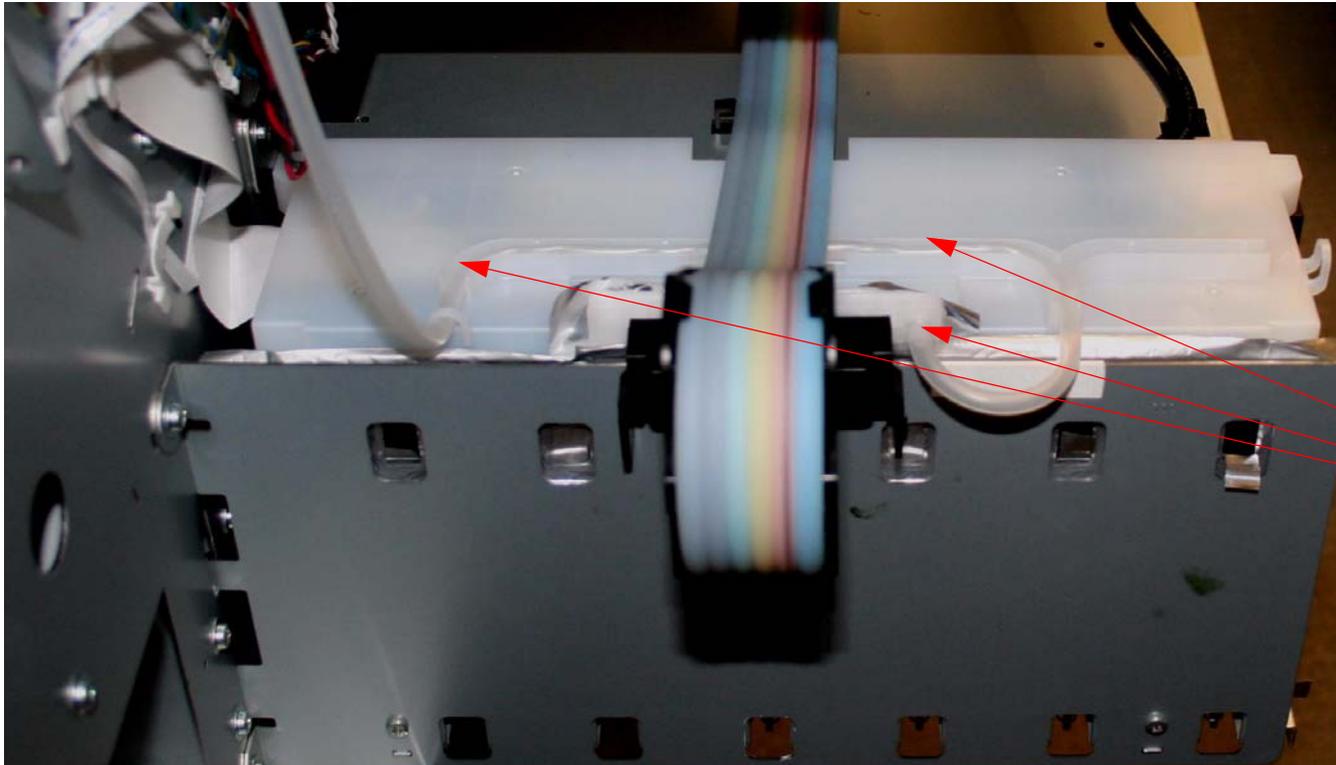
10. Install the **Sub Board Cover**.



1. Place the **Sub Board Cover**.

2. Engage the **Interlocks**.

11. Connect the ***Air Pressure Line***.



Connect the ***Air Pressure Line***, and place it in the ***Guides***.

12. Perform the ***Ink Holder Assy Adjustment***.

13. Install ***Ink Cartridges*** and turn on the ***Printer***.

Note: *If the Printer does not start to charge (prime) turn on the Ink Charge Flag. Follow the directions in the Initial Ink Charge chapter in the Adjustment Section.*

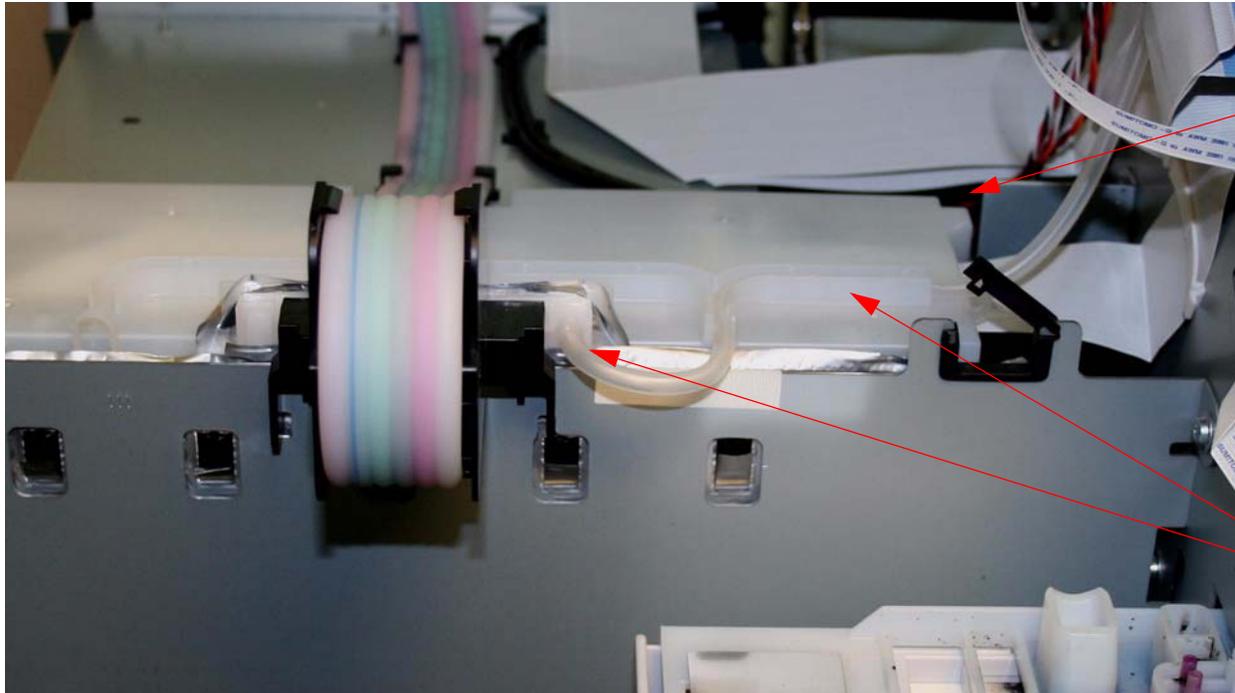
14. Install the ***Side Cover (Left)***.

Ink Bay (Right) Removal

1. Drain the ink from the **Printer** following the directions found in the Ink Draining Procedure chapter located in the reference section.

Note: *The Ink Draining procedure uses air pressure to force the Ink out of the Ink Lines through the Print Head. Because of the nature of the hardware the ink in the Lines is replaced by pressurized air. **Opening the Ink System will result in the escape of the pressurized air, and a small amount of "ink froth". Have paper towels ready to capture the ink.***

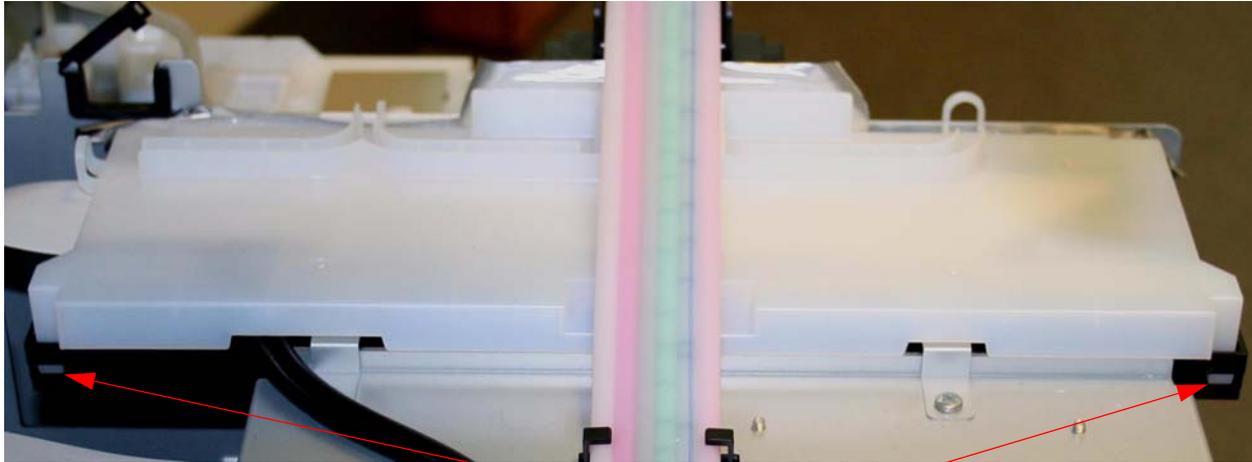
2. Remove the **Side Cover (Right)**.
3. Remove the **Cleaning Unit** (optional).
4. Disconnect the **Air Pressure Line**.



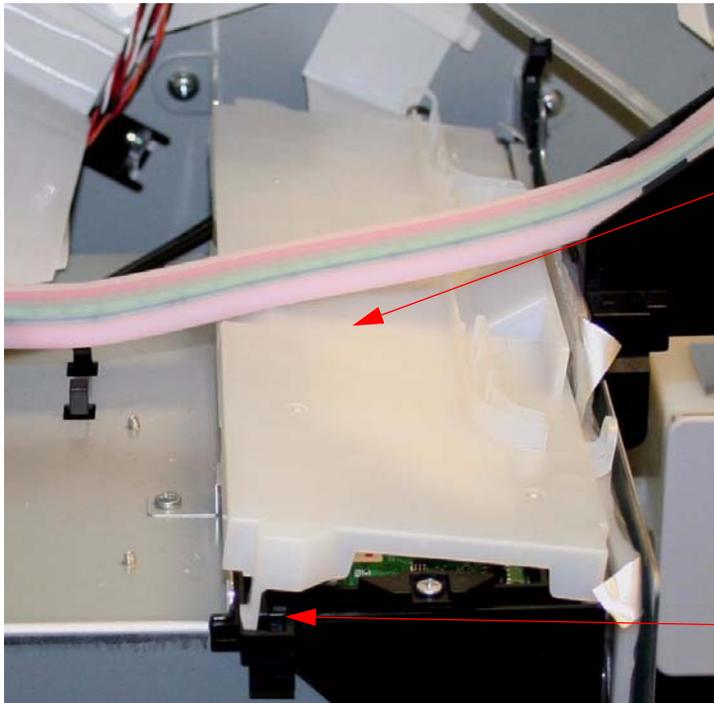
View from the back.

Disconnect the **Air Pressure Line**, and free it from the **Guide**.

5. Remove the **Sub Board Cover**.



1. (View from the front) Release **2 Interlocks**.

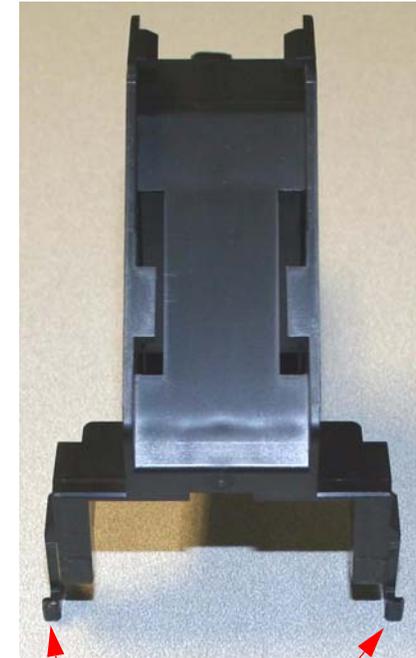
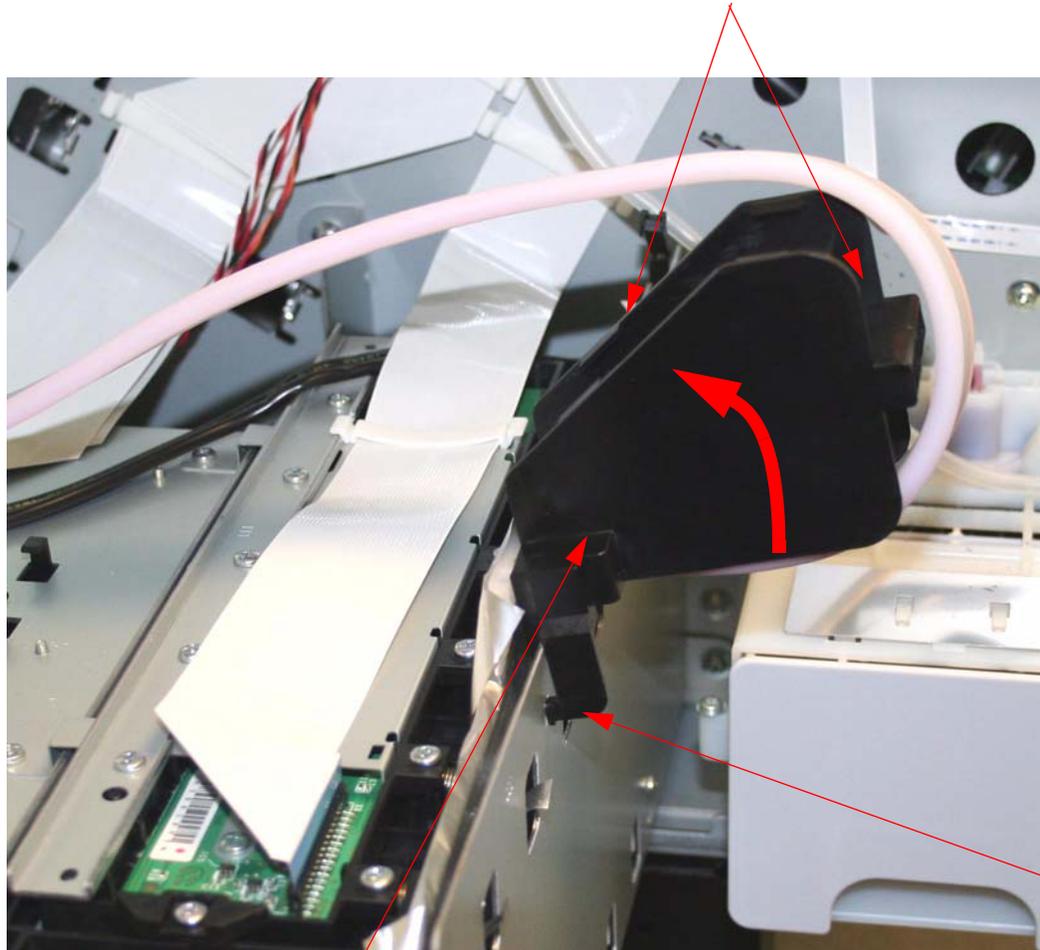


2. Lift off the **Sub Board Cover**.

Released **Interlock**.

6. Remove the ***Ink Tube Guide***.

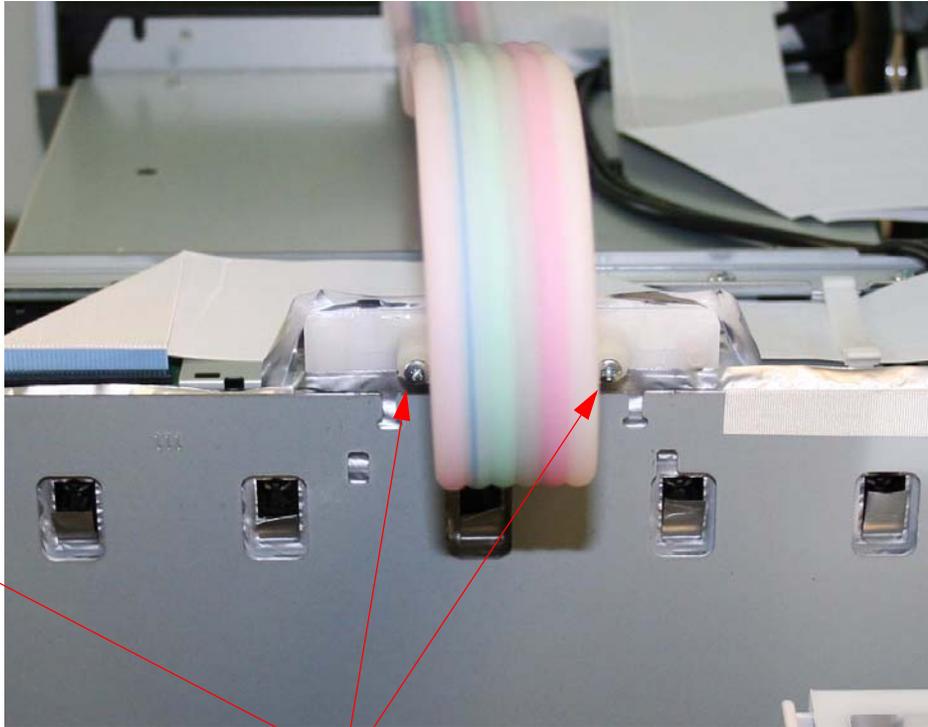
1. Free the ***Ink Tubes*** from the ***Ink Tube Guide***.



2. Squeeze in to release **2 *Interlocks***.

3. Rotate the ***Ink Tube Guide*** up to remove.

7. Disconnect the *Ink Tubes*.



1. Remove **2 Screws** and disconnect the **Tubes**.

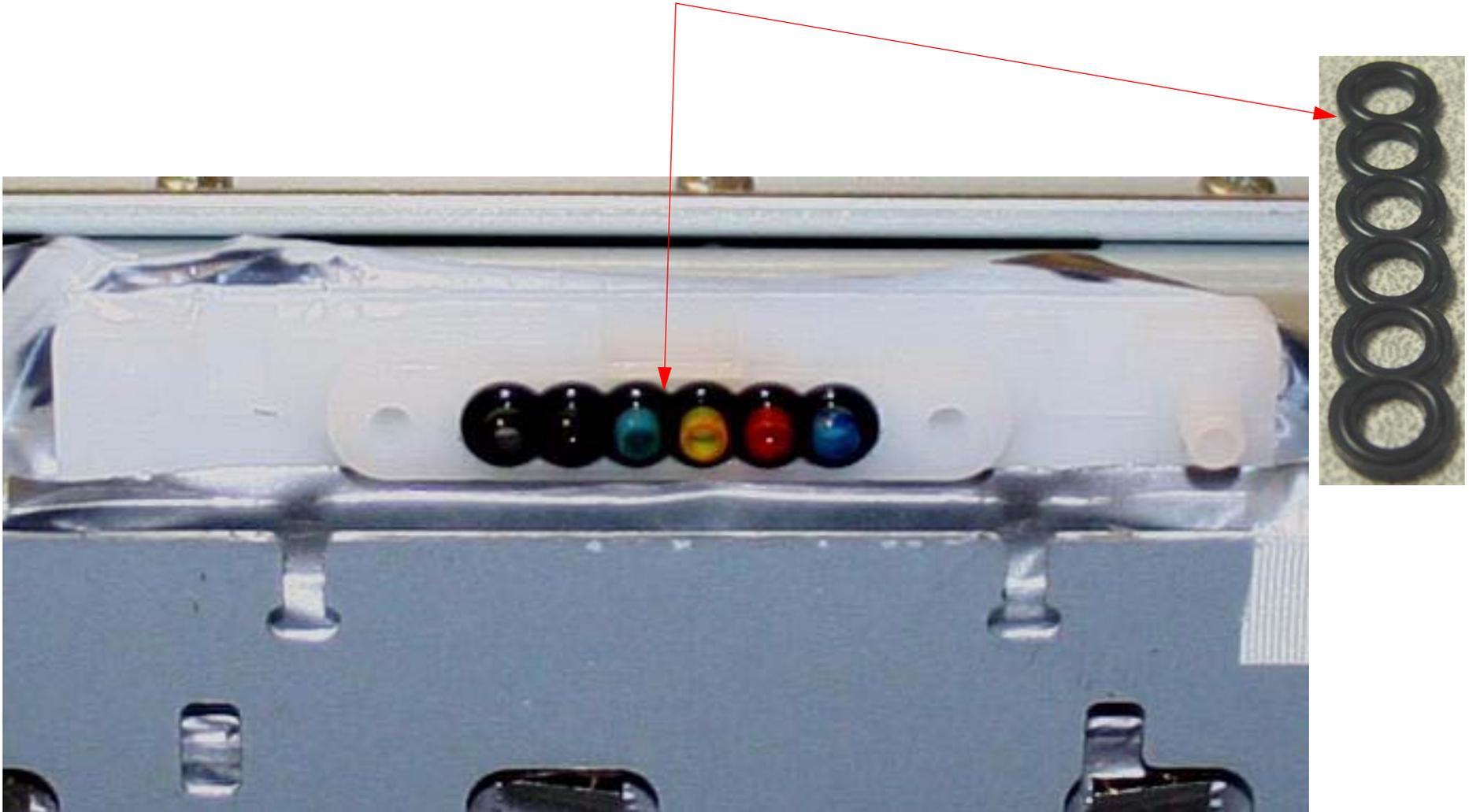
Note: *The Ink Draining procedure uses air pressure to force the Ink out of the Ink Lines through the Print Head. Because of the nature of the hardware the ink in the Lines is replaced by pressurized air. **Opening the Ink System will result in the escape of the pressurized air, and a small amount of “ink froth”.** Have paper towels ready to capture the ink.*

2. Wrap the **Tubes**.

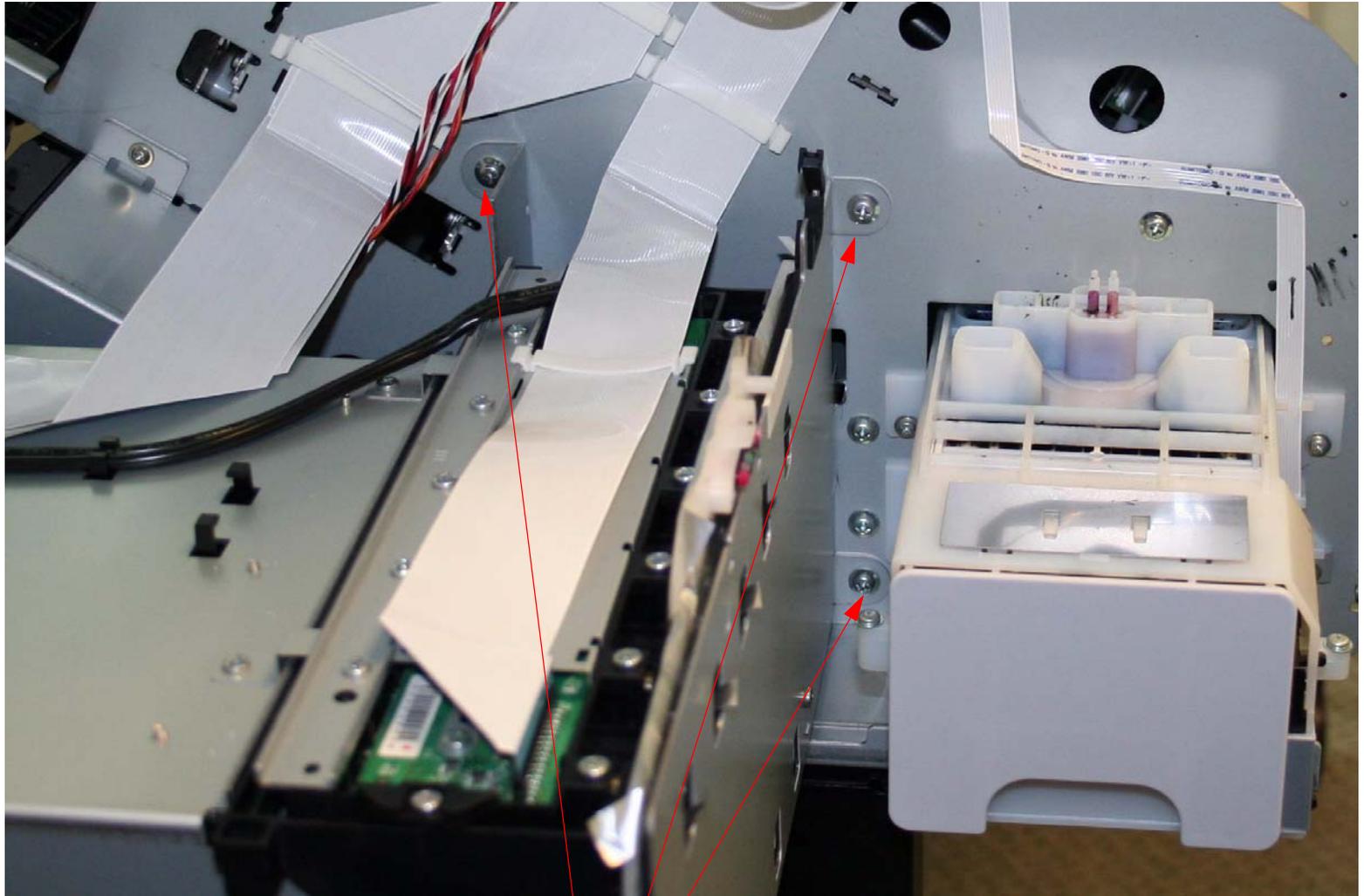


8. **Re-assembly tip.**

If replacing the **Ink Bay**, ensure that the **O-Ring Chain** is transferred to the **New Ink Bay**.



9. Remove **3 Screws**.

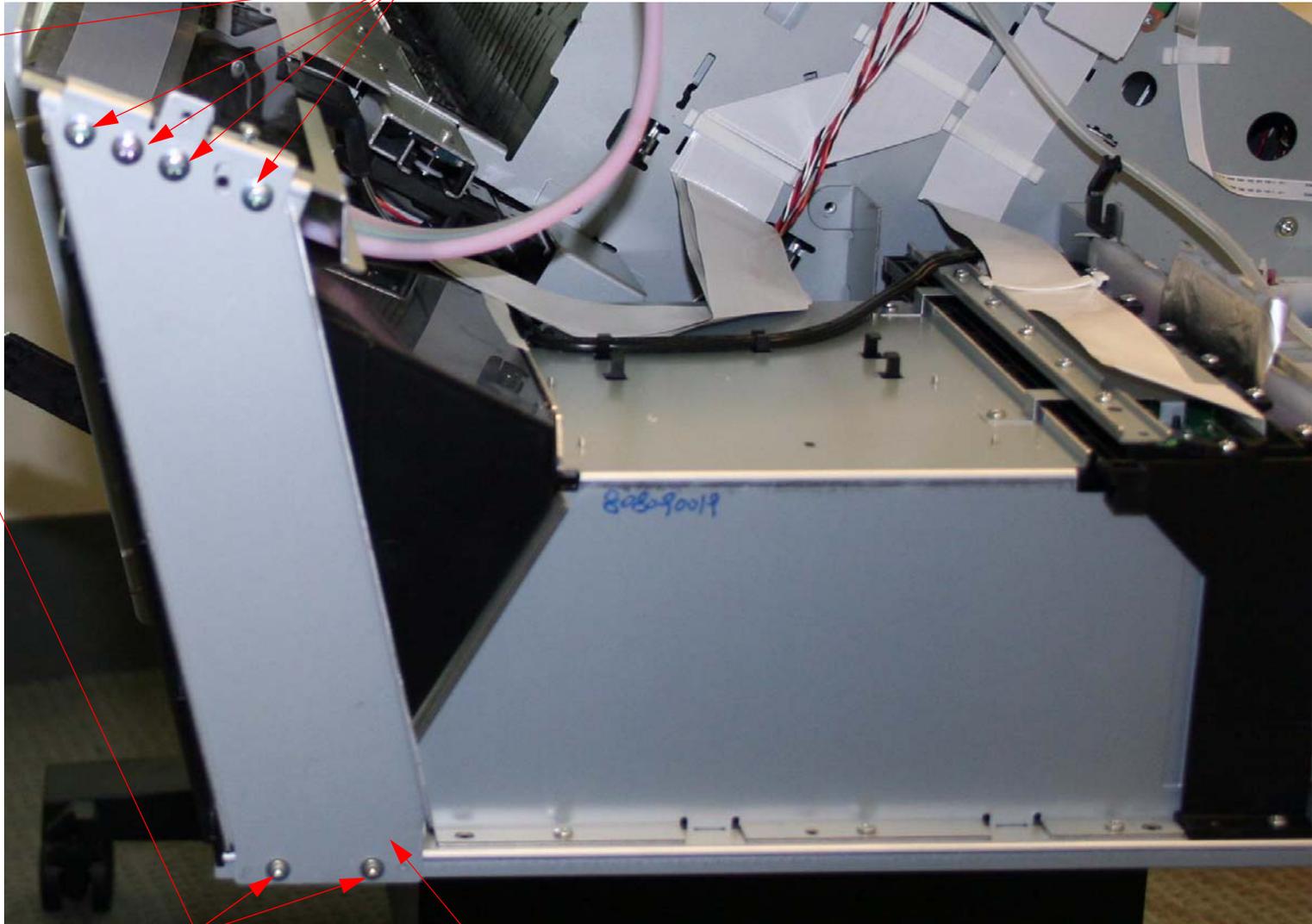


Remove **3 Screws**.

10. Remove **Six Screws** and the **Right Ink Bay Bracket**.



1. Remove **4 Screws**.



2. Remove **2 Screws**.

3. Remove **Bracket**.

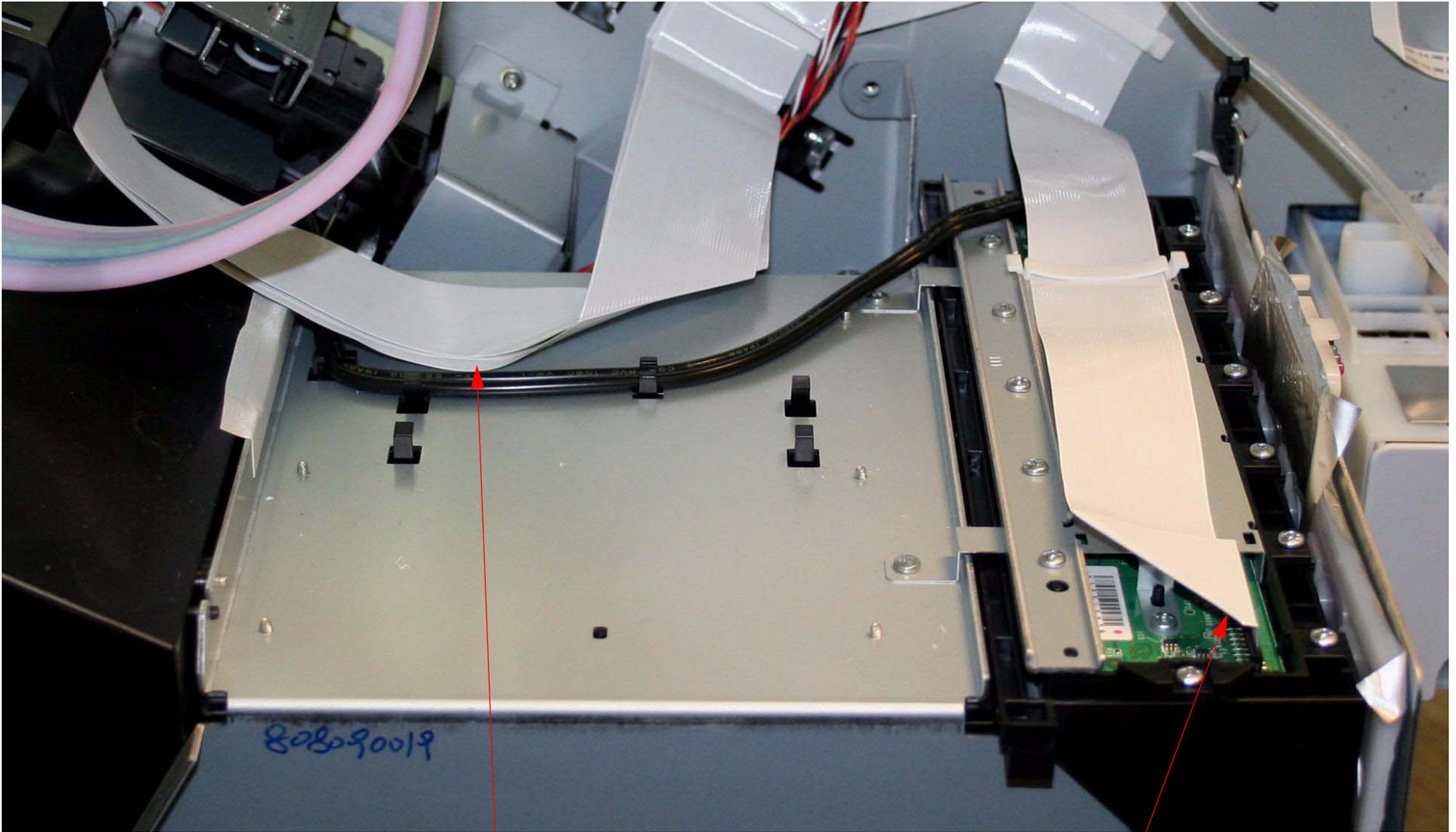


11. Remove **1 Screw**.



(View of the bottom) Remove **1 Screw**.

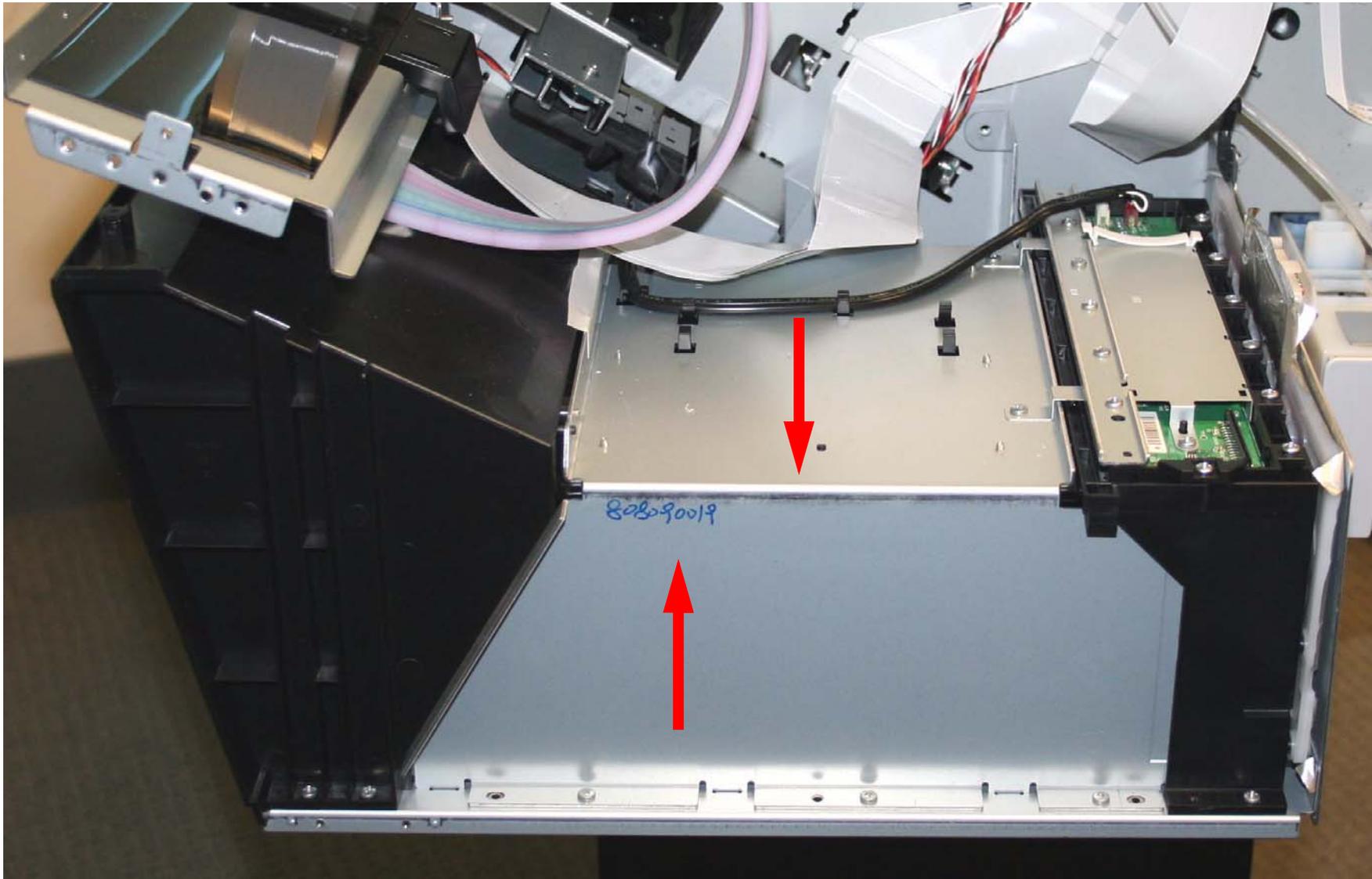
12. Free the **Print Head Cables** and disconnect the **Sub Board Cable**.



1. Free the **Print Head Cables**.

2. Unplug the **Sub Board Cable**.

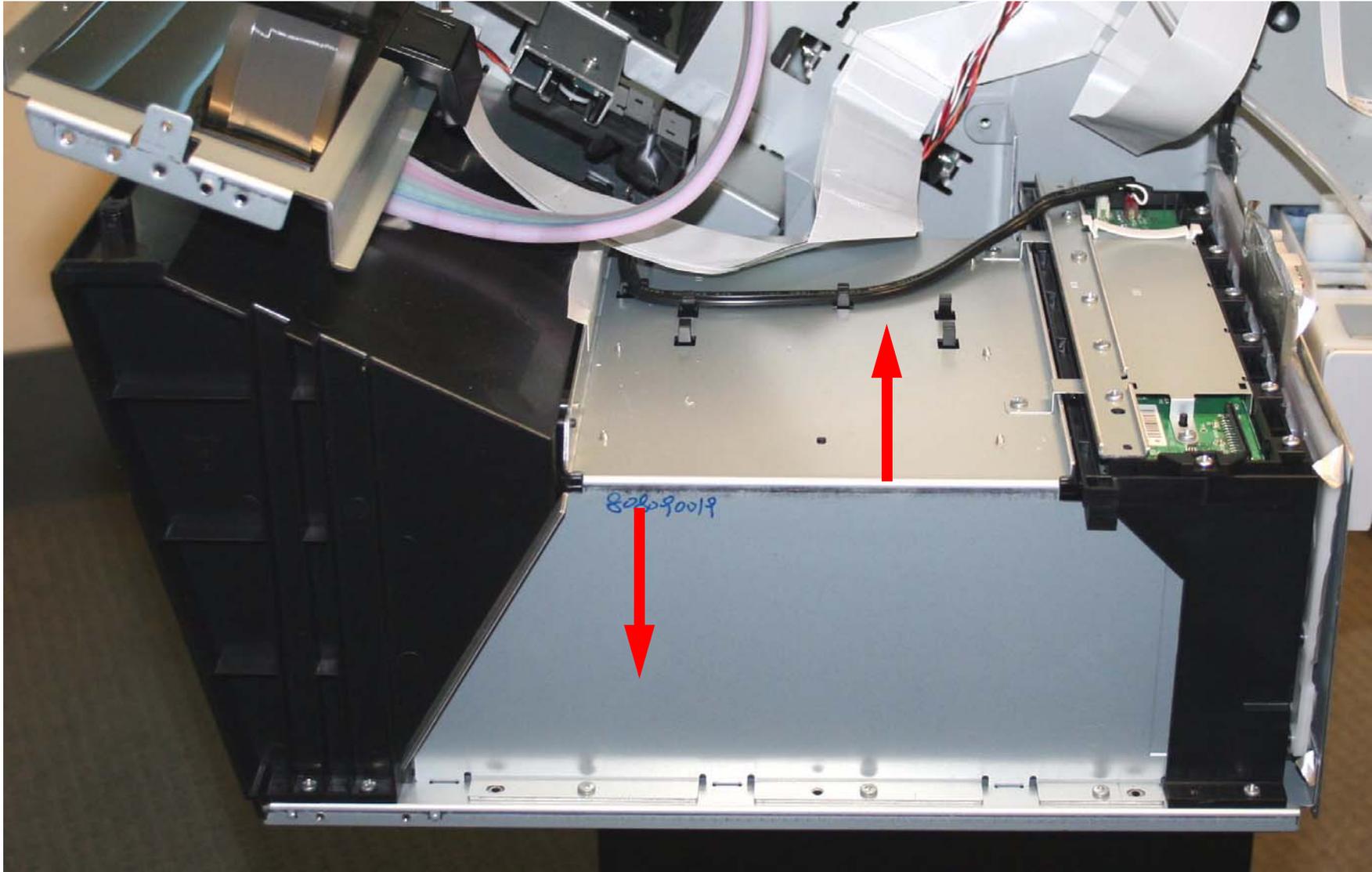
13. Remove the **Right Ink Bay**.



Lift up and out to remove the **Right Ink Bay**.

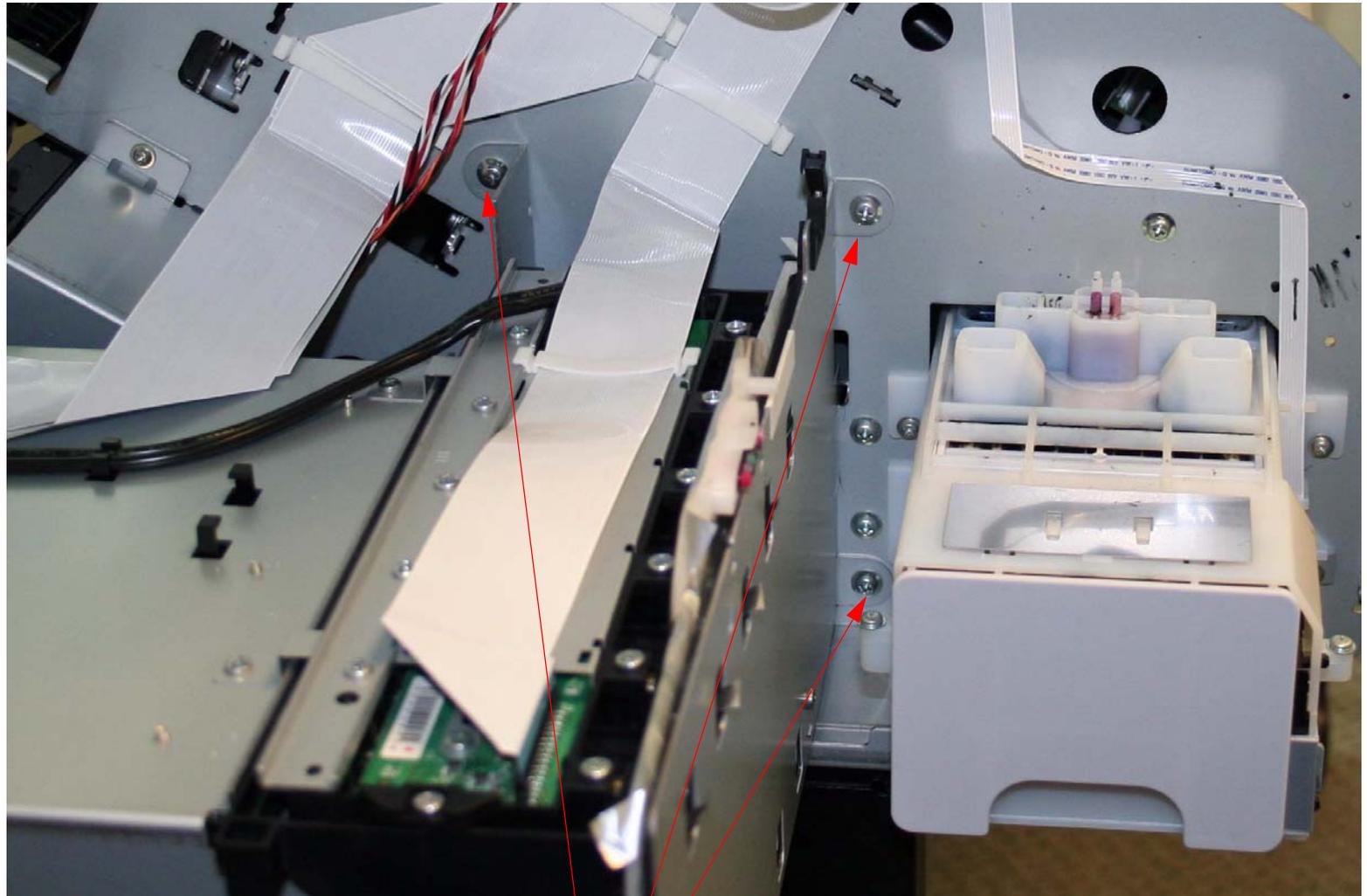
Ink Bay Installation (Right)

1. Install the *Right Ink Bay*.



Place the *Right Ink Bay* in position.

2. Install **3 Screws**.

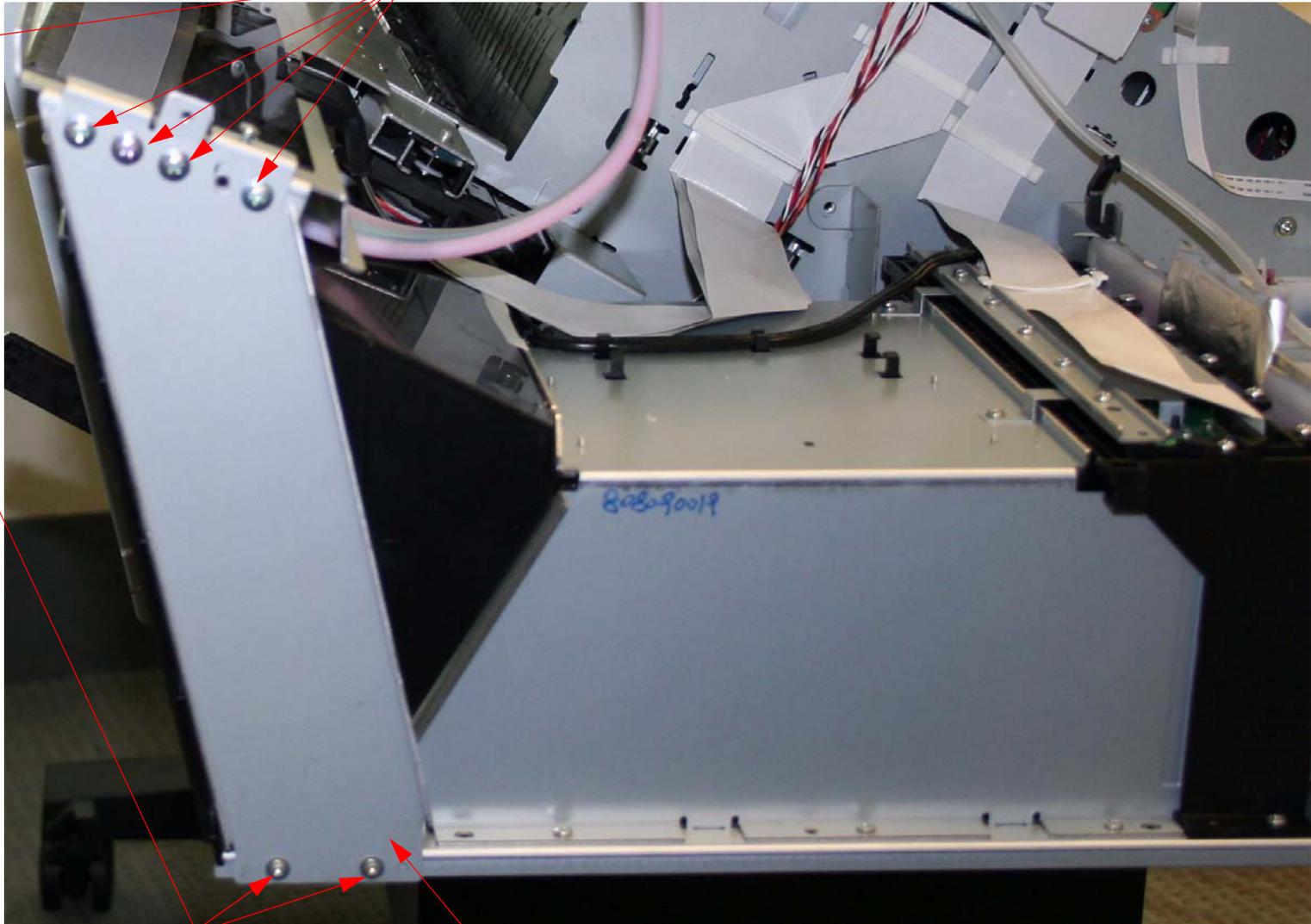


Install **3 Screws**.

3. Install **Six Screws** and the **Right Ink Bay Bracket**.



3. Install **4 Screws**.



2. Install **2 Screws**.

1. Install the **Bracket**.

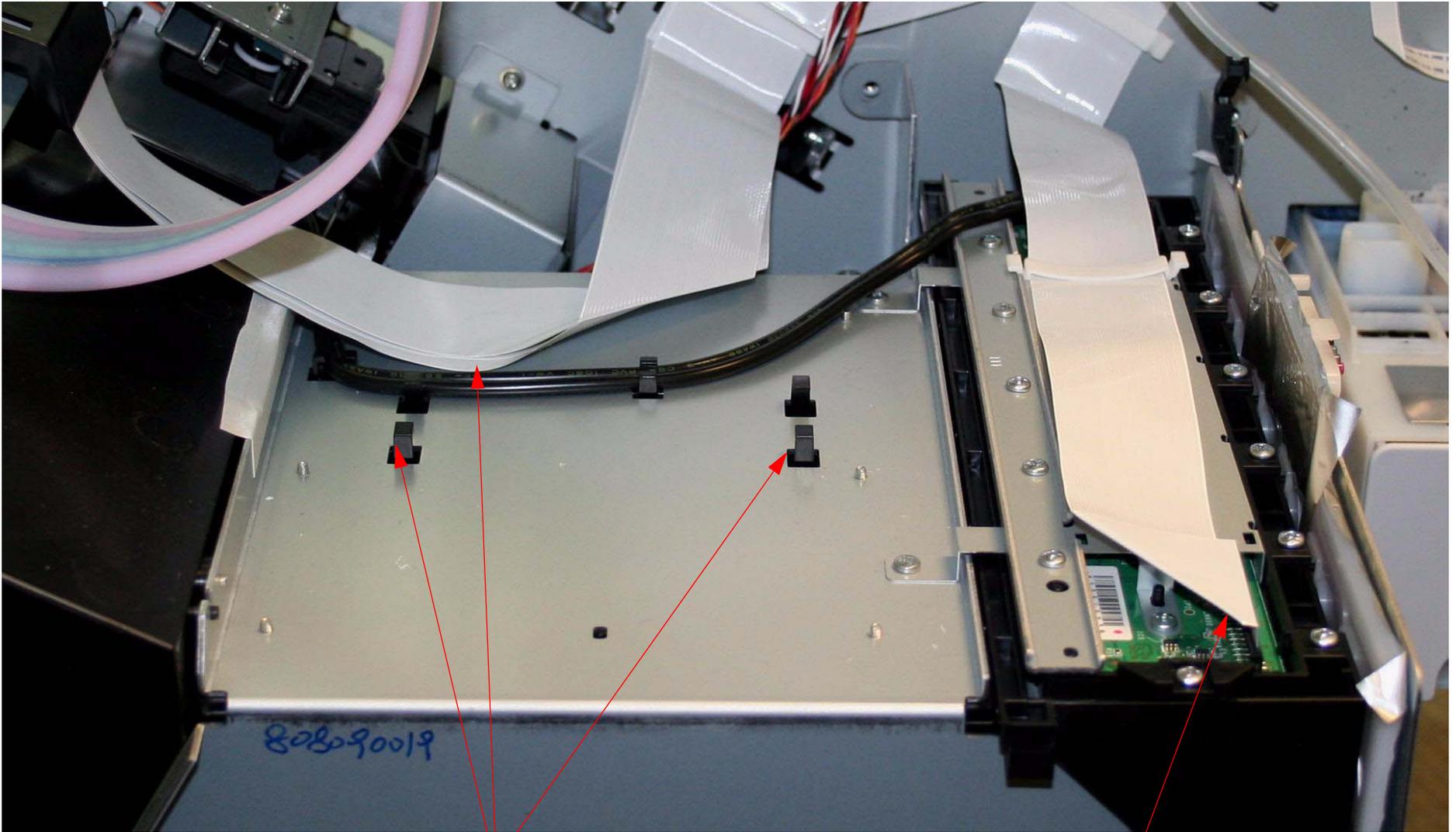


4. Install **1 Screw**.



(View of the bottom) Install **1 Screw**.

5. Fasten the **Print Head Cables** and connect the **Sub Board Cable**.

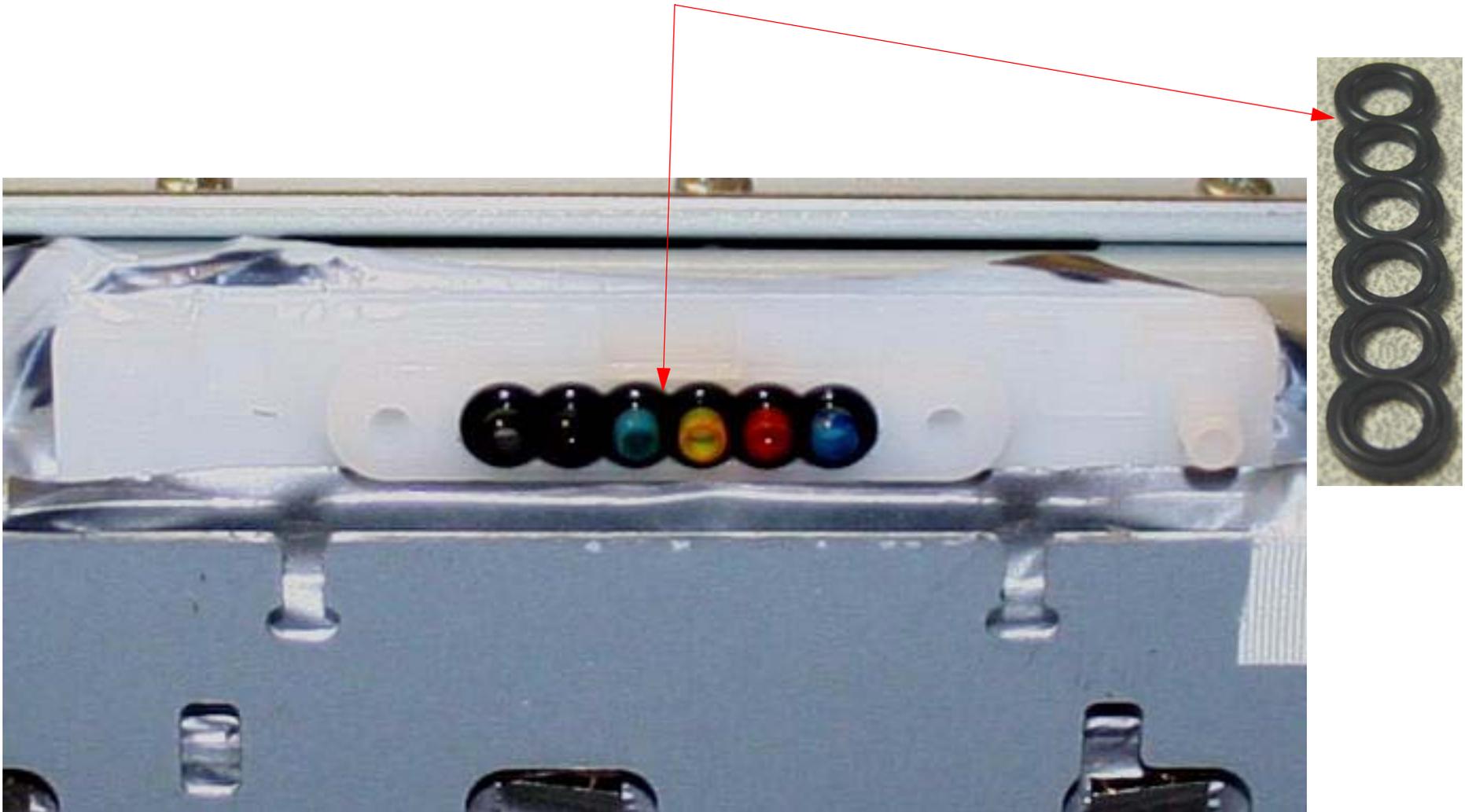


1. Fasten the **Print Head Cables**.

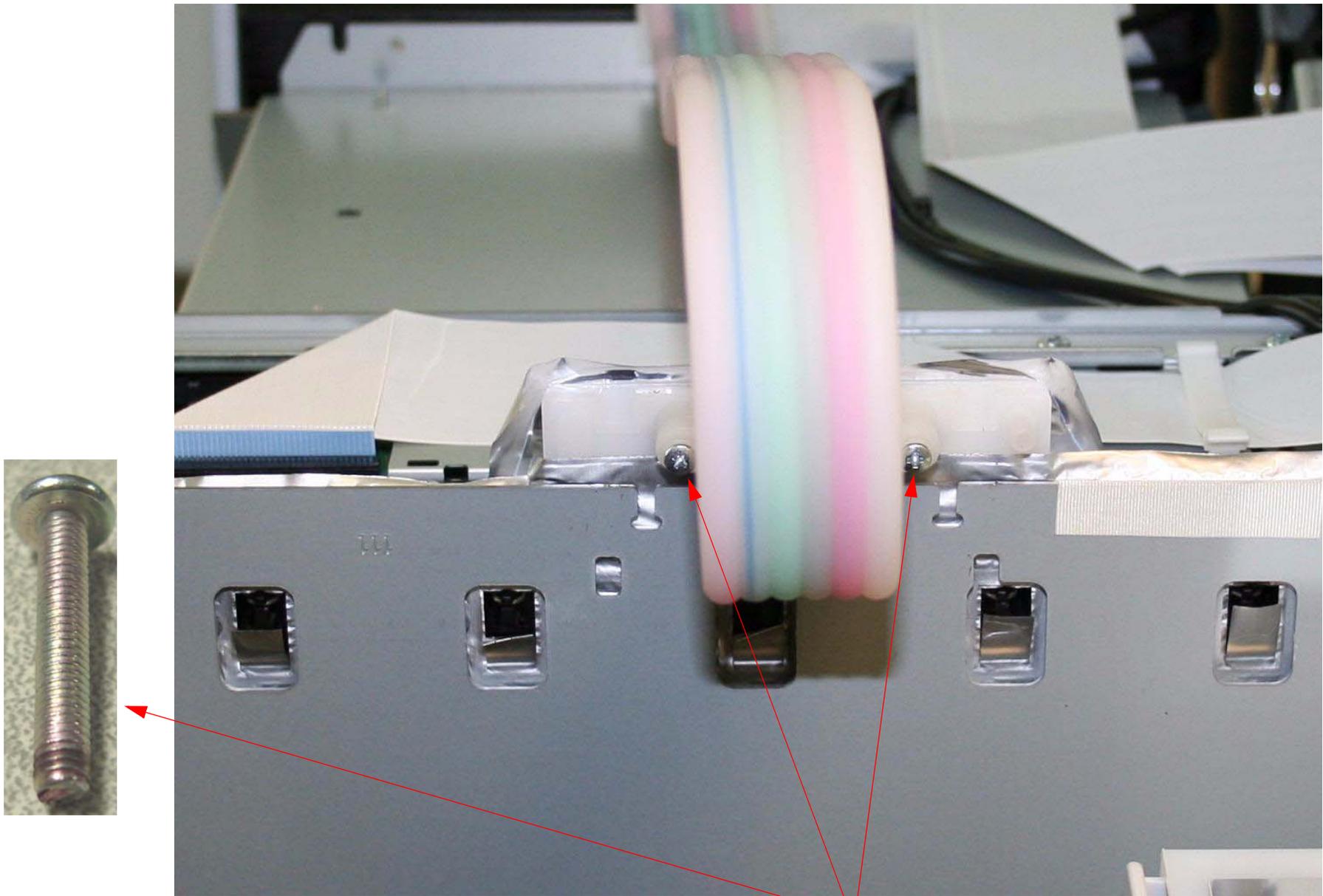
2. Plug in the **Sub Board Cable**.

6. Ensure that the ***Ink Bay O-Ring Chain*** is installed.

If replacing the Ink Bay, ensure that the O-Ring Chain is transferred to the New Ink Bay.

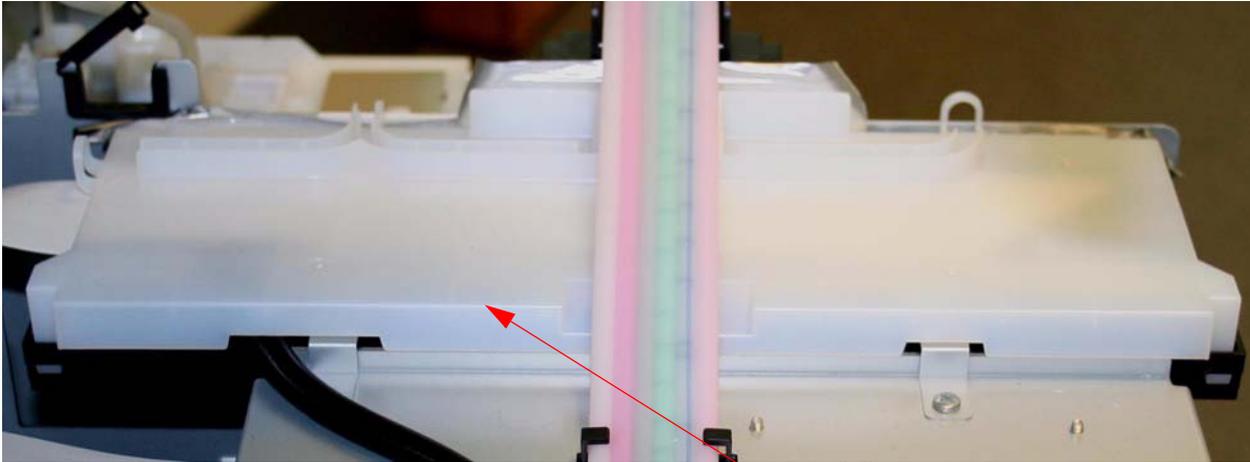


7. Connect the ***Ink Tubes***.

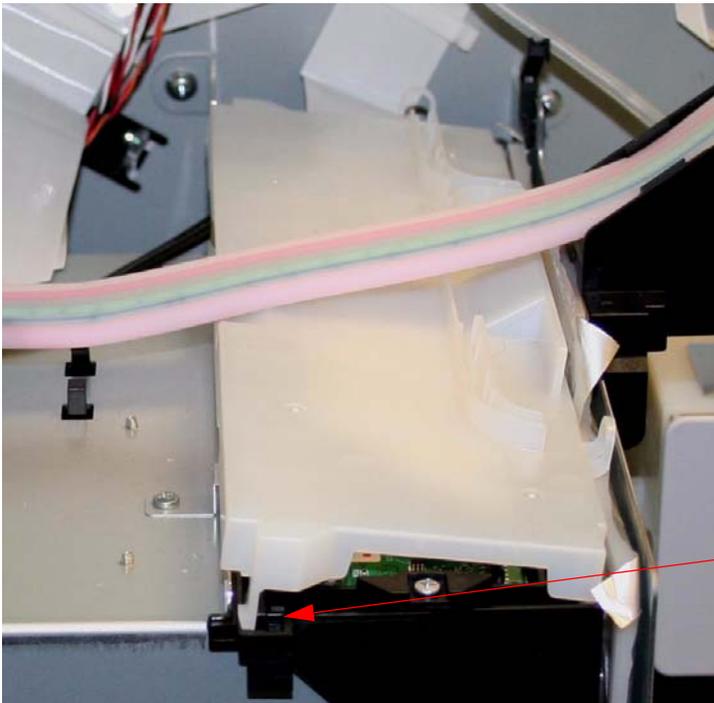


Connect the ***Tubes***, and install **2 Screws**.

8. Remove the **Sub Board Cover**.



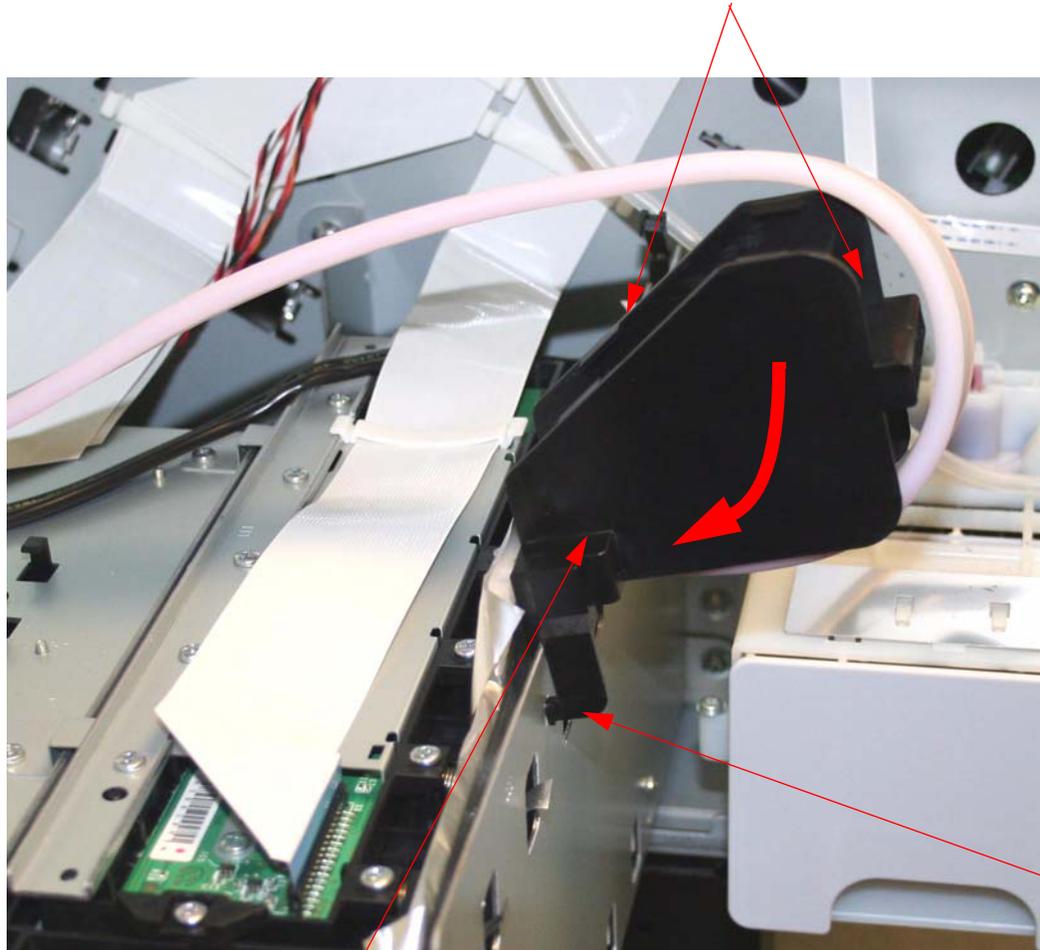
1. Place the **Sub Board Cover**.



2. Engage the **Interlocks**.

9. Install the ***Ink Tube Guide***.

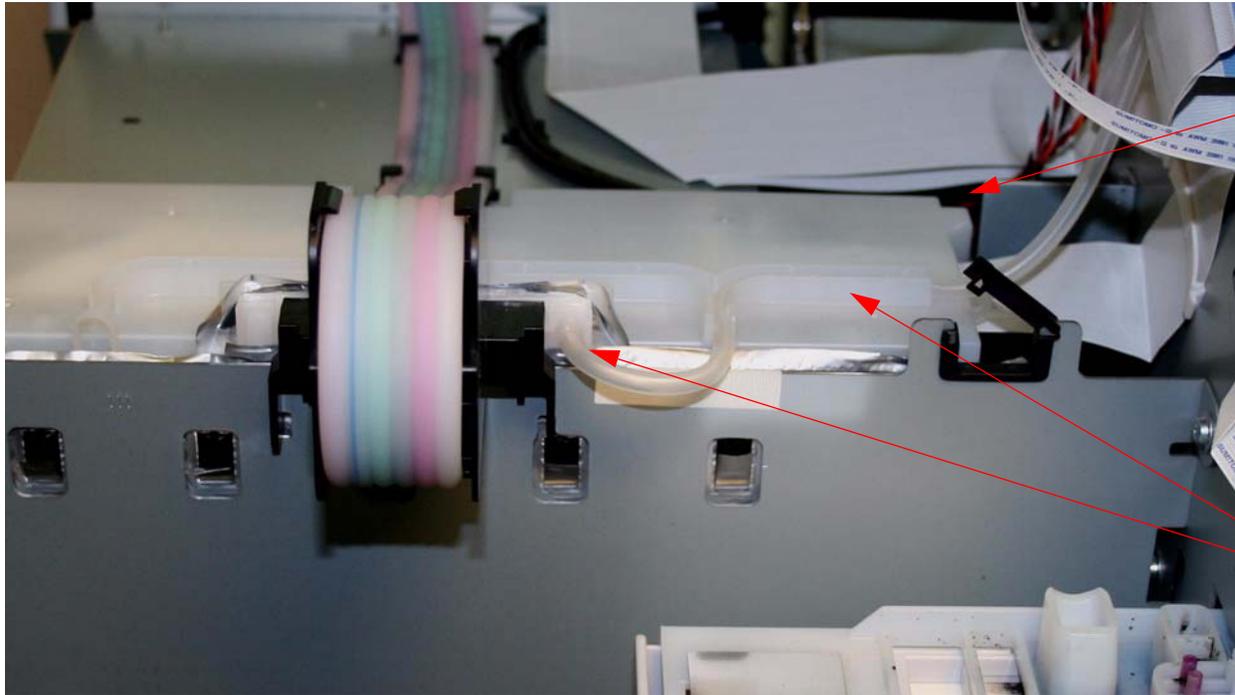
3. Place the ***Ink Tubes*** In the ***Ink Tube Guide***.



1. Squeeze in to release **2 Interlocks**.

2. Rotate the ***Ink Tube Guide*** Into place.

10. Connect the ***Air Pressure Line***.



View from the back.

Connect the ***Air Pressure Line***, and place it in the ***Guide***.

11. Install the ***Cleaning Unit*** (if it was removed).

12. Perform the ***Ink Holder Assy Adjustment***.

13. Install ***Ink Cartridges*** and turn on the ***Printer***.

Note: If the Printer does not start to charge (prime) turn on the Ink Charge Flag. Follow the directions in the Initial Ink Charge chapter in the Adjustment Section.

14. Install the ***Side Cover (Right)***.

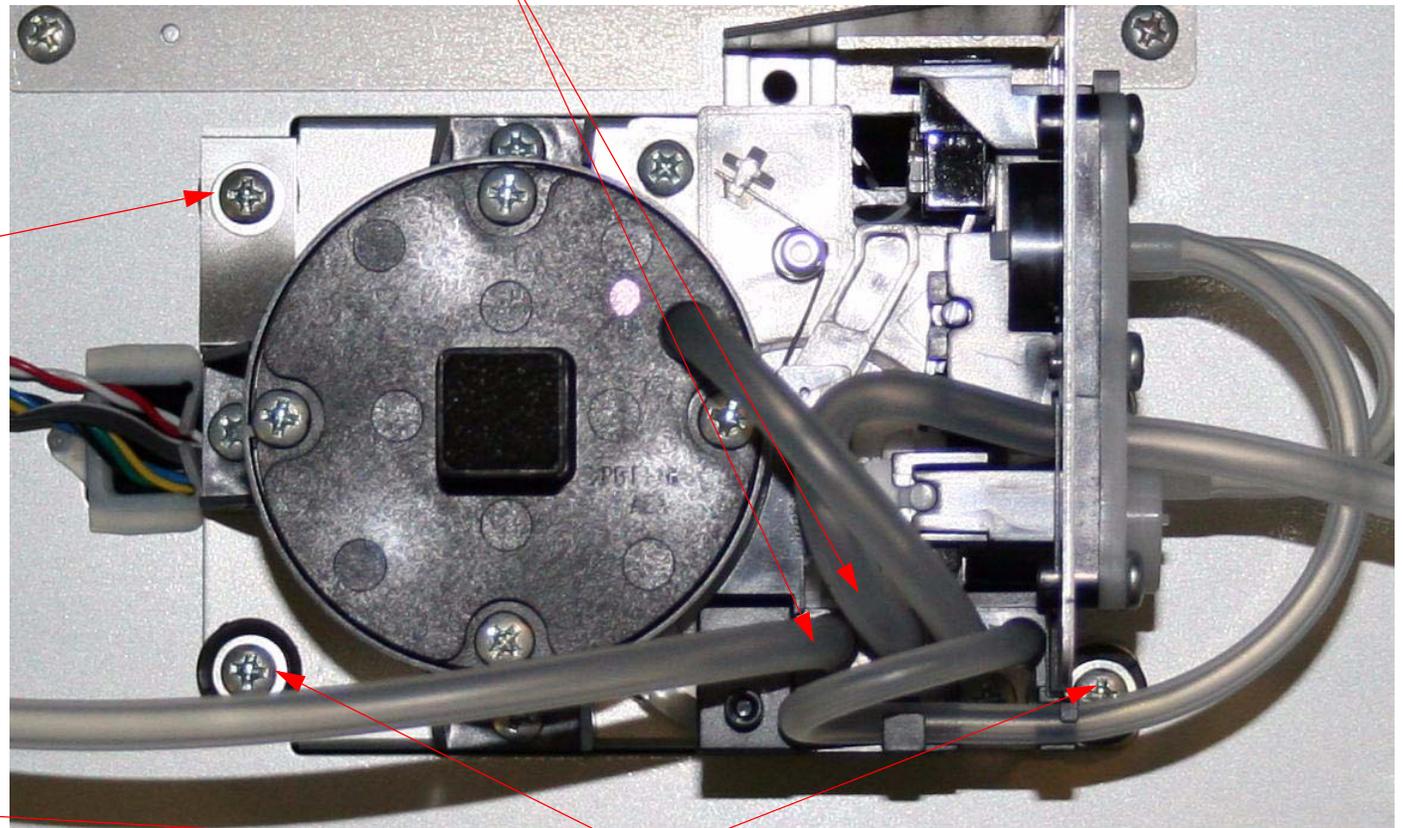
Pressure Pump Assembly Removal

1. Turn off the **Printer** and **UNPLUG from AC.**
2. Remove the **Cover (Rear).**
3. Disconnect **2 Air Pressure Tubes** and remove **3 Screws** from the **Pressure Pump Assembly.**

1. Disconnect **2 Air Pressure Tubes.**

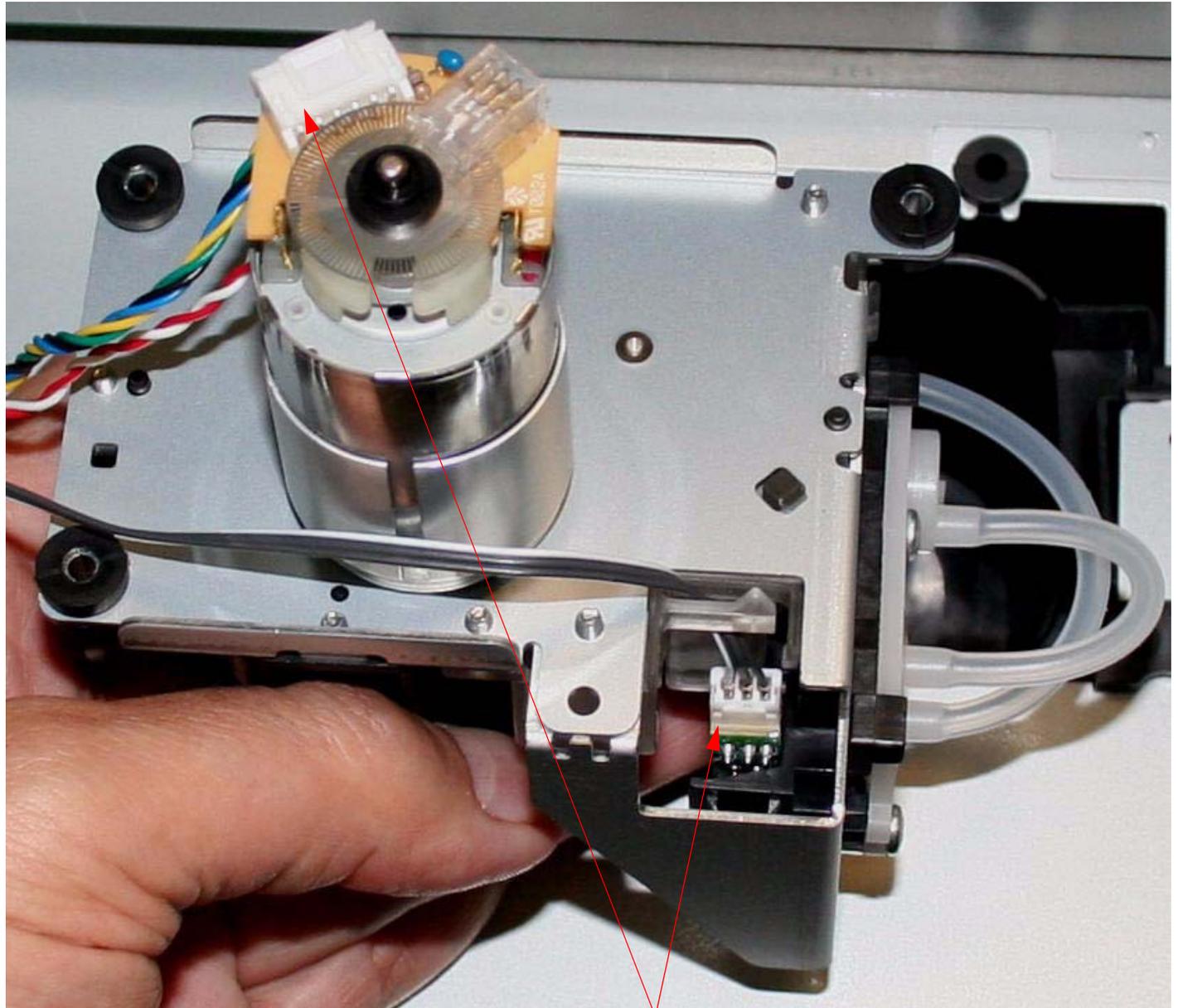


2. Remove **1 Screw** and **Ground Strap.**



3. Remove **2 Screws.**

4. Remove the **Pressure Pump Assembly**.



1. Lift out and turn over the **Pressure Pump Assembly**.

2. Unplug **2 Cables**.

Print Head Removal

Note: The Print Head Nozzle Plate on the Pro 79_9900 is as fragile as tin foil. Any contact with the Nozzle plate will damage the Print Head.

Note: A long shafted (6") number 1 phillips screw driver is necessary for this procedure.

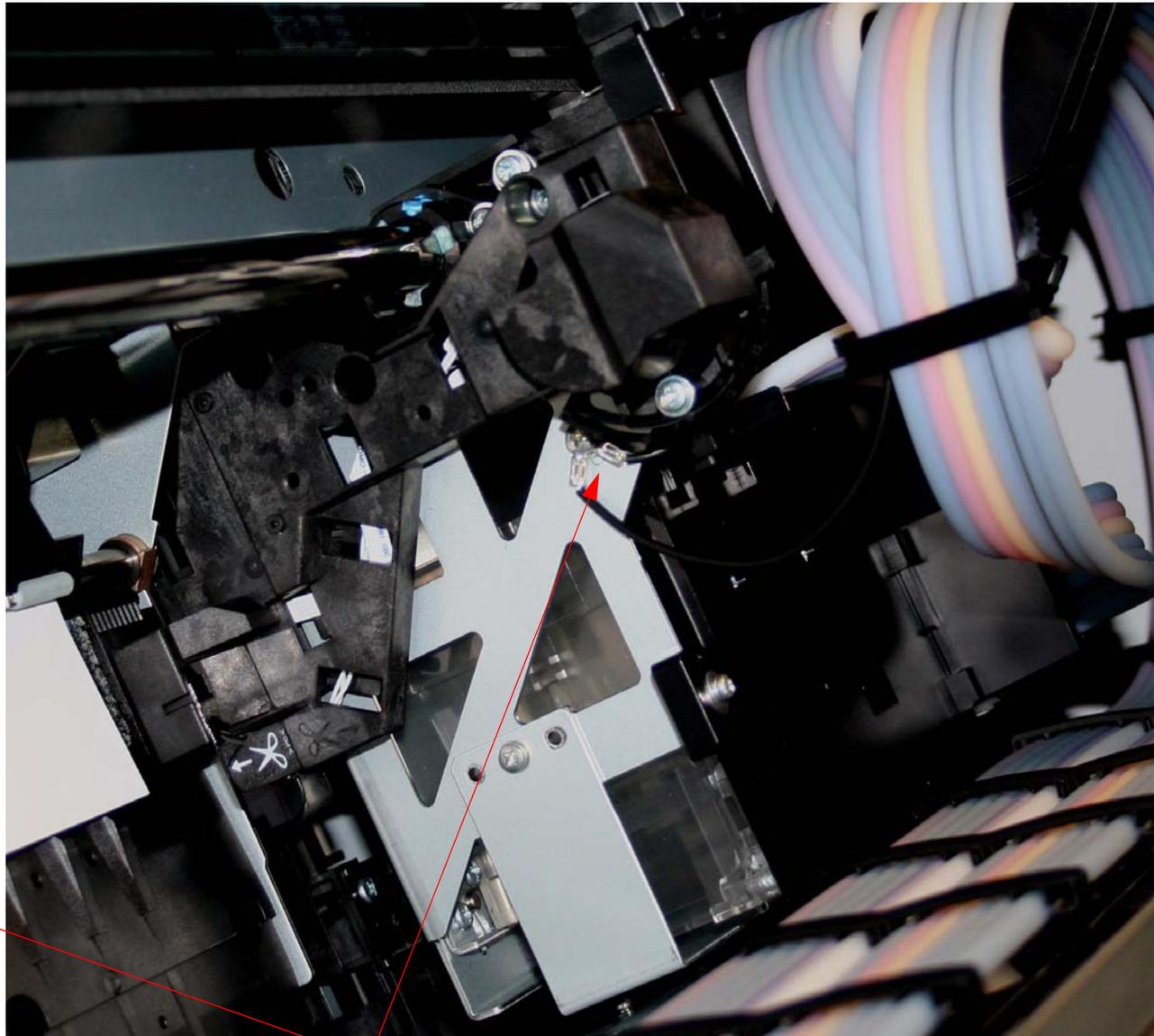
Print Head Removal Overview

- Input the **New Print Head's Head Rank ID** (if the Print Head is to be replaced).
- Release the **Carriage Mechanism**.
- Remove the **Ink Cartridges** to bleed off the **Ink System** pressure.
- Unplug the **Printer**.
- Remove the **Old Print Head**.

Print Head Removal Detail

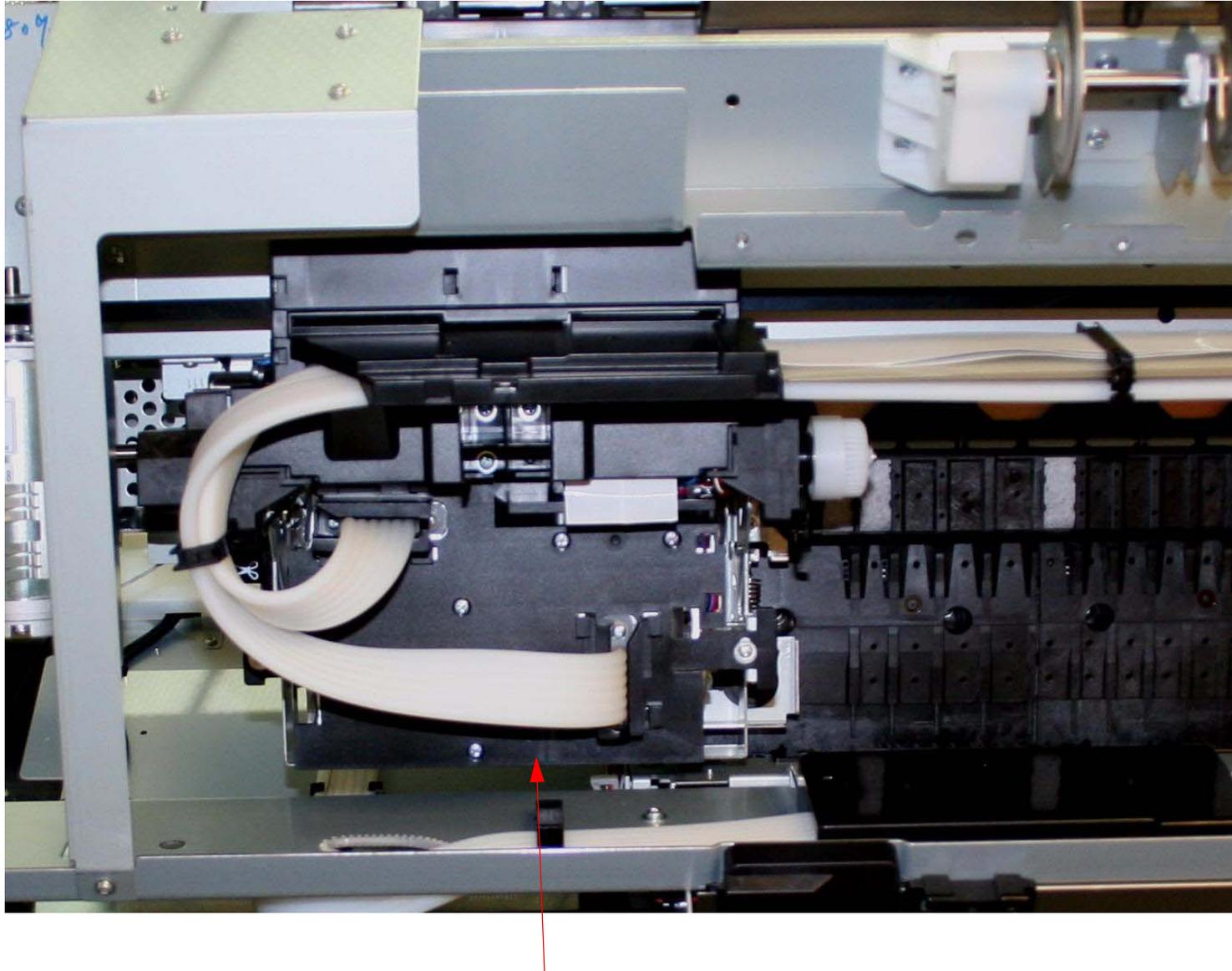
1. If you are replacing the **Print Head**, run the **Servprog.exe** and input the new **Print Head's** calibration value (**Head Rank ID**).
2. Release the **Carriage Mechanism**, following the directions found in the Carriage Release Chapter, located in the Reference Section.
3. Partially remove **1 Ink Cartridge**, to ensure that the **Ink System** is un-pressurized.
4. **Unplug the Printer.**
5. Remove the **Cover (Top)**.
6. Remove the **Cover (Left Side)**.

7. Remove the **Cover (Right Side)**.
8. Remove **1 Screw** that fastens **2 Ground Straps** to the left side of the **Carriage Mechanism**.



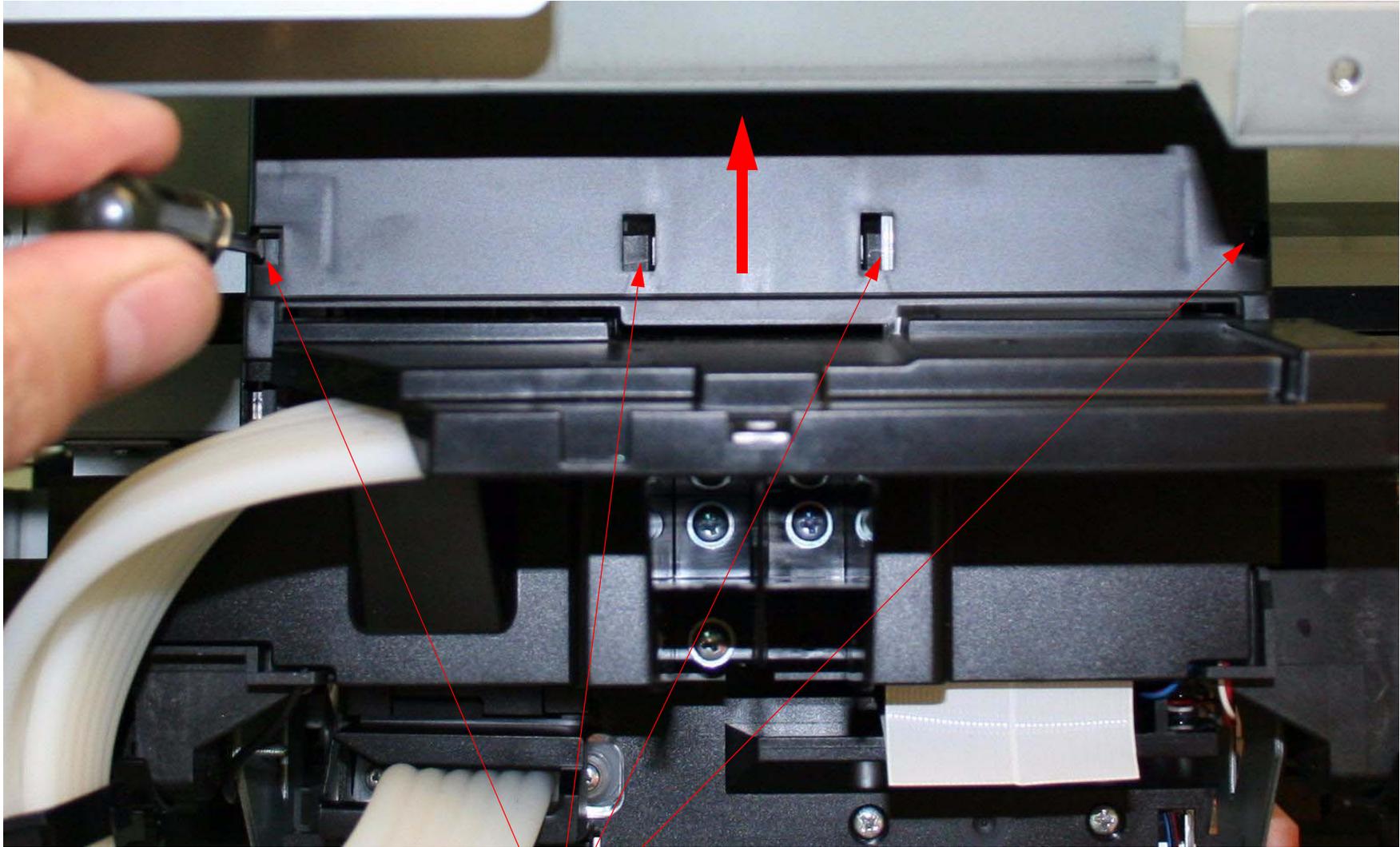
Remove **1 Screw**.

9. Move the **Carriage Mechanism** to the left side of the **Printer**.



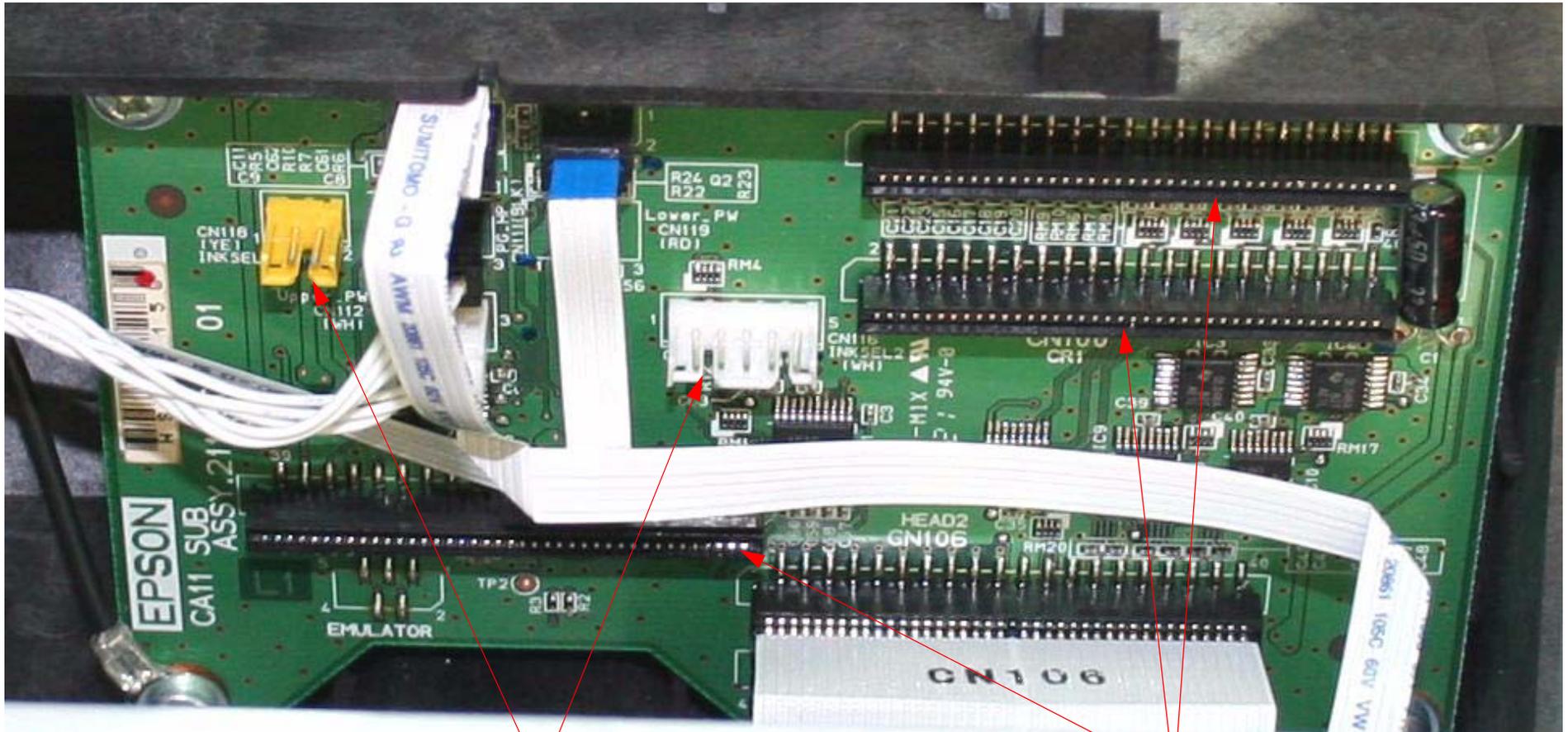
Move the **Carriage Mechanism** to the left side of the **Printer**.

10. Remove the **Carriage Board Cover**.



Working from left to right, release **4 Interlocks** and remove the **Carriage Board Cover**.

11. Unplug **2 Wired Cables** and **3 Foil Cables**.

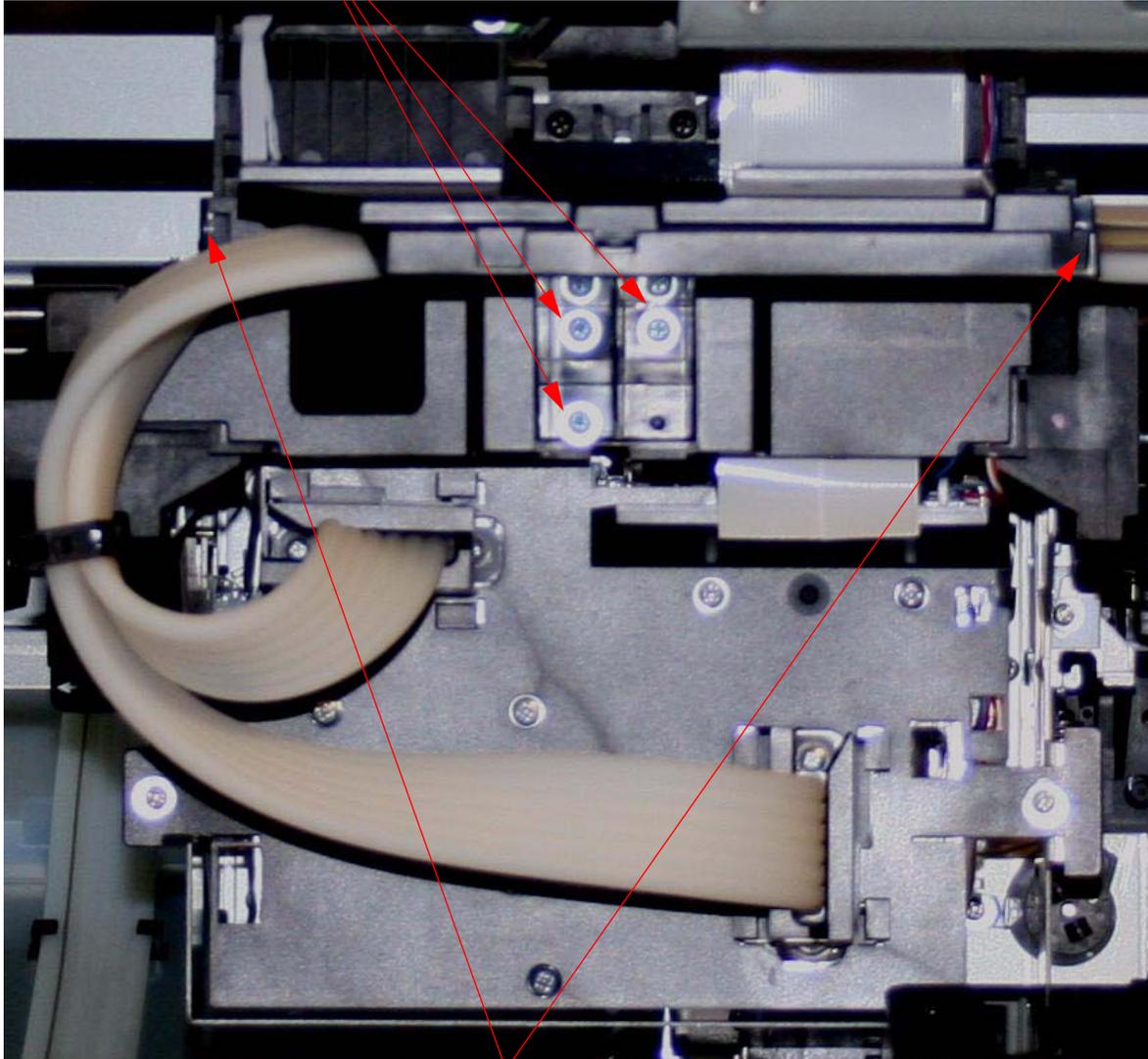


1. Unplug **2 Wired Cables**.

2. Unplug **3 Foil Cables**.

12. Remove **3 Screws**, and **2 Interlocks** that fasten the **Ink Tube Holder** to the **Carriage Assembly**.

1. Remove **3 Screws**.



2. Release **2 Interlocks**.

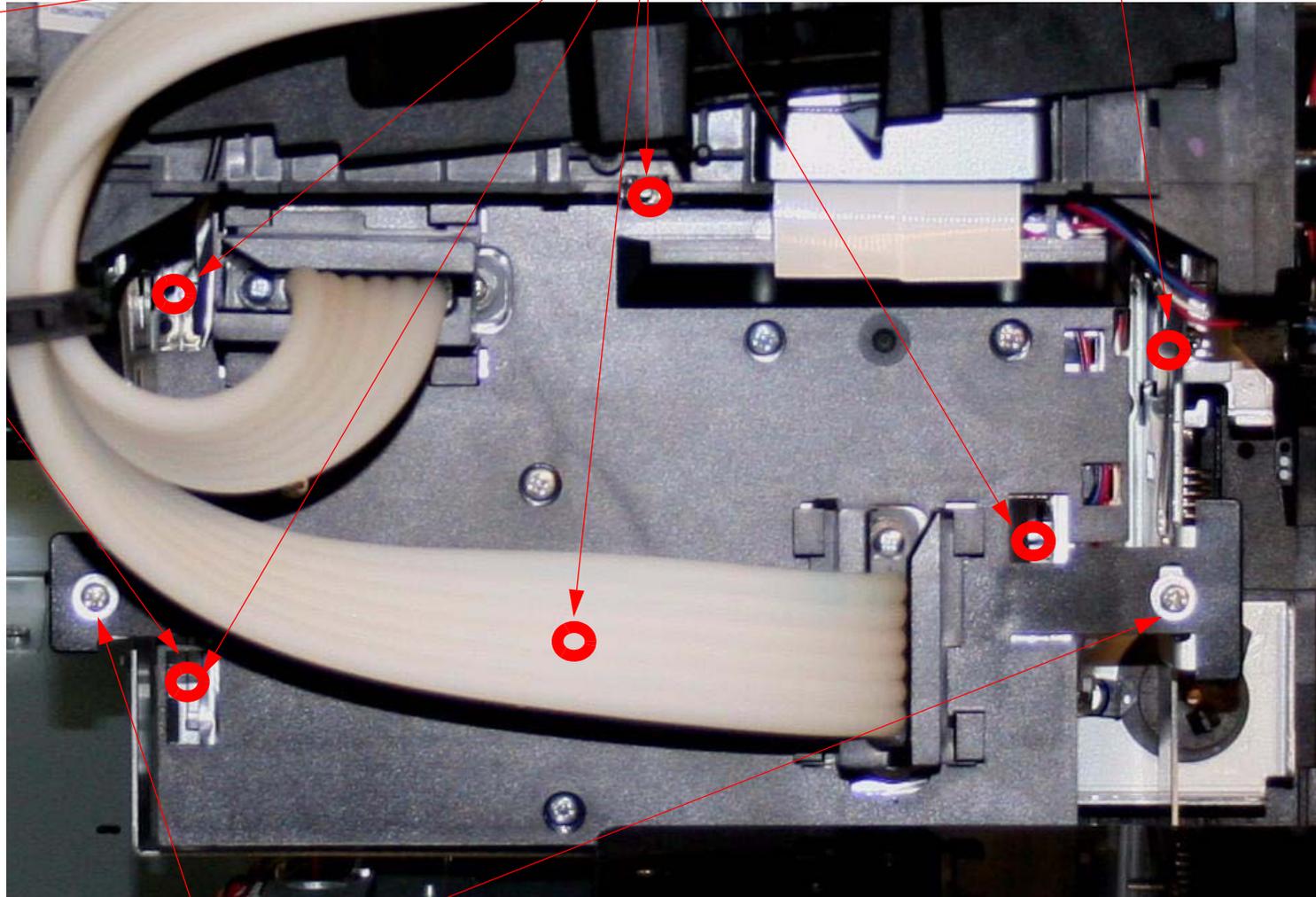
13. Remove **8 Screws** that fasten the **Damper Assembly** to the **Printer**.

1. Remove **5 Screws**.

2. Remove **1 Screw**.



Note:
Remove the
Top Screw
in this area.
Do not
remove the
bottom one.

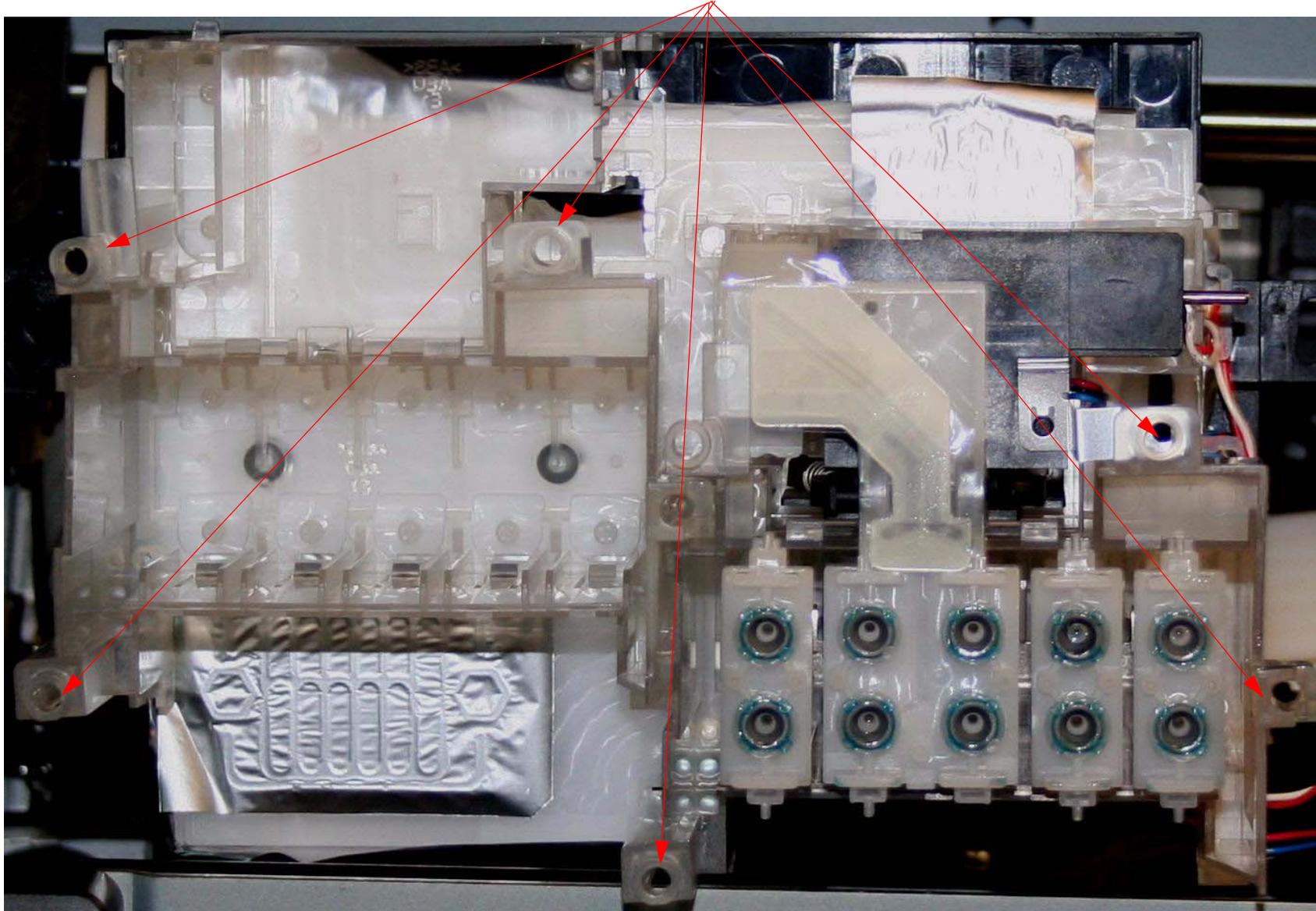


Note: See the next page for additional help in locating the correct Screws to remove in this step.

14. Additional reference for the preceding step.

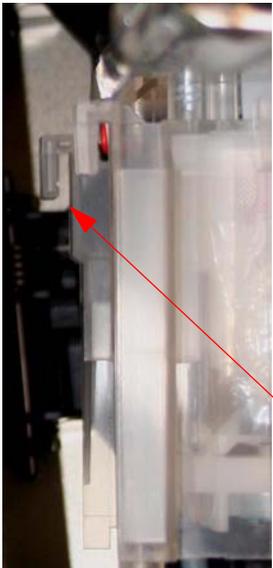
Bottom view of the **Damper Assembly**

Location of the **6 Screws**



Back of the **Damper Assembly**.

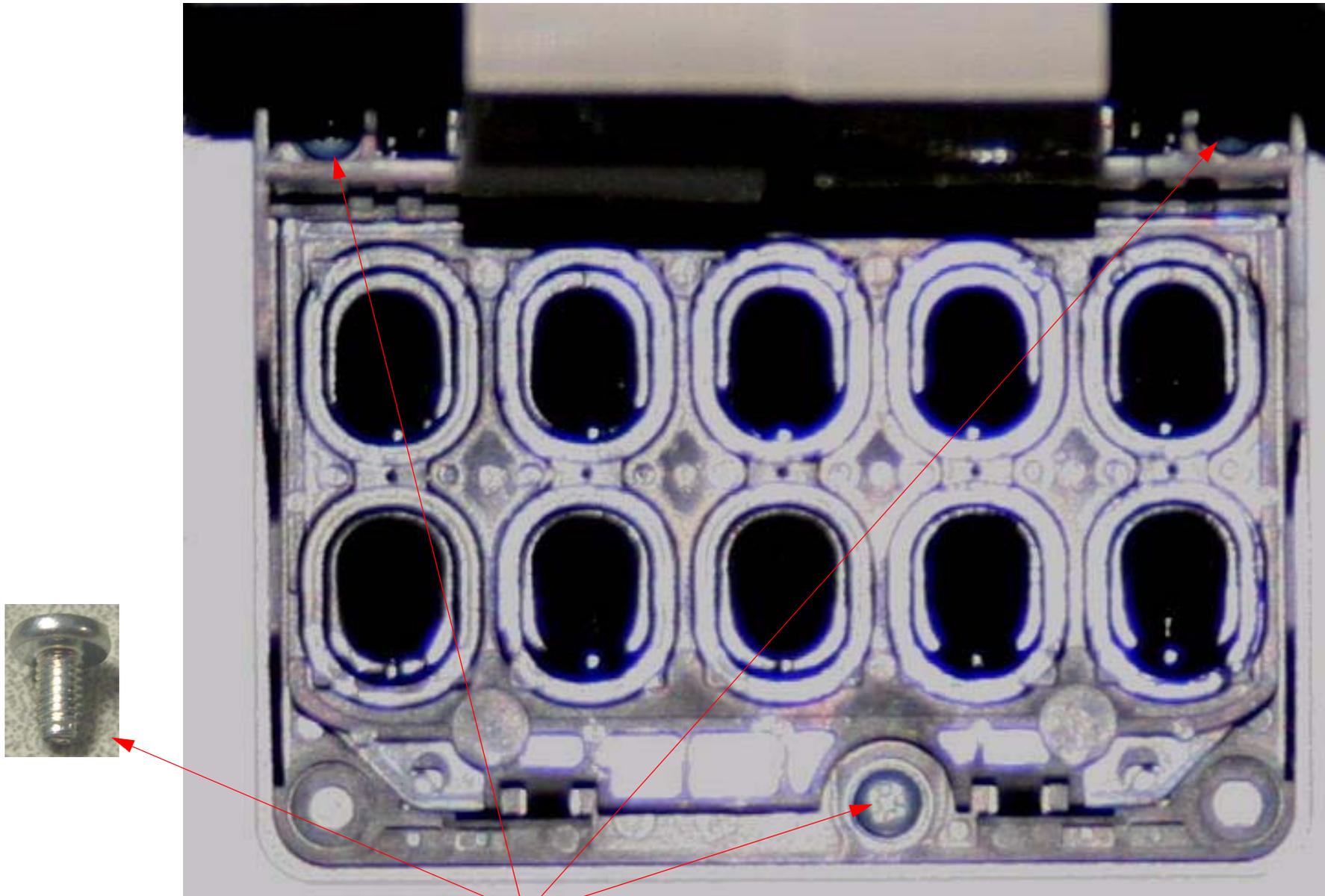
15. Hang the *Damper Assembly*.



Hang the *Damper Assembly* on the *Front Cover Frame*. Use the *Hooks* located on the back of the *Damper Assembly*.

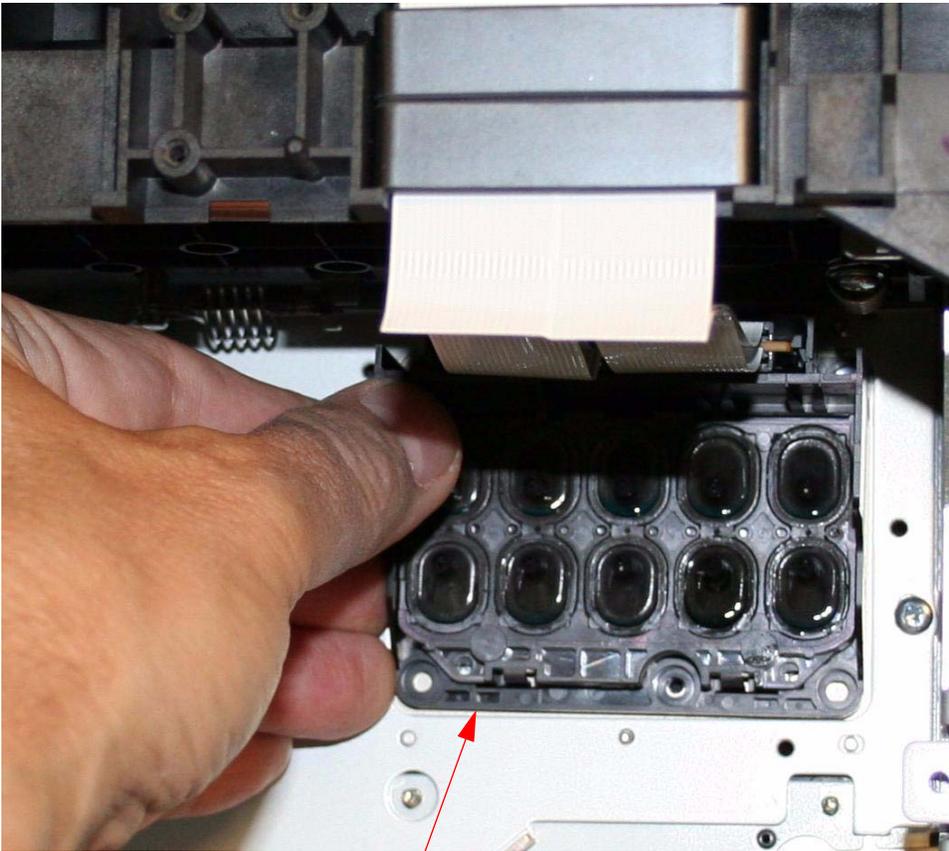
Hooks located on the back of the *Damper Assembly*.

16. Remove **3 Screws**.

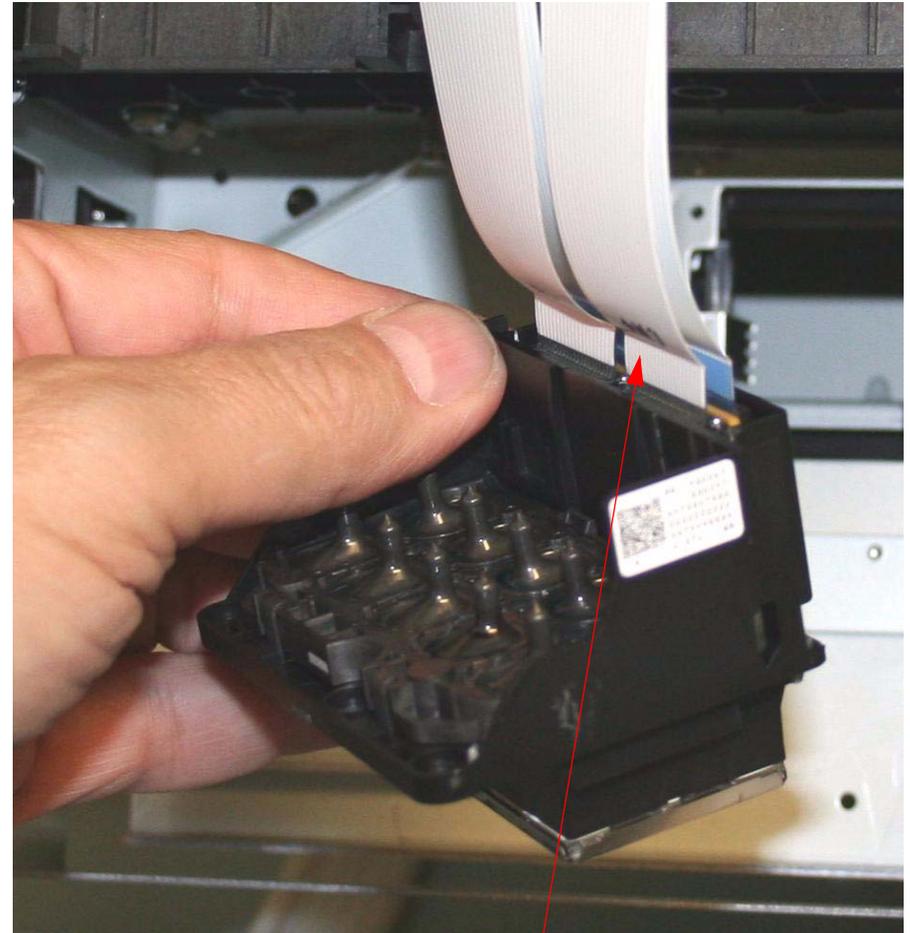


Remove **3 Screws**.

17. Remove the **Print Head**, and unplug **4 Print Head Cables**.



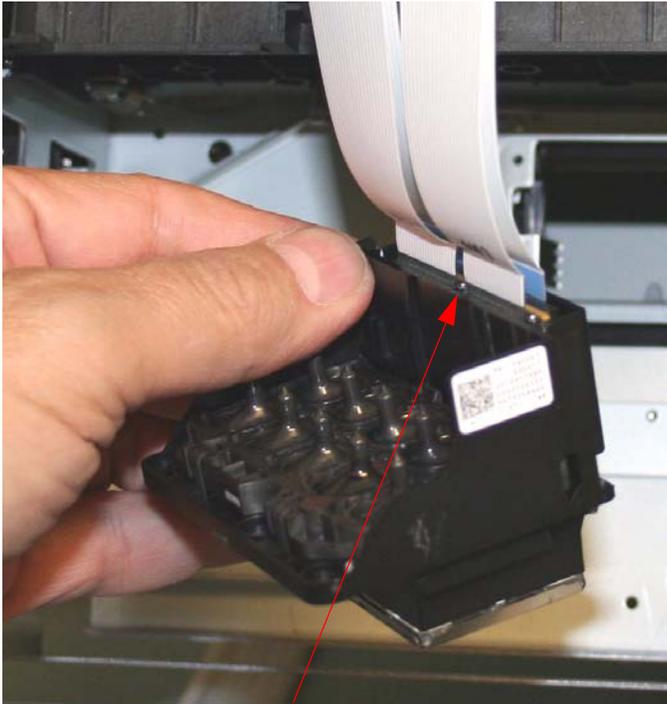
1. Remove the **Print Head**.



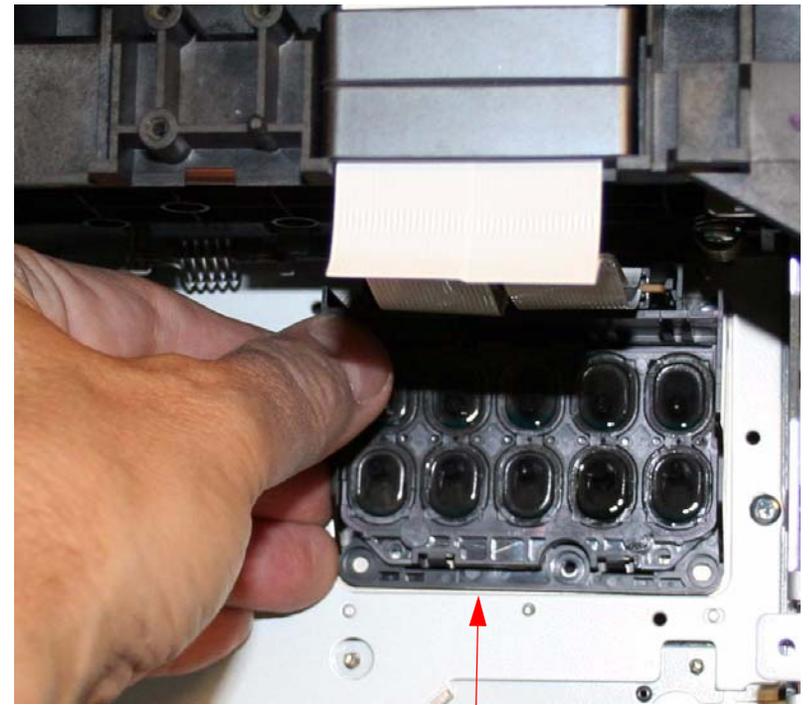
2. Unplug **4 Print Head Cables**.

Print Head Installation

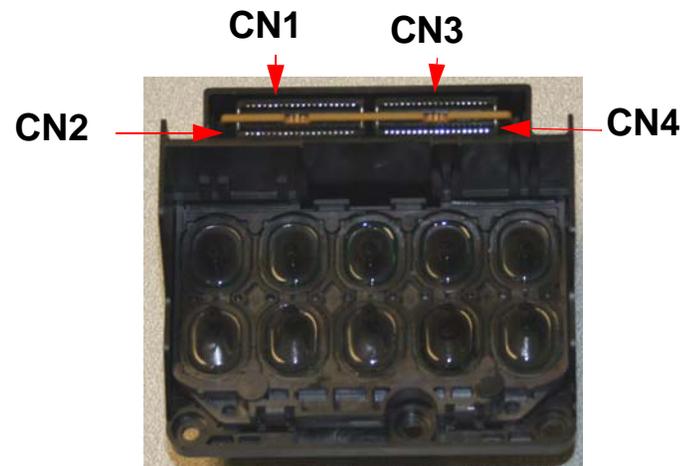
1. Plug in **4 Print Head Cables** and put the **Print Head** in place.



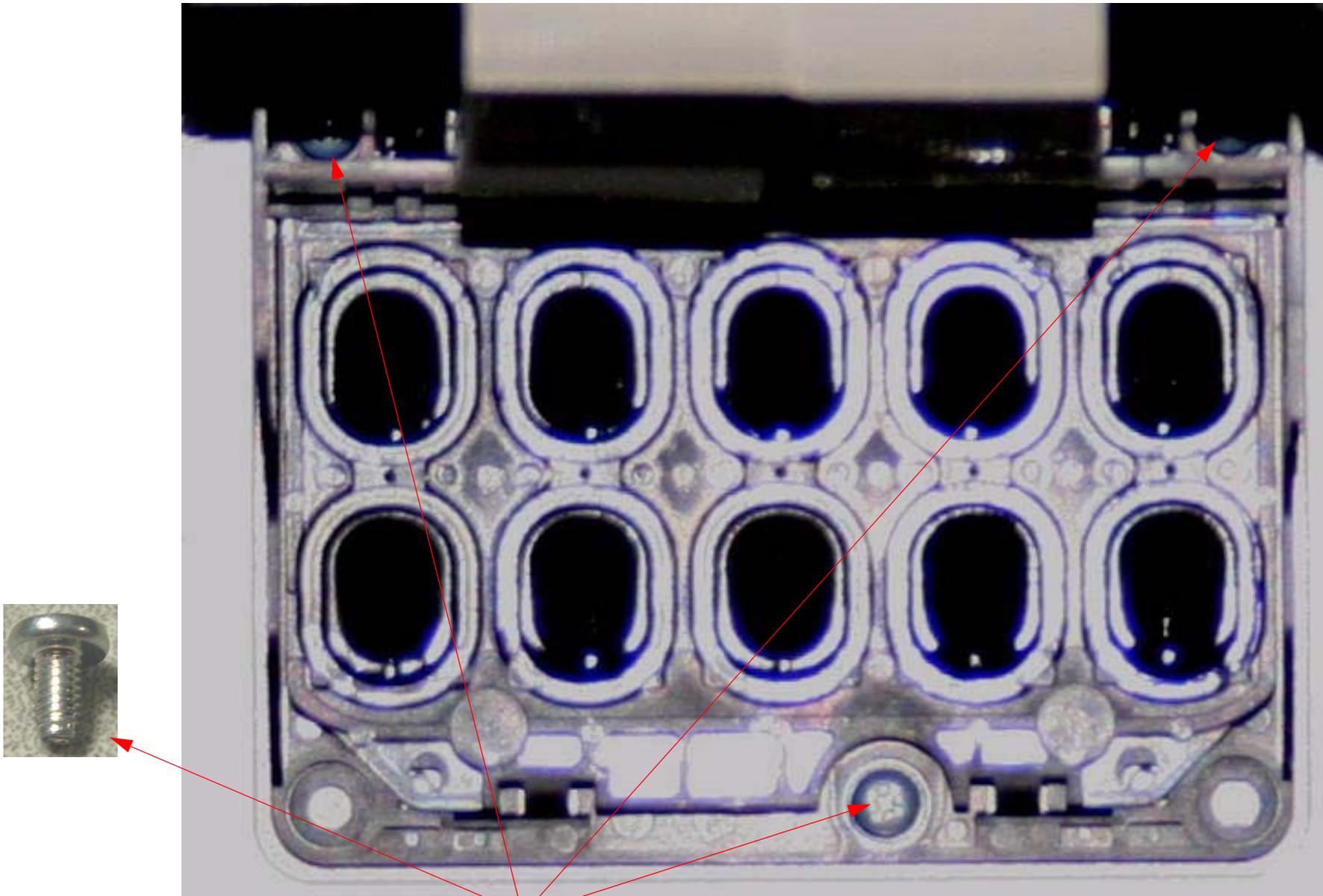
1. Plug in **4 Print Head Cables**.



2. Install the **Print Head**.

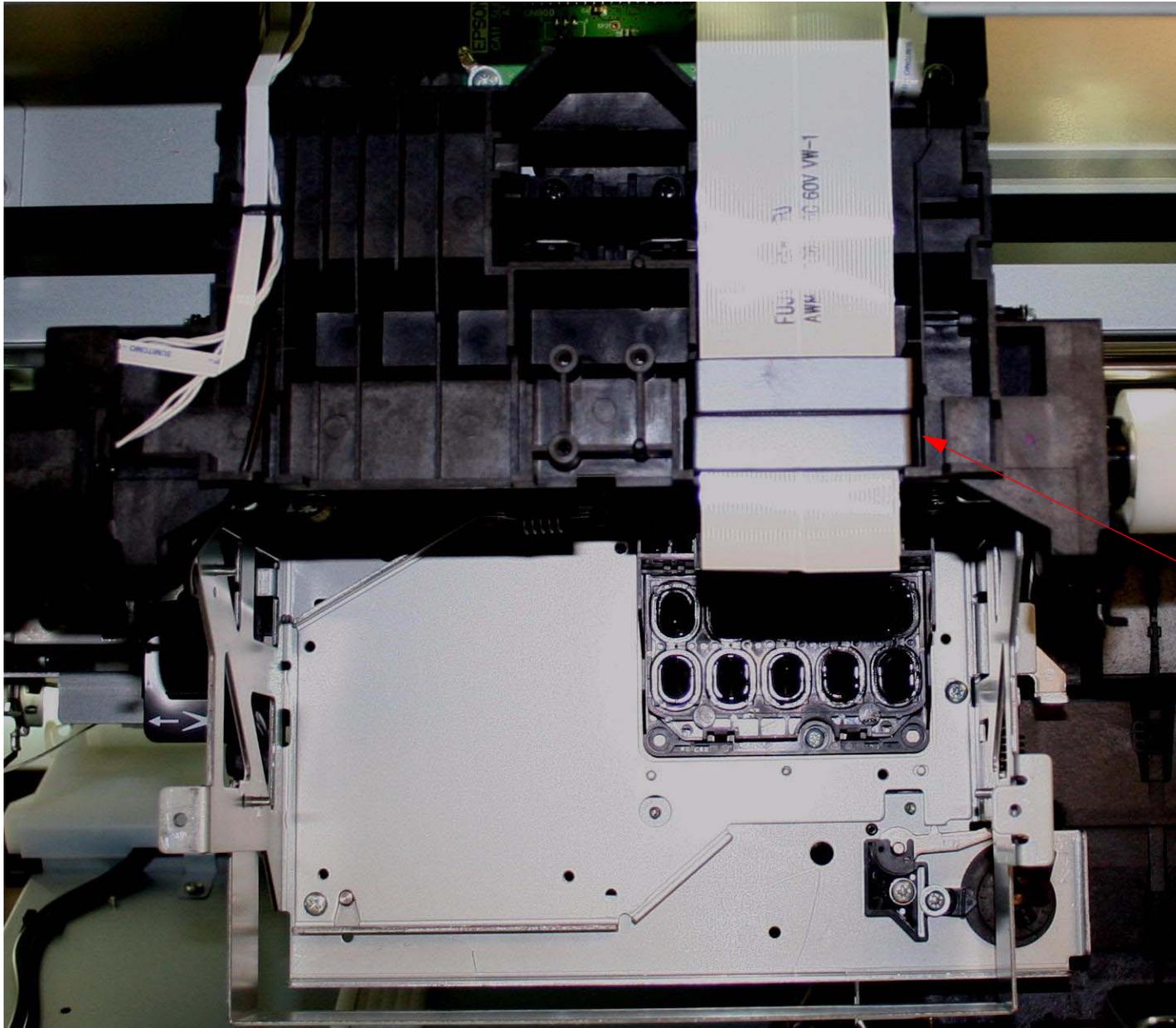


2. Fasten with **3 Screws**.



Install **3 Screws**.

3. Put the **2 Ferrite Cores** in place.

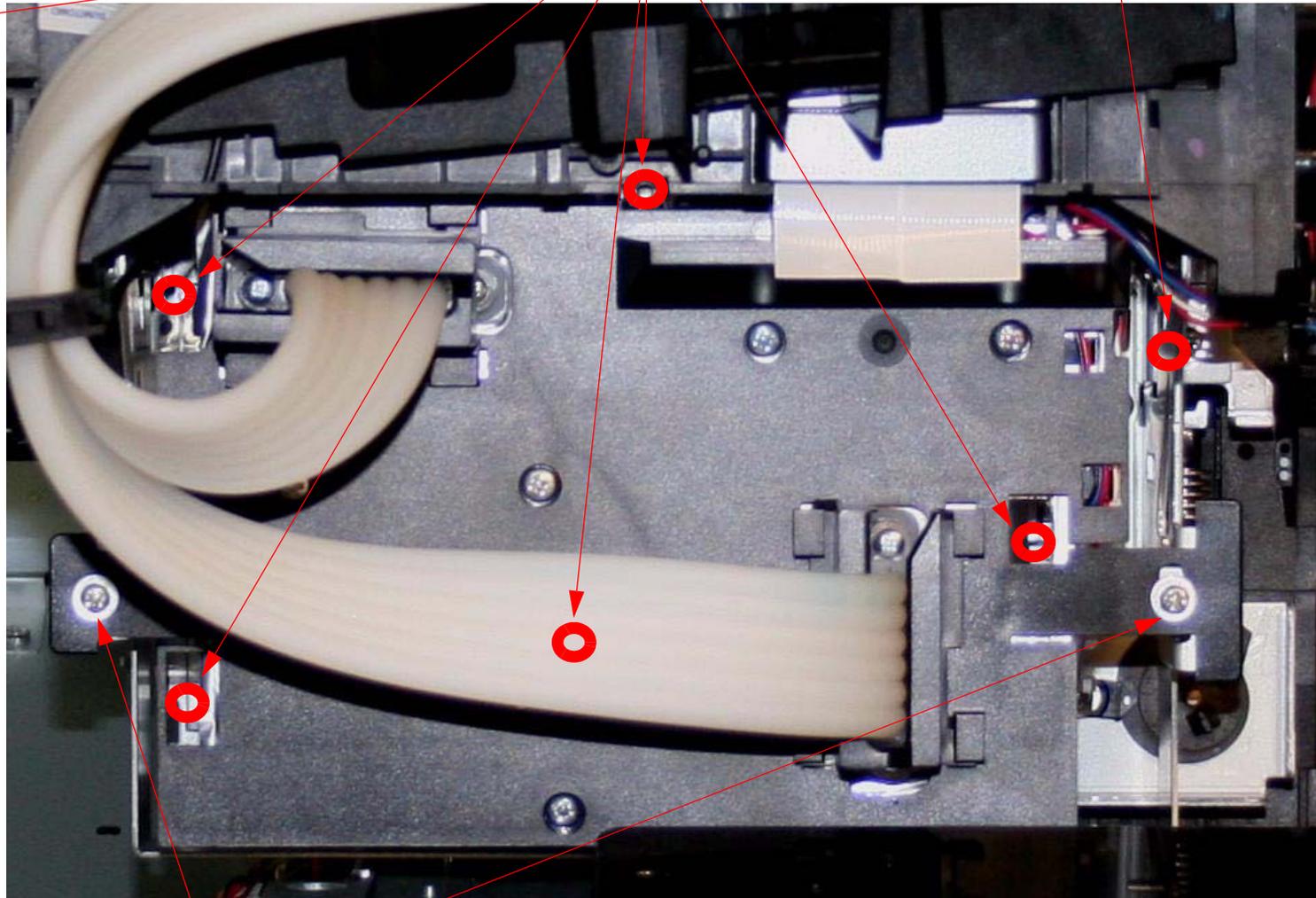


Put the **2 Ferrite Cores** in place.

4. Install the **Damper Assembly** and fasten with **8 Screws**.

1. Install **5 Screws**.

2. Install **1 Screw**.



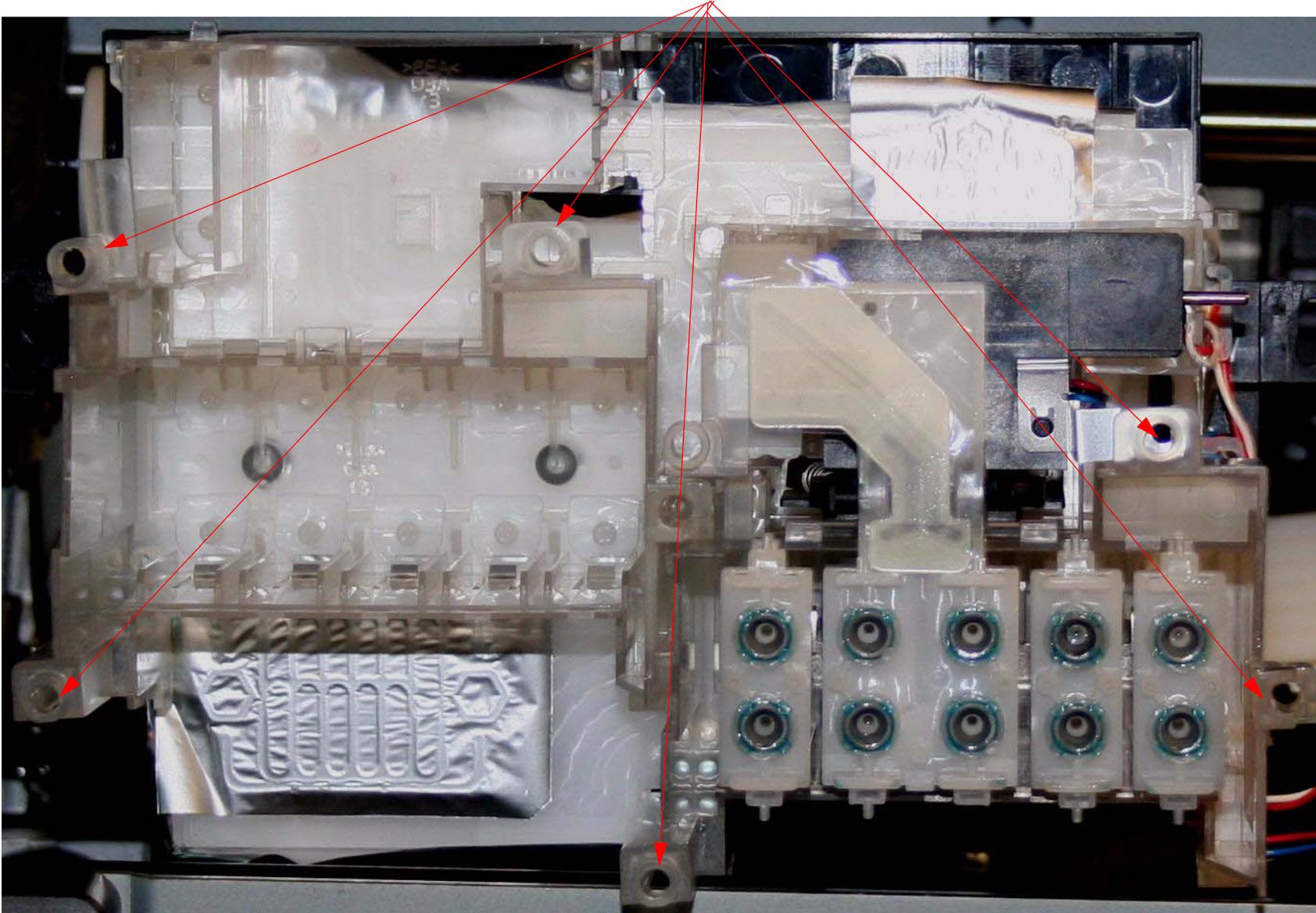
3. Install **2 Screws**.

Note: See the next page for additional help in locating the correct Screws to install in this step.

5. Additional reference for the preceding step.

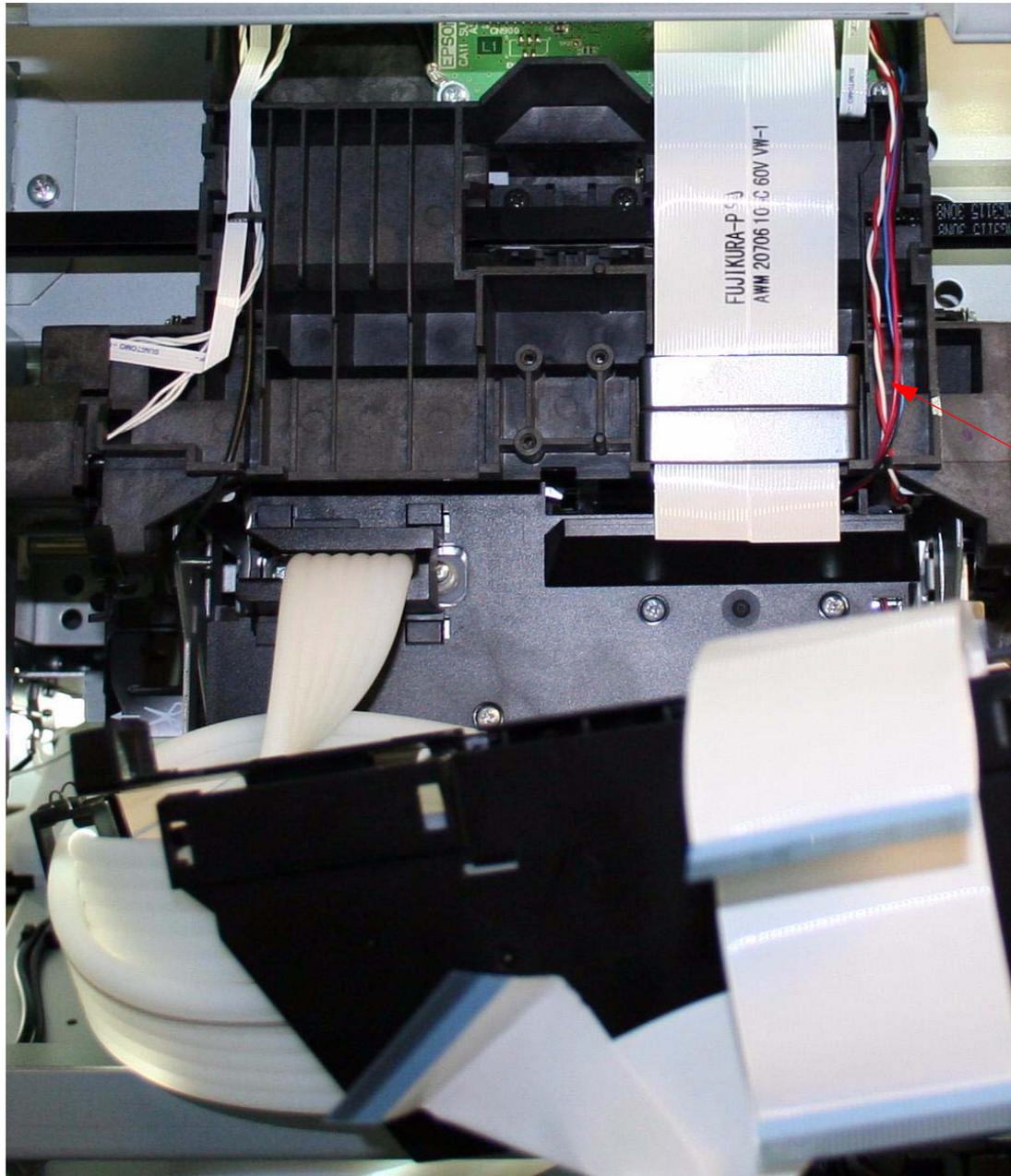
Bottom view of the **Damper Assembly**

Location of the **6 Screws**



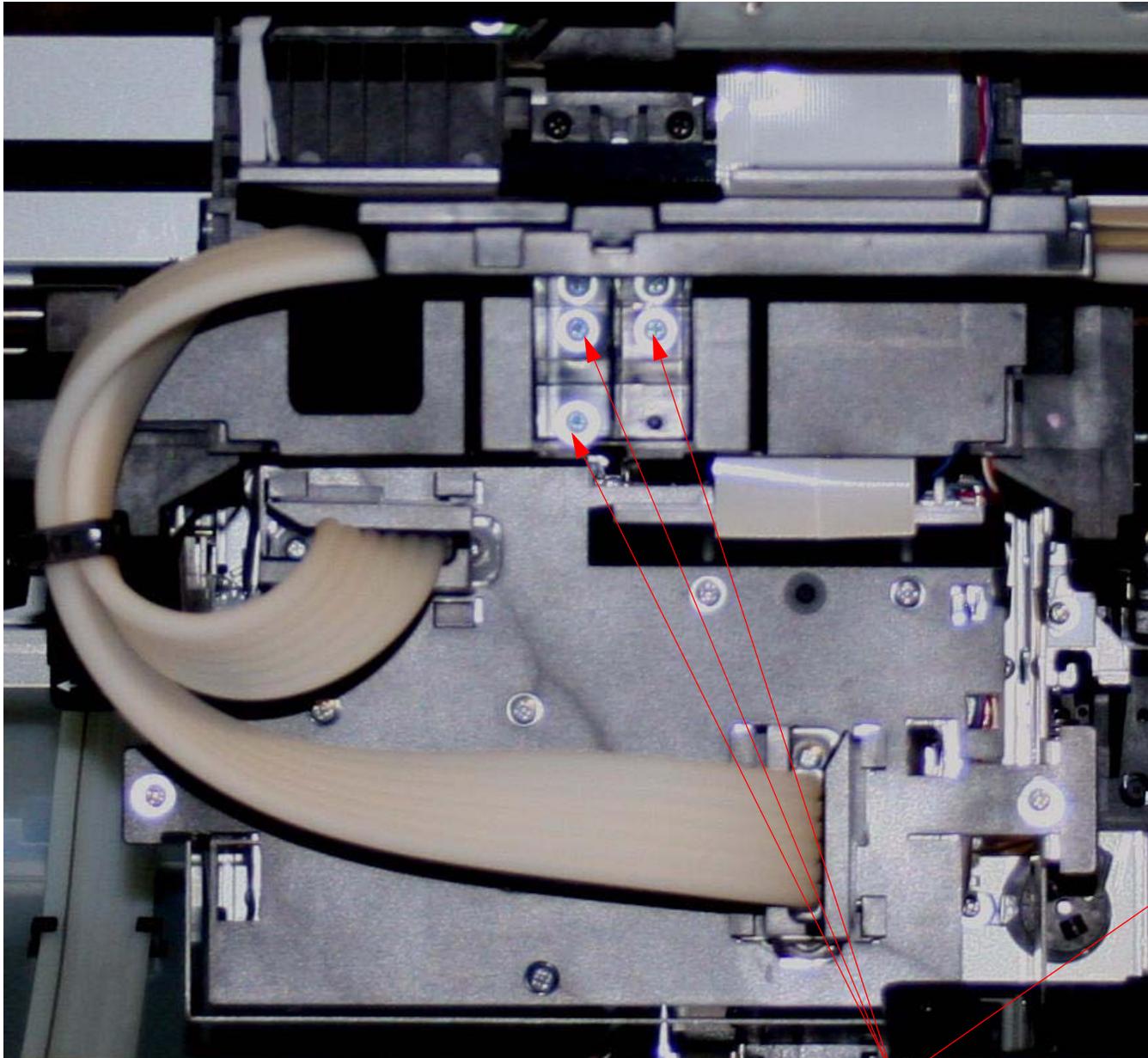
Back of the **Damper Assembly**.

6. Route **5 Wires**.



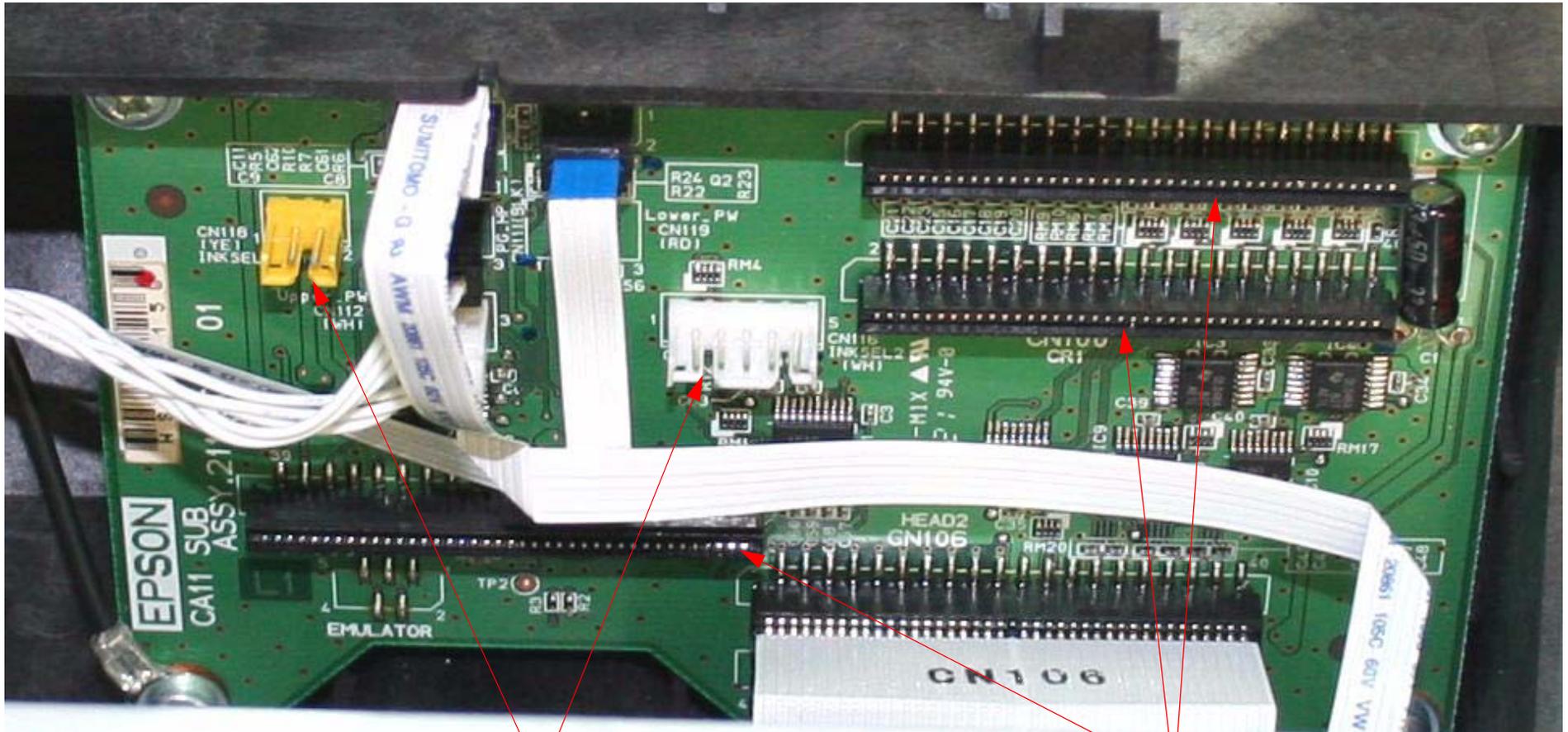
Route **5 Wires**.

7. Install **3 Screws** and fasten the *Ink Tube Holder* to the *Carriage Assembly*.



Install **3 Screws**.

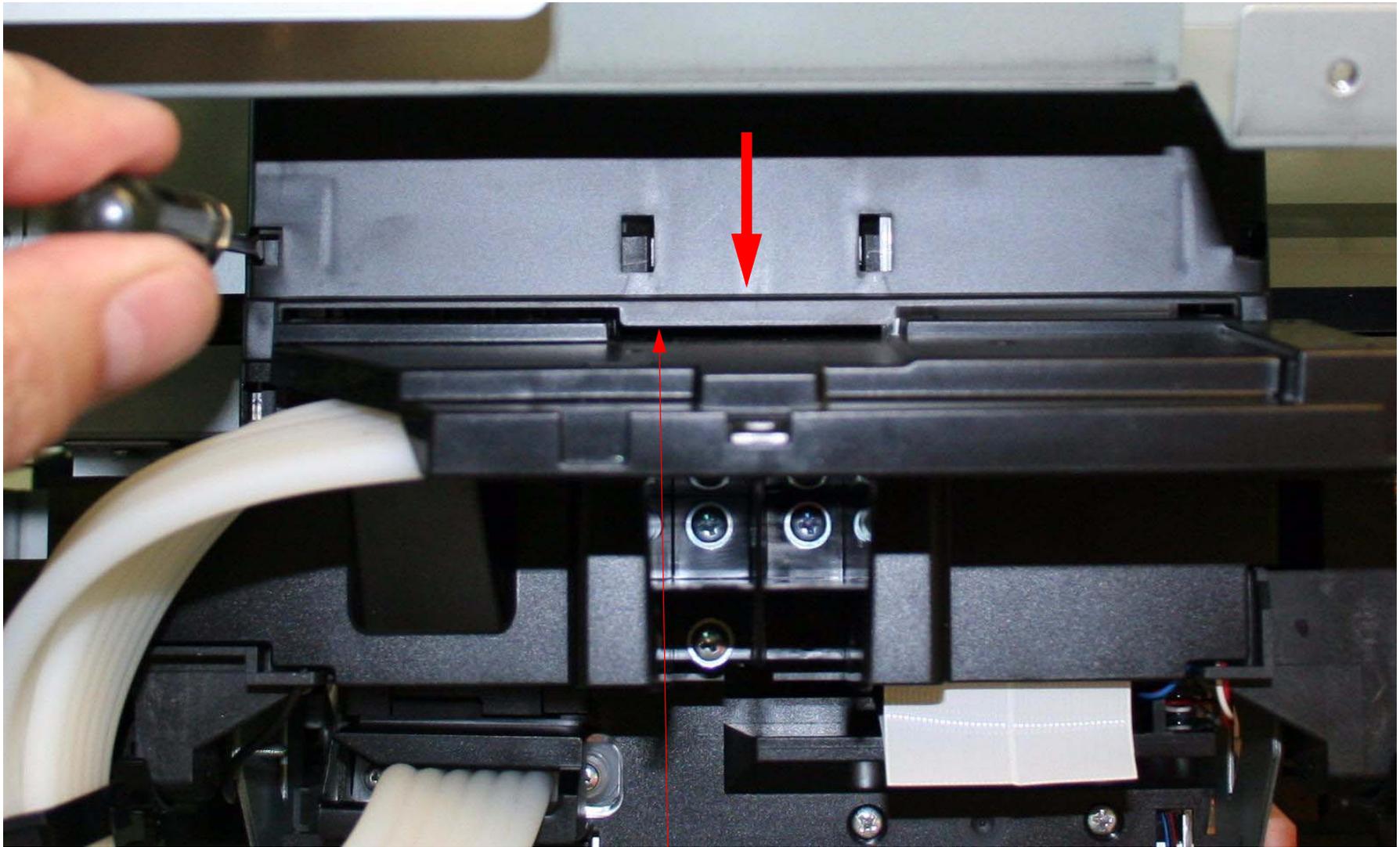
8. Plug in **2 Wired Cables** and **3 Foil Cables**.



1. Plug in **2 Wired Cables**.

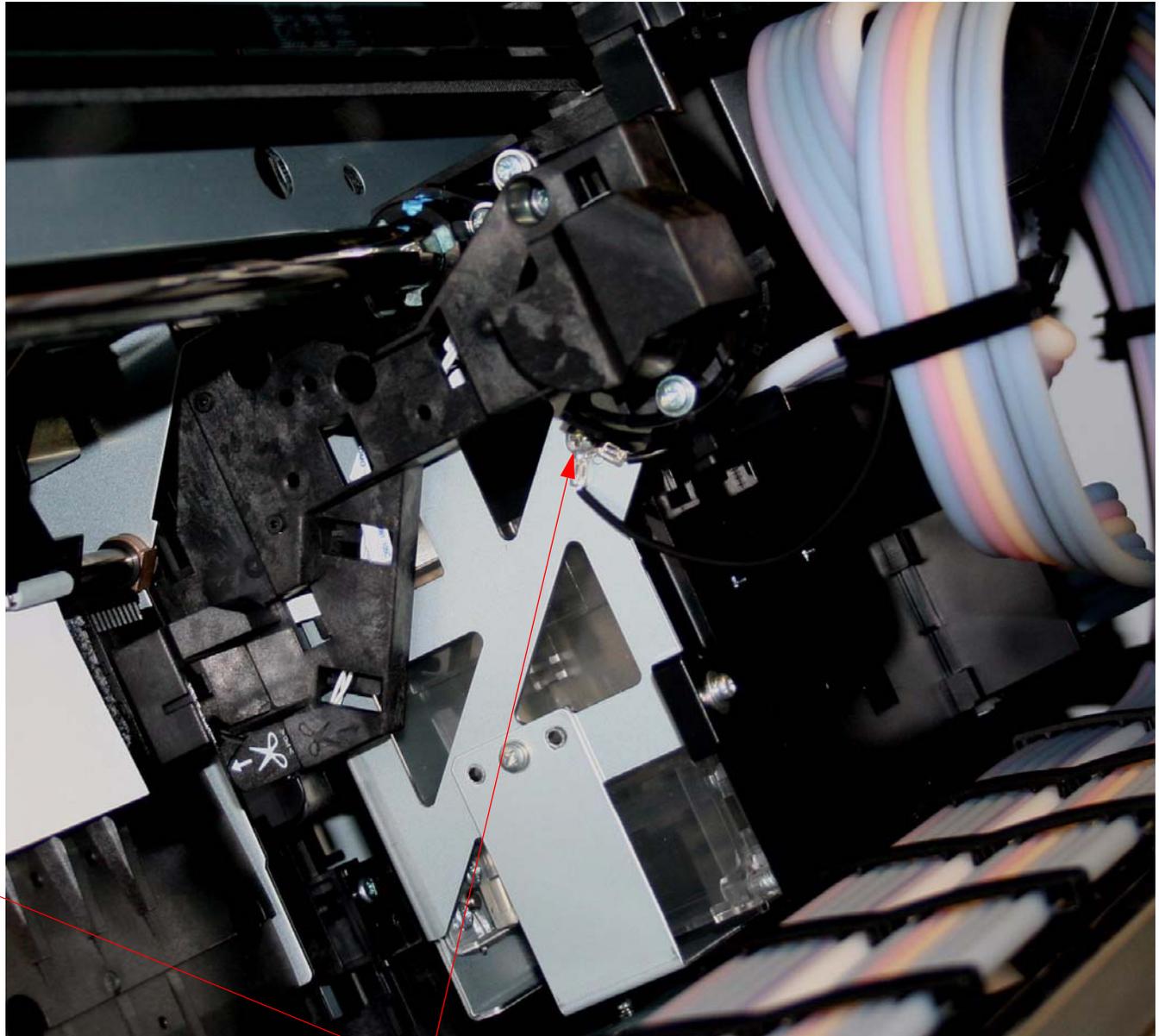
2. Plug in **3 Foil Cables**.

9. Install the **Carriage Board Cover**.



Install the **Carriage Board Cover**.

10. Install **1 Screw** that fastens **2 Ground Straps** to the left side of the **Carriage Mechanism**.



Install **1 Screw**.

11. Plug in the **Printer**, insert the **Ink Cartridges**, and close the **Ink Bay Doors**.

12. Defeat the **2 Front Cover Sensors**.

13. Turn on the **Printer**, and let it come **Ready**.

14. Press the **Menu** button and navigate to **Maintenance**.

15. Press the **Menu** button and navigate to **PWR CLEANING**.

16. Press the **Menu** button, and follow the directions to execute.

Note: Power Cleaning is necessary to prime the “negative pressure” Dampers. Other cleaning cycles do not work as well, or as quickly.

17. Print a Nozzle Check pattern (Perform standard cleanings if necessary).

18. Perform the following adjustments in sequence.

18.1 Perform **Clear Counter [when replacing Printhead]**

18.2 Perform **Head Rank Input (if you did not do it before removing the old Print Head)**.

18.3 Perform the **CR Head Slant** Adjustment.

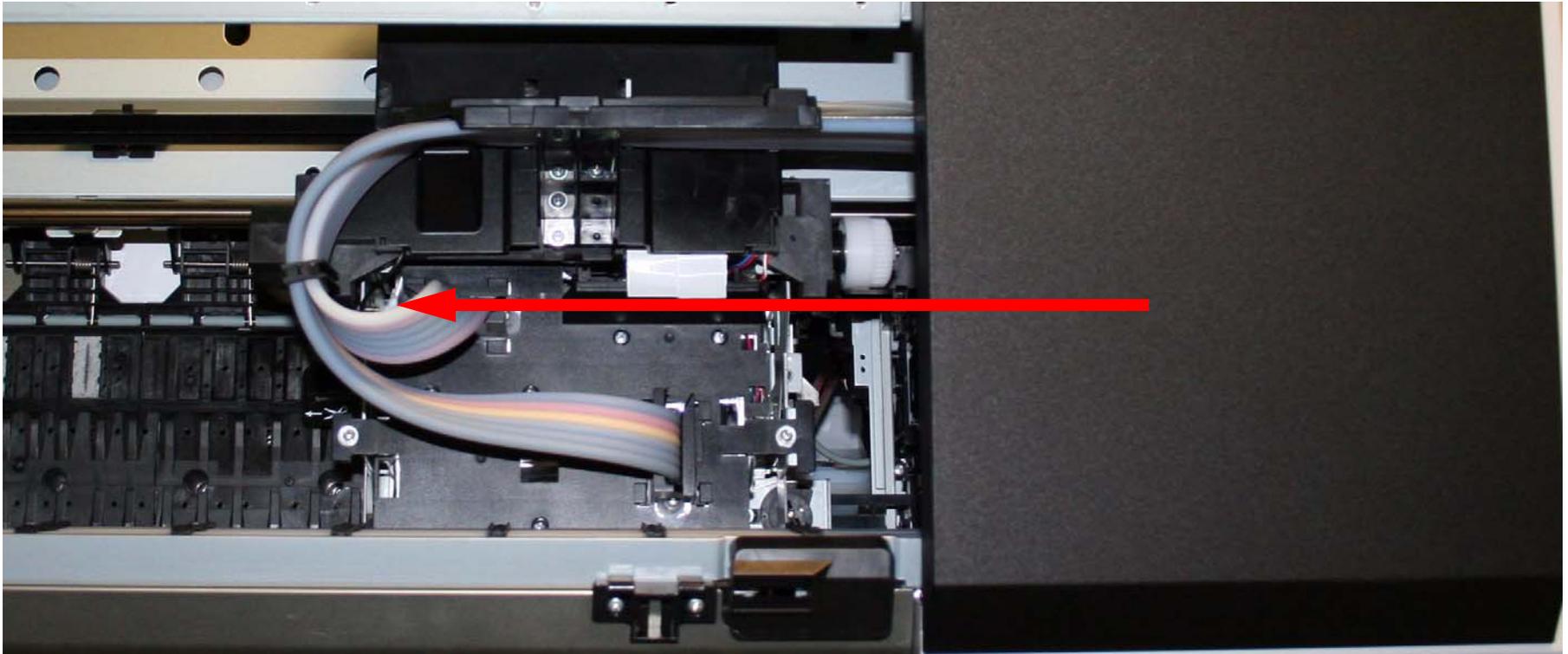
18.4 Perform the **Gap: Auto Bi-D Adjustment**

18.5 Perform the **Gap: Auto Uni-D Adjustment**

18.6 Perform the **Colorimetric Calibration (When specifically requested by Epson)**

Sensor (Carriage Encoder) Removal

1. Release the **Carriage Mechanism**.
 - 1.1 Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
 - 1.2 Navigate to **SELF TESTING\Mecha Adjustment\IM Sensor Gap**
 - 1.3 Press the **Right Arrow** to display the **[Enter] Start**.
 - 1.4 Press the **OK** button to release the **Carriage**.
2. Move the **Carriage Mechanism** off of the “capped position”.



3. **Unplug the Printer.**

4. Remove the **Top Cover**.
5. Remove **1 Screw** that fasten the **Carriage Encoder** in place.

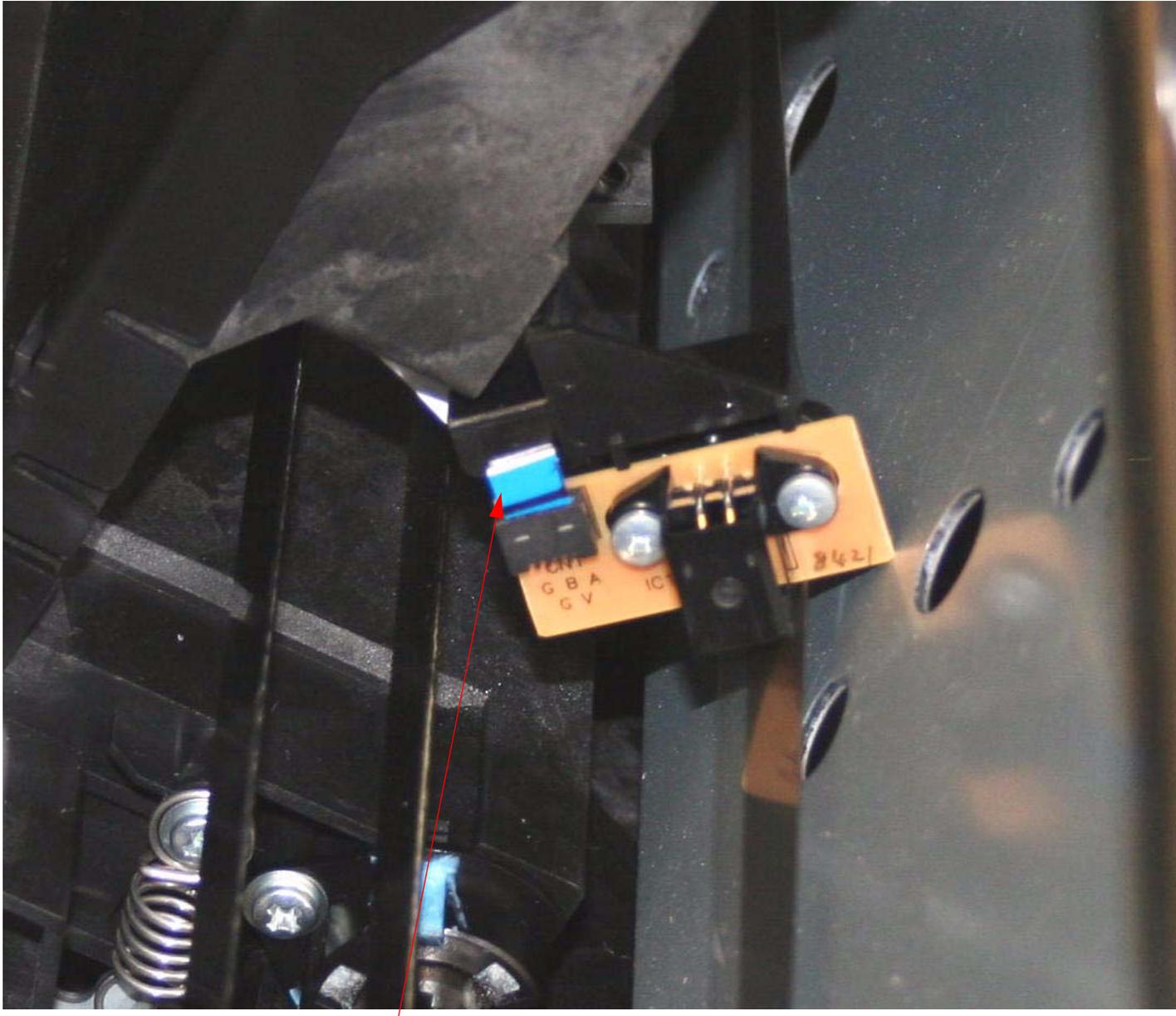


Right side of the **Carriage Mechanism**.



Remove **1 Screw**.

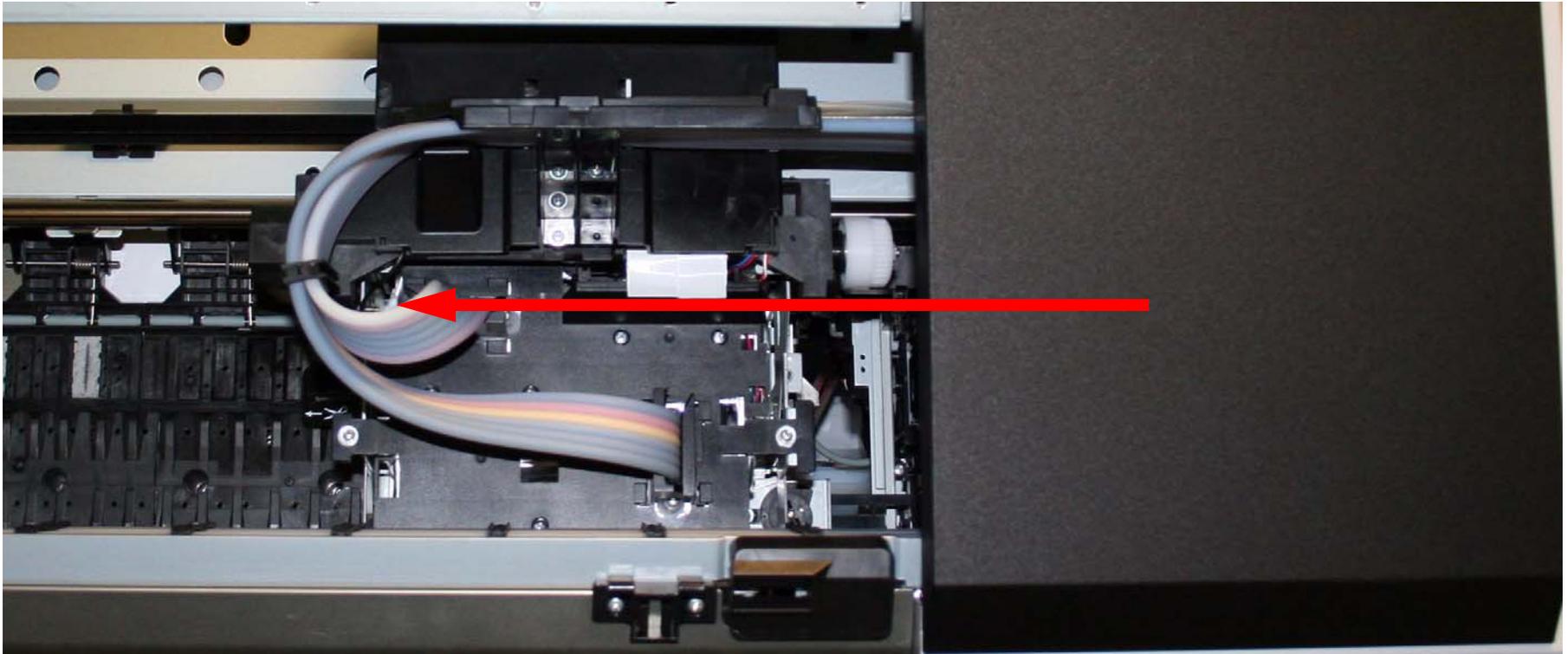
6. Unplug the **Foil Cable**, and remove the **Carriage Encoder**.



Unplug the **Foil Cable**, and remove the **Carriage Encoder**.

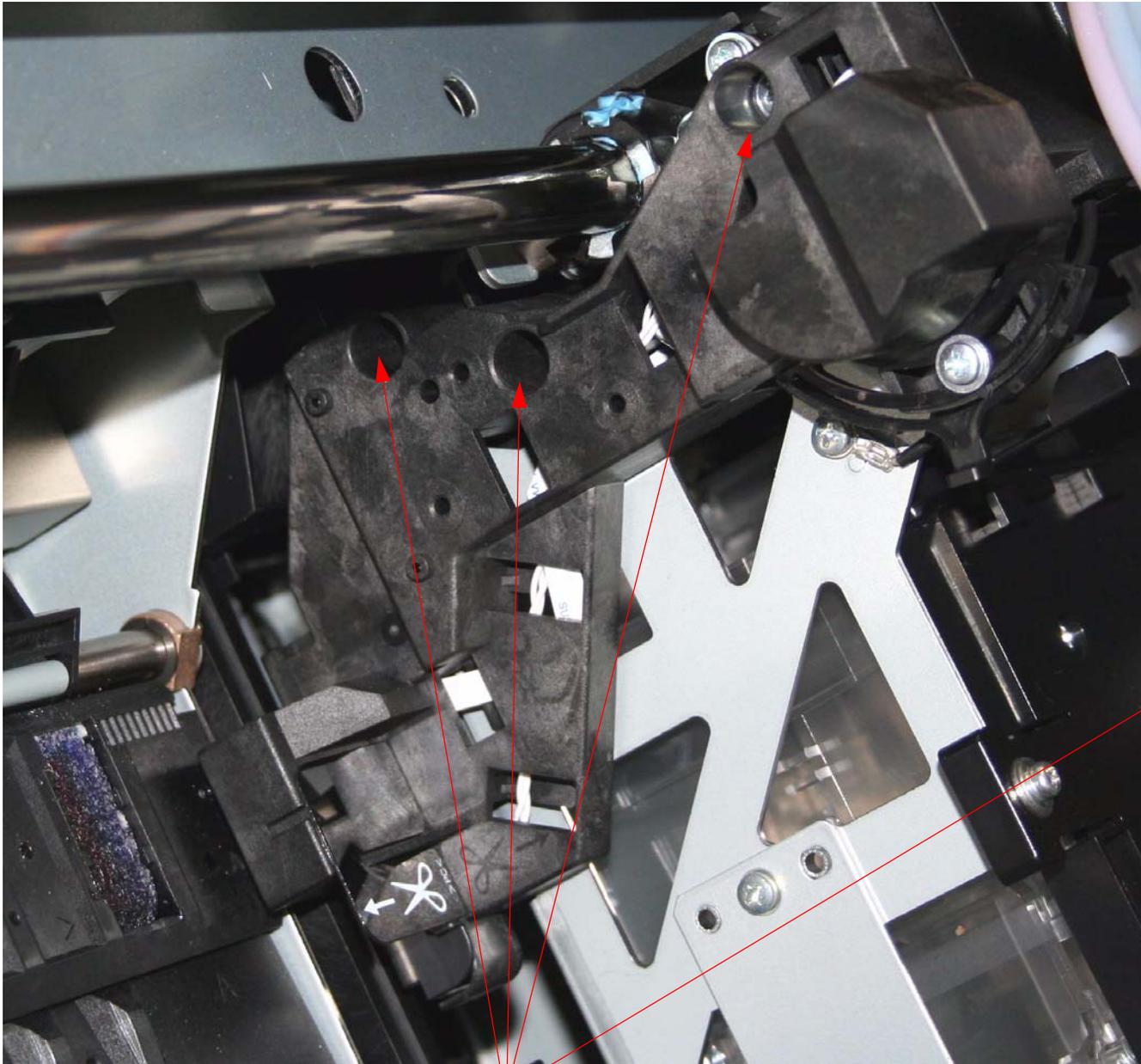
Sensor (Edge Detector) Removal

1. Release the **Carriage Mechanism**.
 - 1.1 Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
 - 1.2 Navigate to **SELF TESTING\Mecha Adjustment\IM Sensor Gap**
 - 1.3 Press the **Right Arrow** to display the **[Enter] Start**.
 - 1.4 Press the **OK** button to release the **Carriage**.
2. Move the **Carriage Mechanism** off of the “capped position”.



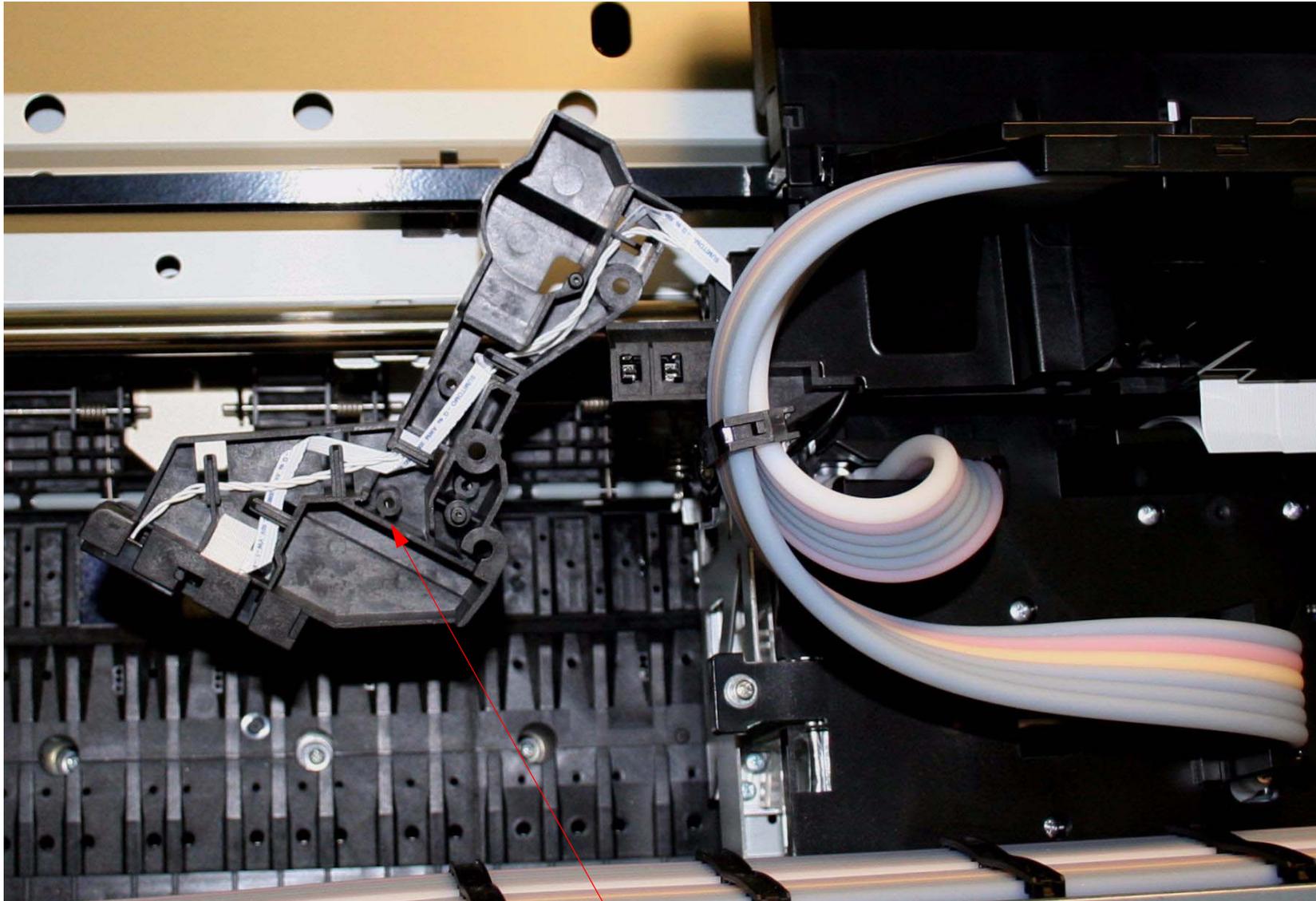
3. **Unplug the Printer.**

4. Remove **3 Screws** that fasten the **Sensor Bracket** in place.



Remove **3 Screws**.

5. Carefully remove, and rotate the **Sensor Bracket** exposing the **Cables**.



Expose the **Sensor Cables**.

6. Inspect the end of the **Sensor Bracket** and remove **1 Screw** and **1 Cover**.

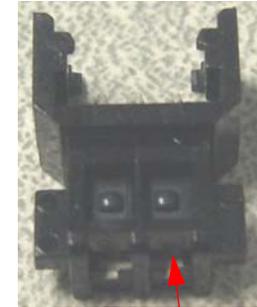
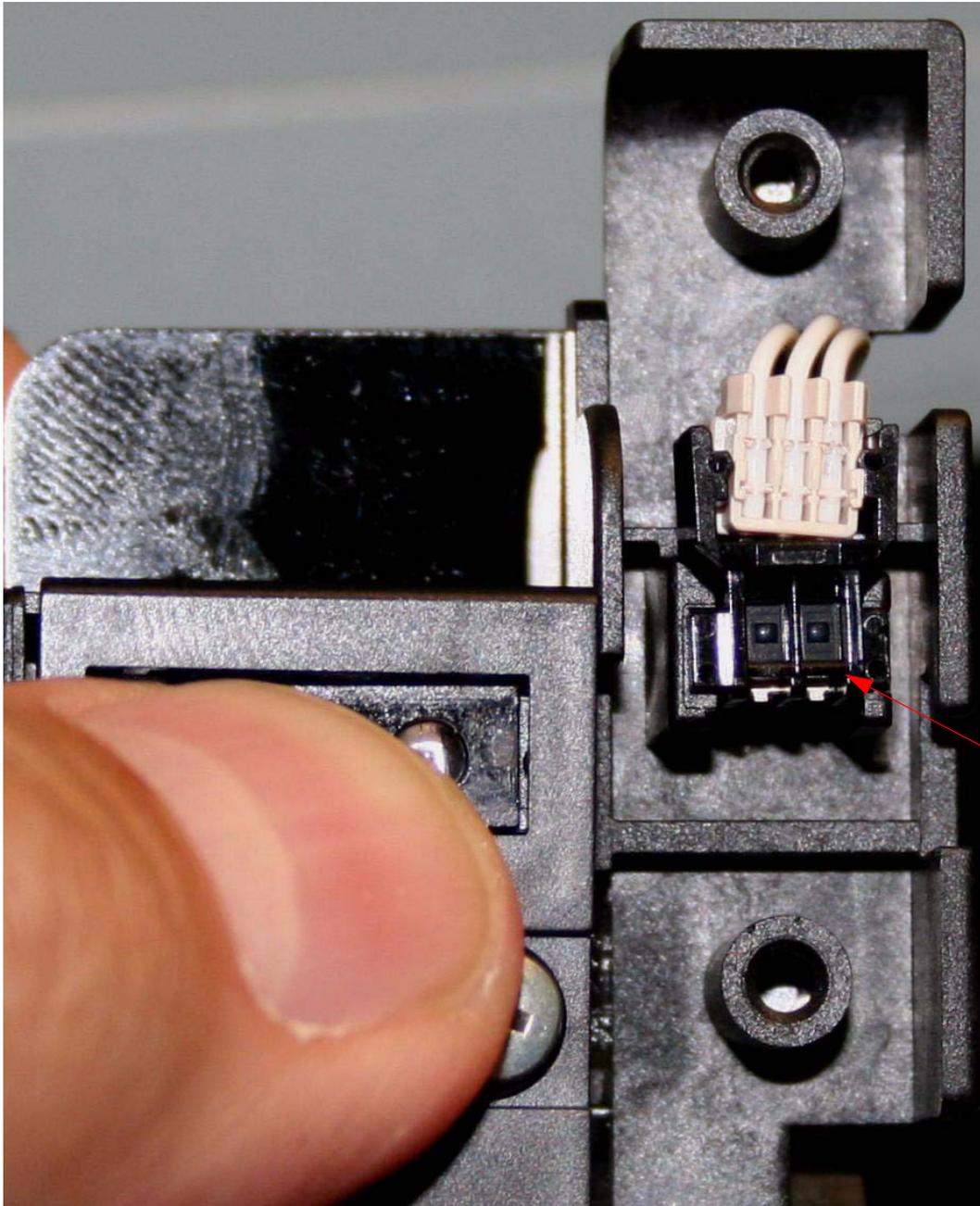


1. Remove **1 Screw**.



2. Remove the **Cover**.

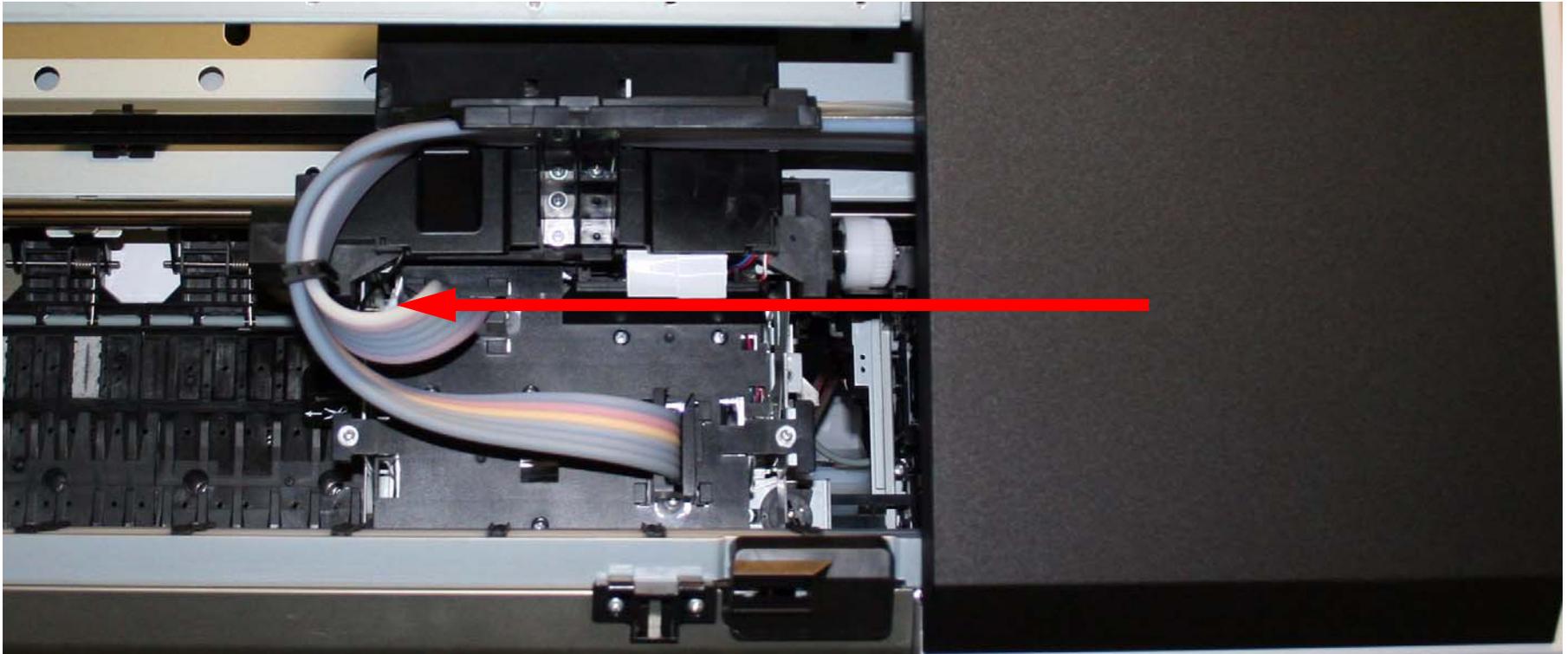
7. Remove the *Edge Detector*.



Lift out the **Sensor**, and unplug the **Cable**.

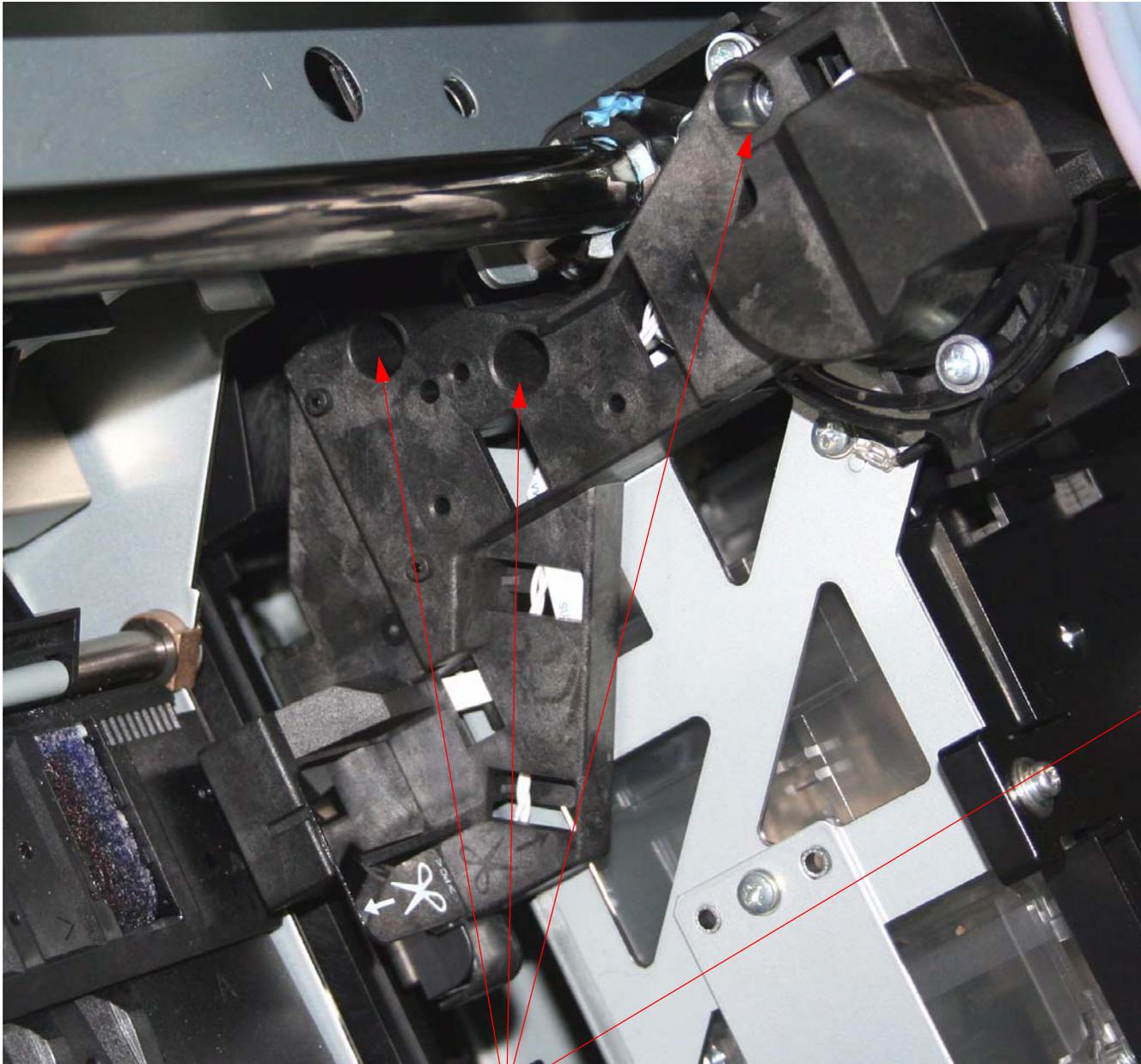
Sensor (Ink Mark) Removal

1. Release the **Carriage Mechanism**.
 - 1.1 Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
 - 1.2 Navigate to **SELF TESTING\Mecha Adjustment\IM Sensor Gap**
 - 1.3 Press the **Right Arrow** to display the **[Enter] Start**.
 - 1.4 Press the **OK** button to release the **Carriage**.
2. Move the **Carriage Mechanism** off of the “capped position”.



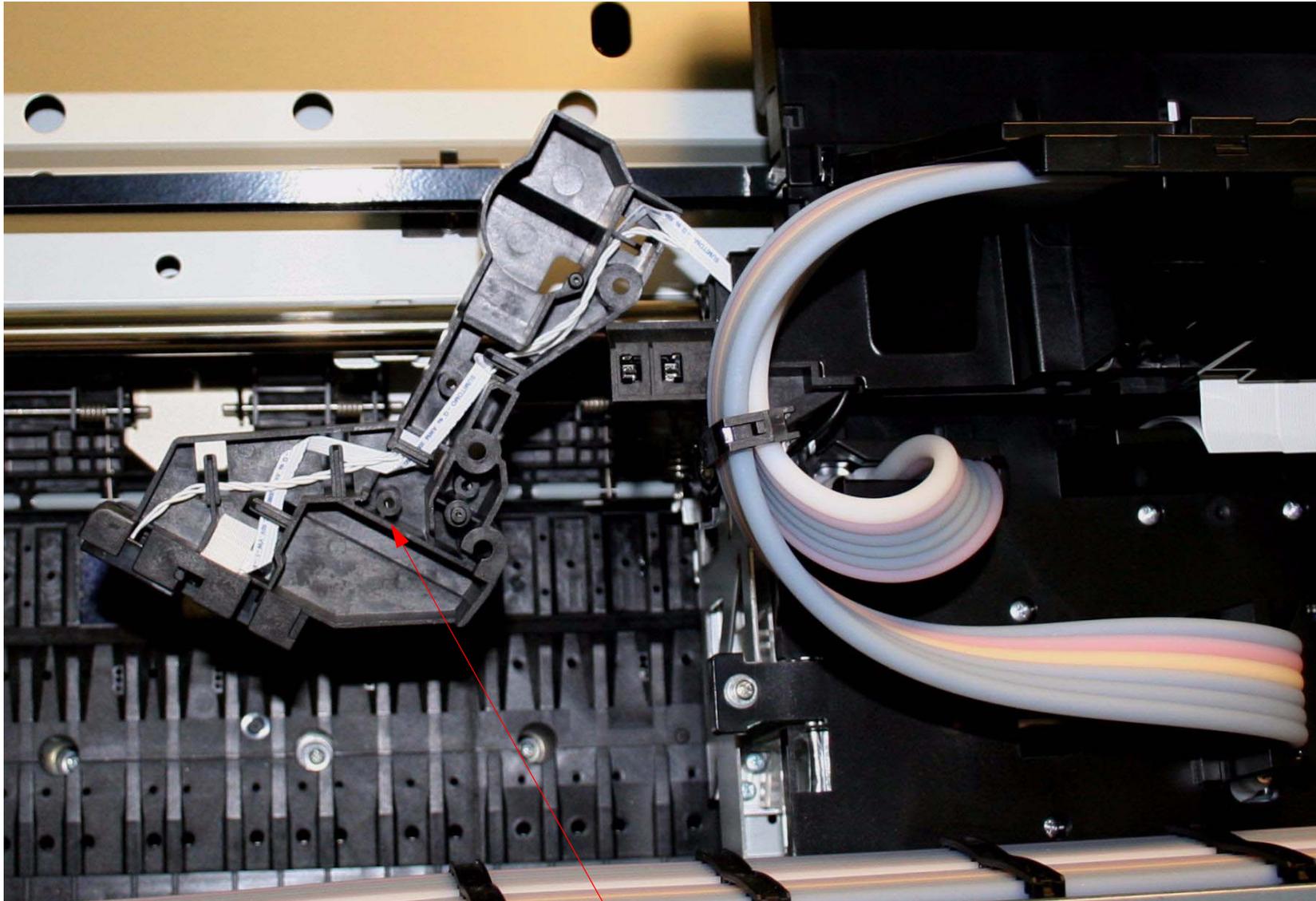
3. **Unplug the Printer.**

4. Remove **3 Screws** that fasten the **Sensor Bracket** in place.



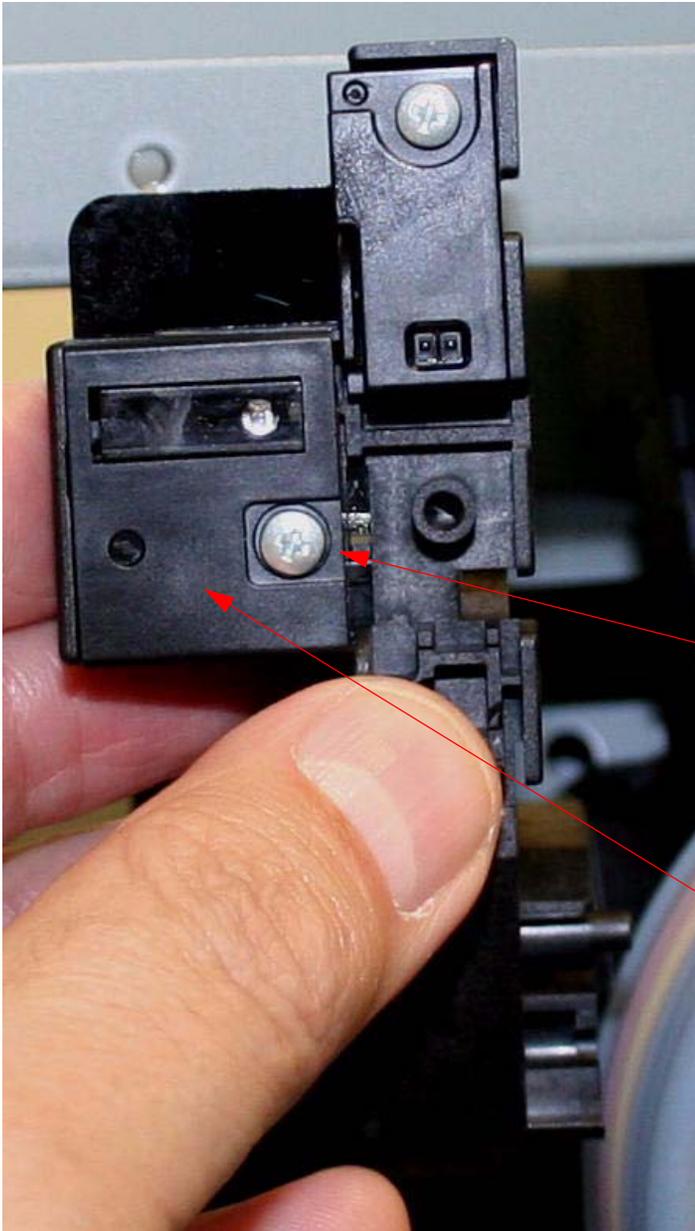
Remove **3 Screws**.

5. Carefully remove, and rotate the **Sensor Bracket** exposing the **Cables**.



Expose the **Sensor Cables**.

6. Inspect the end of the **Sensor Bracket** and remove **1 Screw** and **1 Cover**.

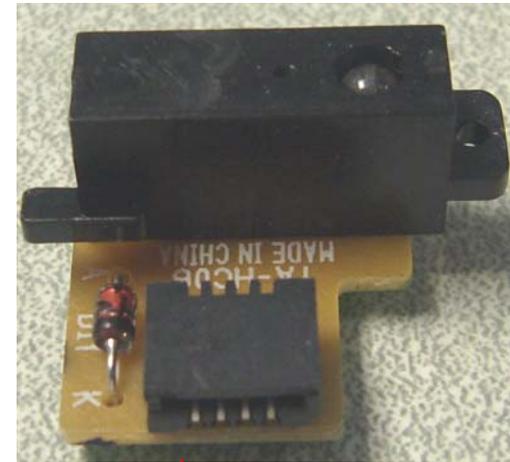
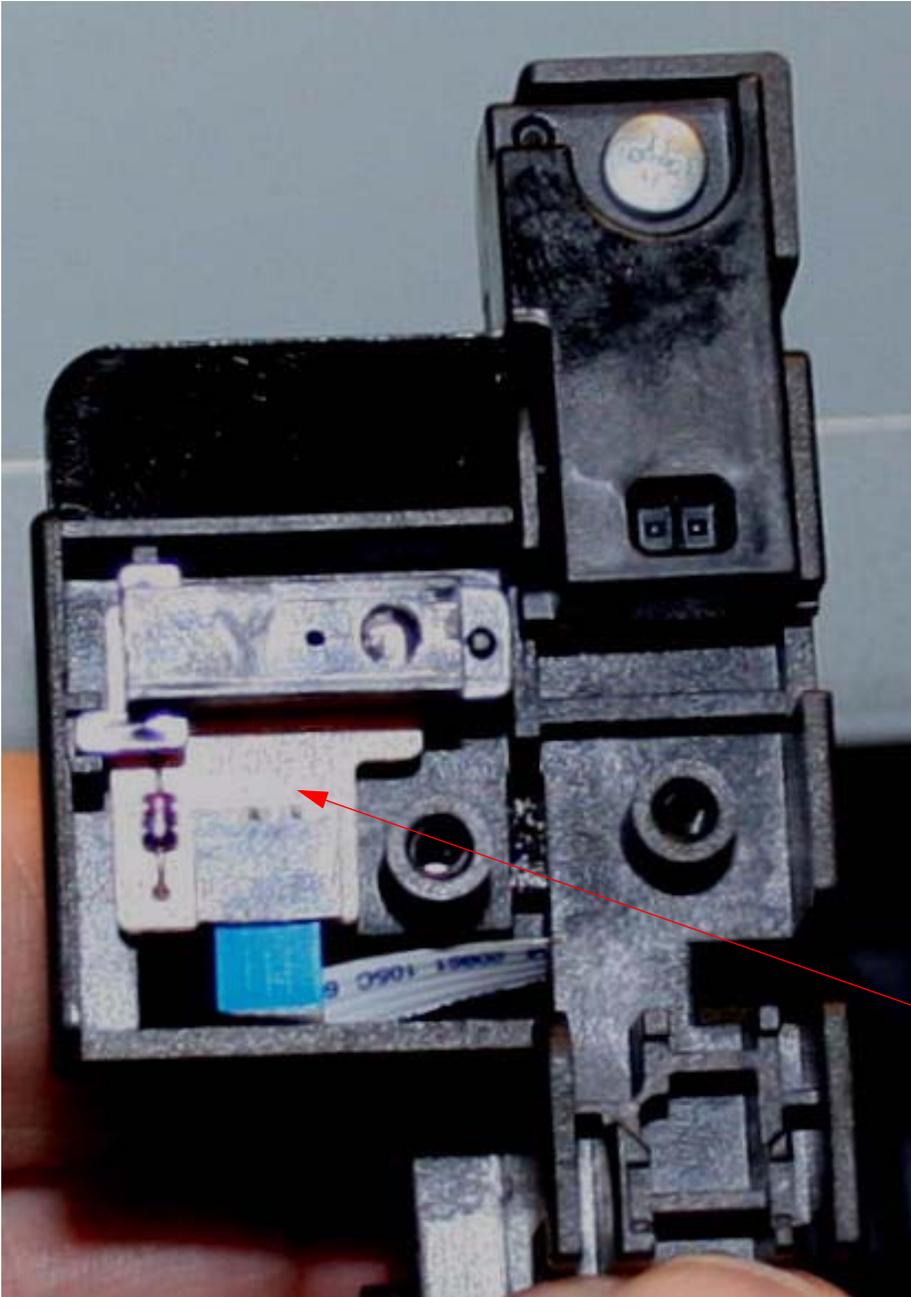


1. Remove **1 Screw**.



2. Remove the **Cover**.

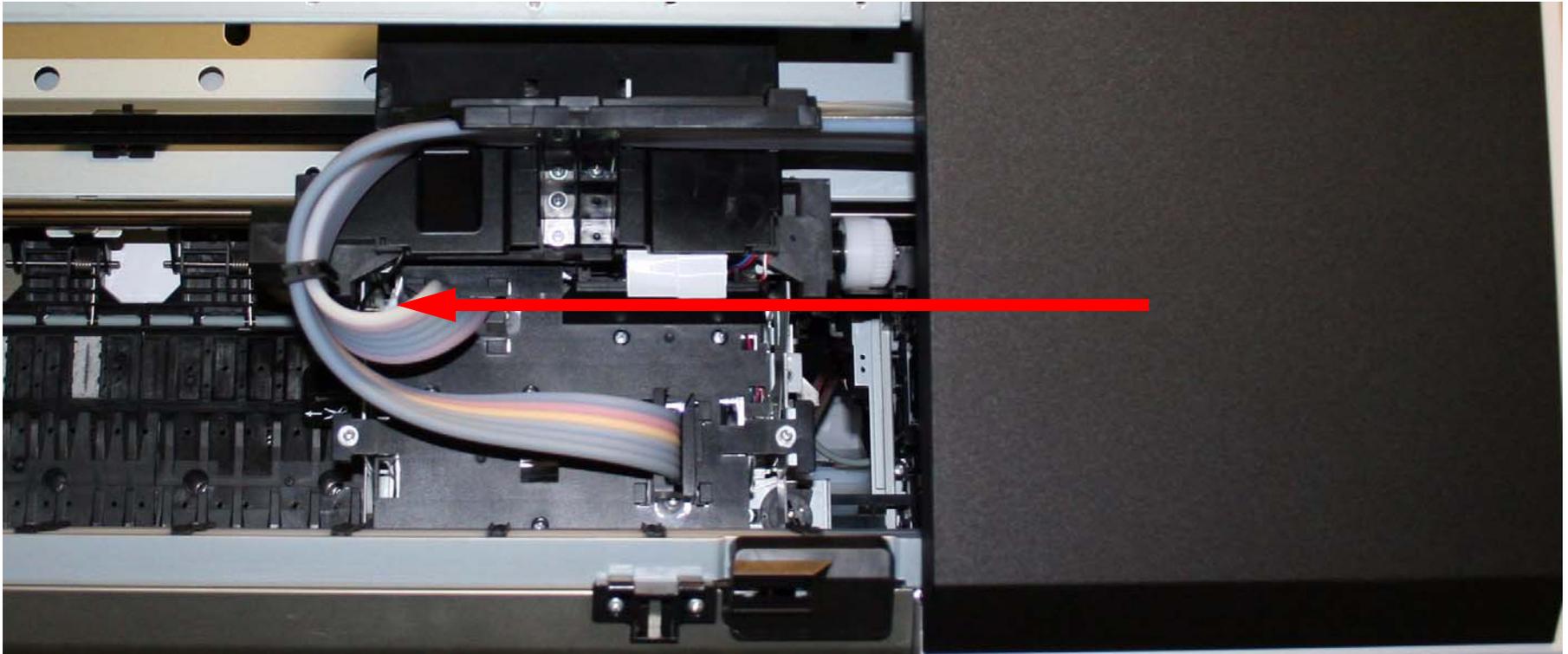
7. Remove the ***Ink Mark Sensor***.



Lift out the **Sensor**, and unplug the **Foil Cable**.

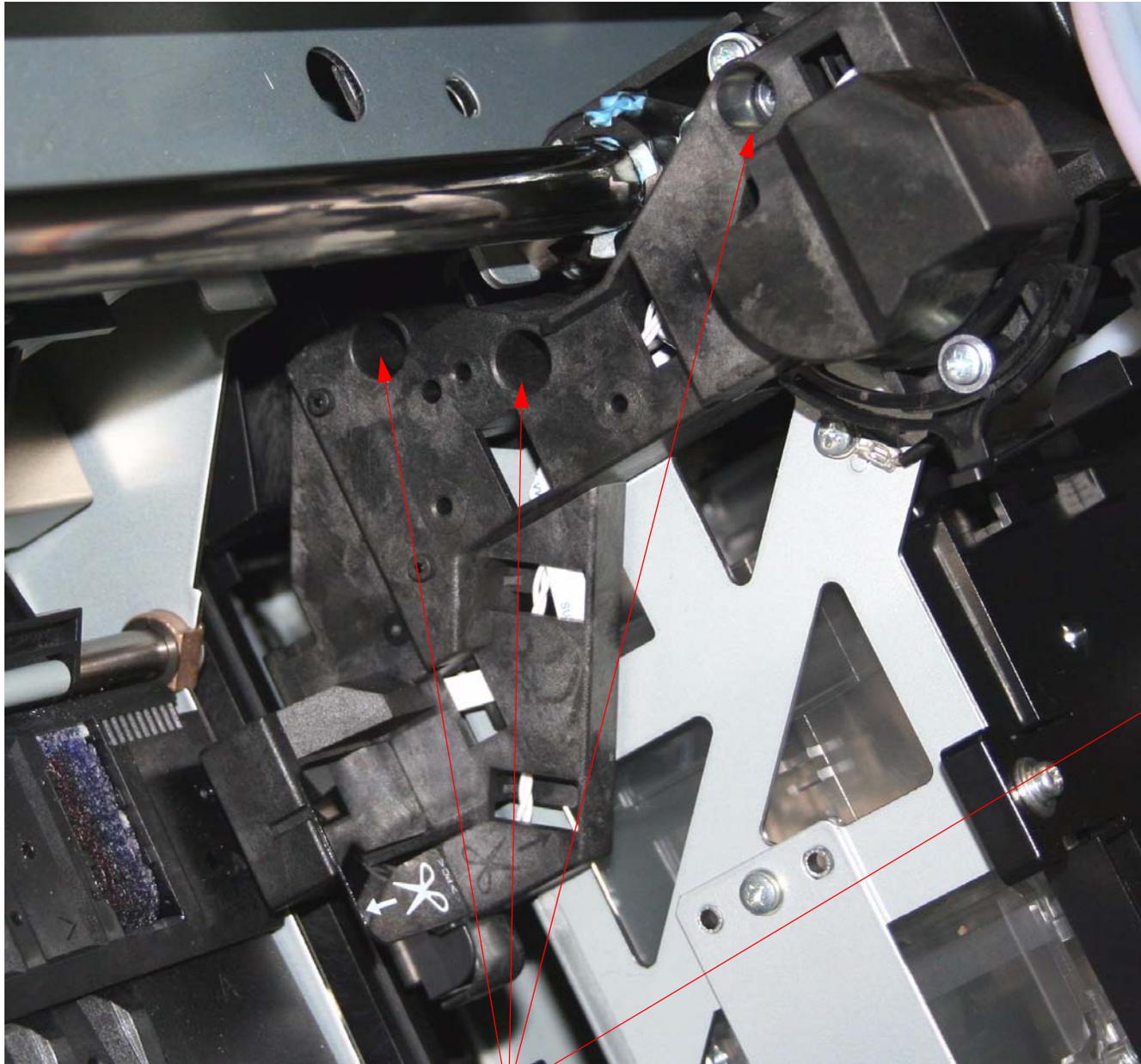
Sensor (Platen Gap) Removal

1. Release the **Carriage Mechanism**.
 - 1.1 Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
 - 1.2 Navigate to **SELF TESTING\Mecha Adjustment\IM Sensor Gap**
 - 1.3 Press the **Right Arrow** to display the **[Enter] Start**.
 - 1.4 Press the **OK** button to release the **Carriage**.
2. Move the **Carriage Mechanism** off of the “capped position”.



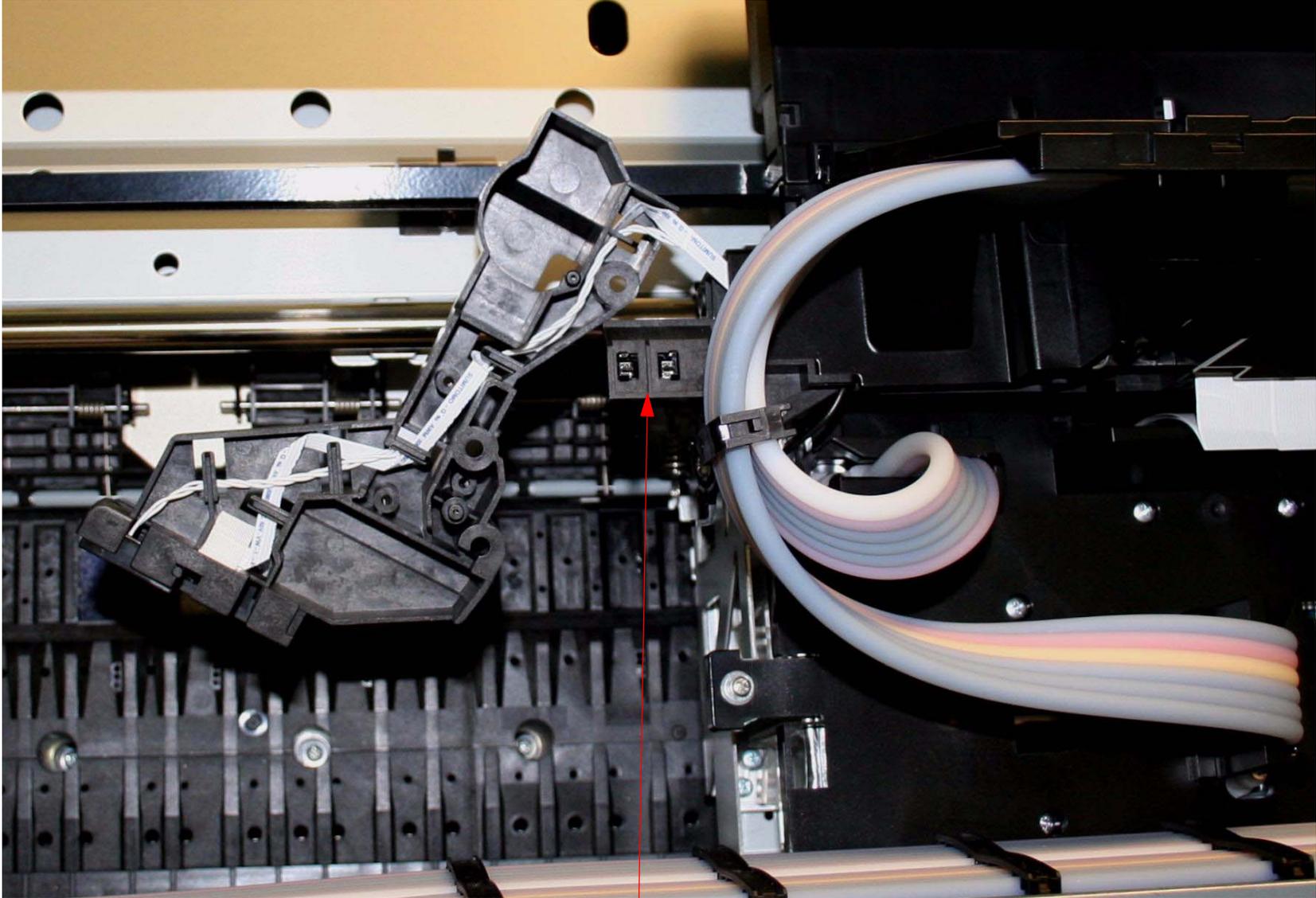
3. **Unplug the Printer.**

4. Remove **3 Screws** that fasten the **Sensor Bracket** in place.



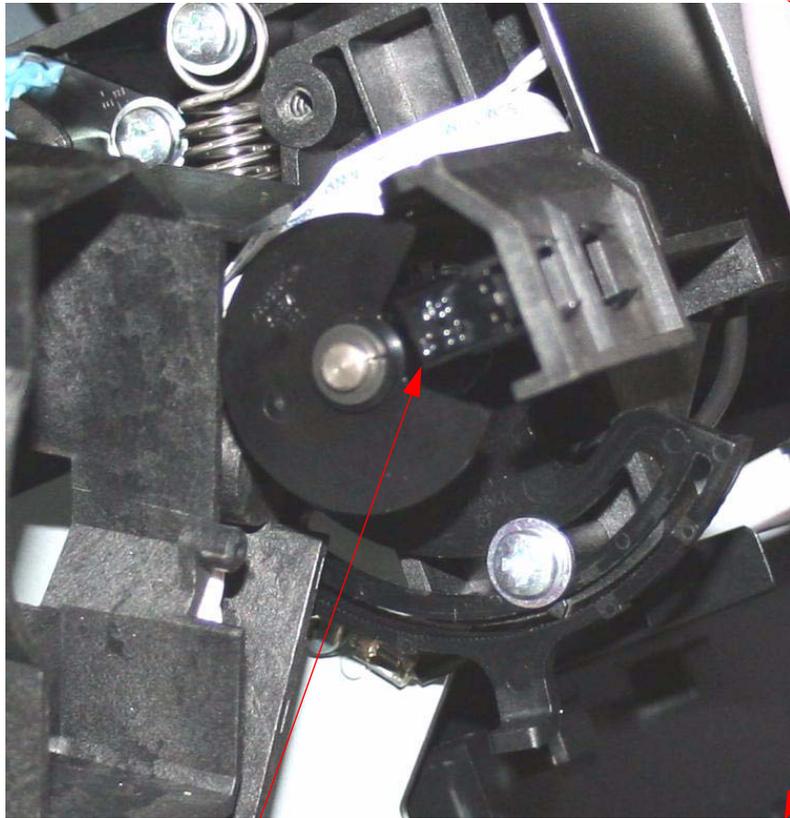
Remove **3 Screws**.

5. Carefully remove, and rotate the **Sensor Bracket** exposing the **Platen Gap Sensor**.

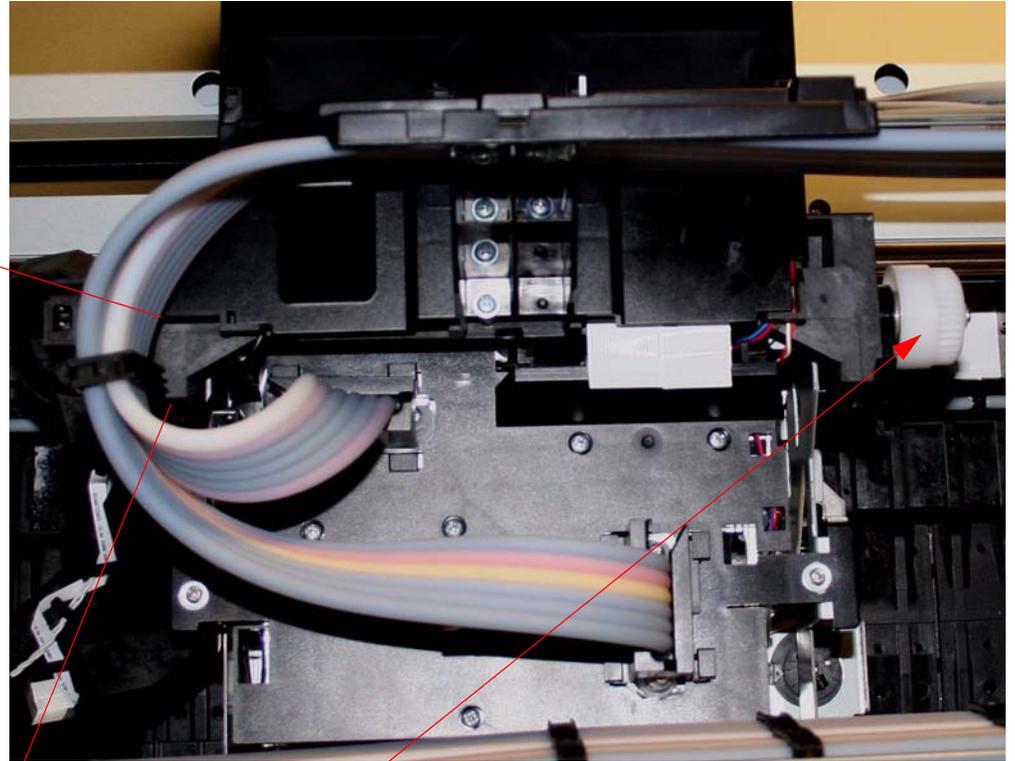


Expose the **Platen Gap Sensor**.

6. Turn the **Platen Gap Gear** until the **Home Position Window** is aligned with the **Sensor**.

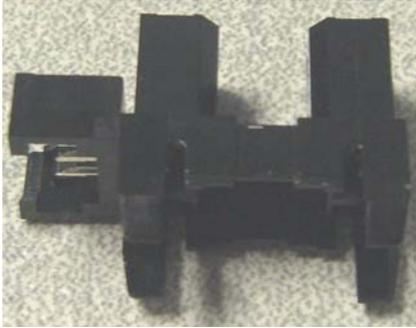


Sensor in the **Window**.

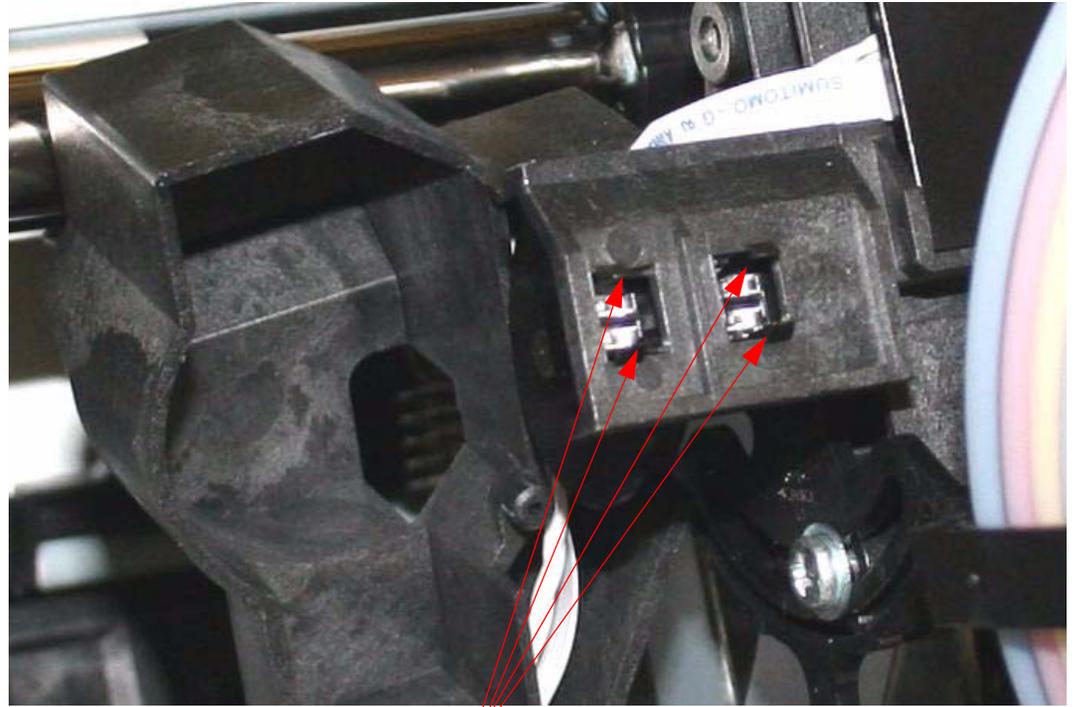


Turn this **Gear** until the Sensor is in the **Window**.

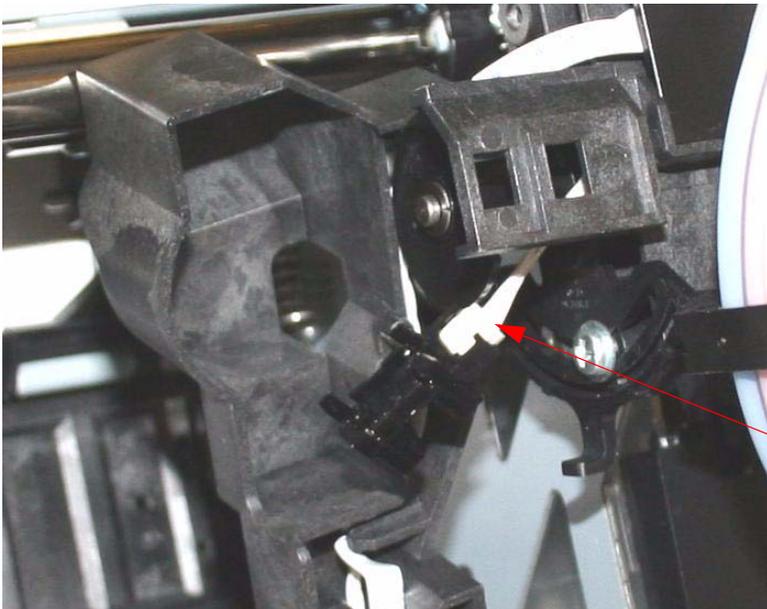
7. Remove the **Platen Gap Home Position Sensor**.



Platen Gap Home Position Sensor



1. Compress the **Interlocks** and remove the **Sensor**.



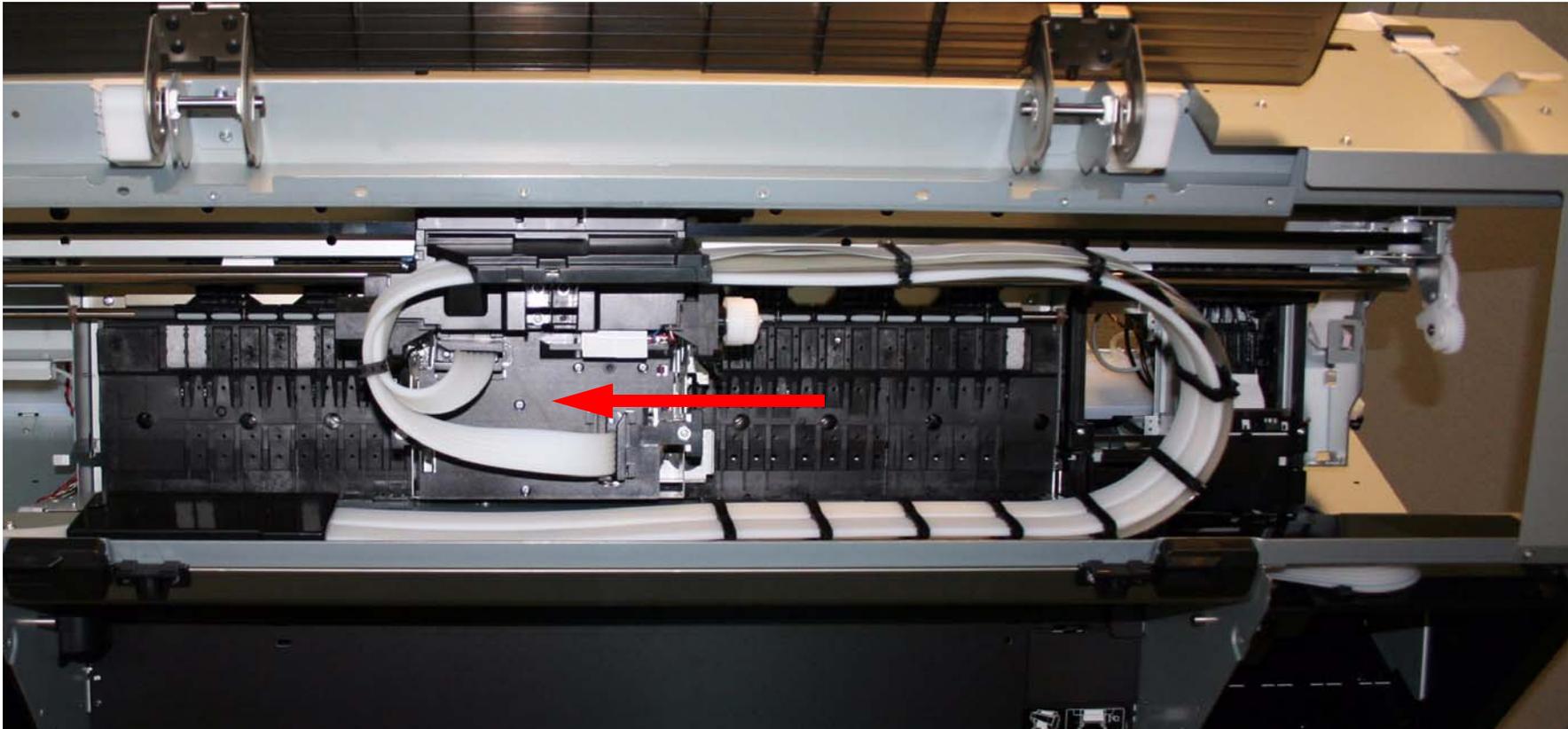
2. Unplug the **Cable**.

Wiper Blade Assembly Removal

Note: *Wiper Blade Assembly Part # 1504179*

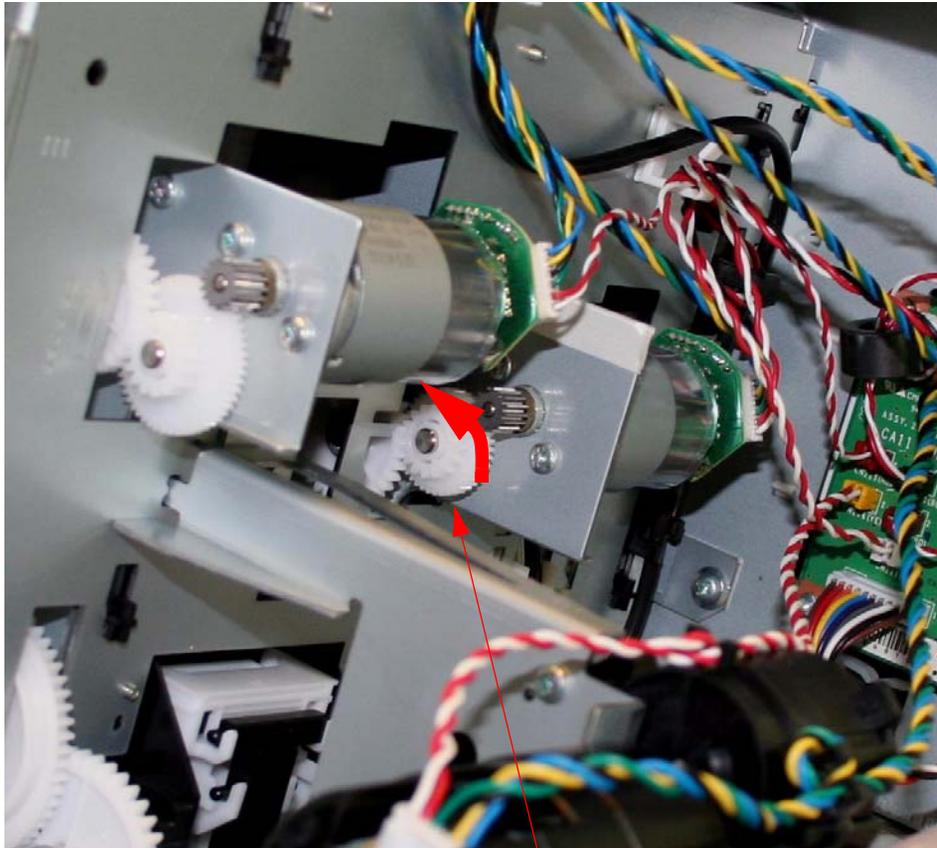
1. Remove the **Right Side Cover**.
2. Move the **Carriage Assembly** off the **Cleaning Unit**, towards the center of the **Printer**.
 - 2.1 Follow the directions in the Carriage Release (Manual) Chapter found in the Reference Section.

Note: *The Print Head is very fragile and can be damaged moving it away from the Cleaning Unit.*



Move the **Carriage Assembly** towards the center of the **Printer**.

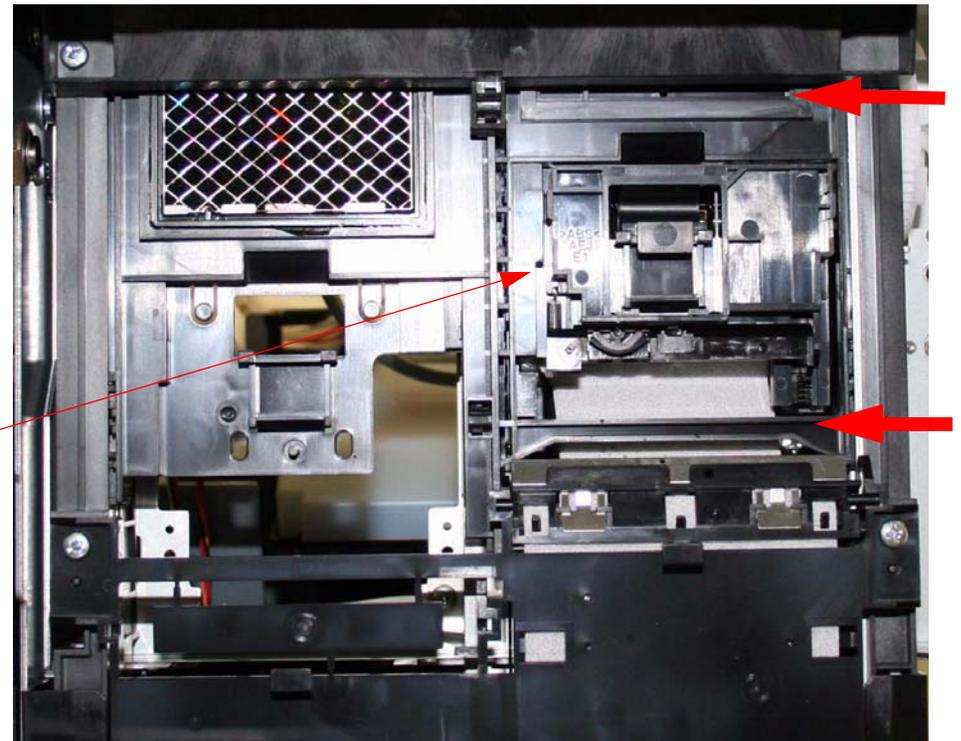
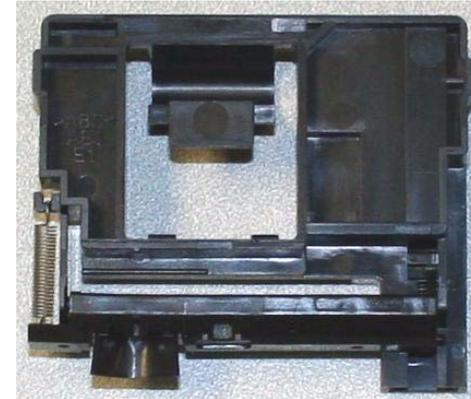
3. Rotate the **Flushing Box/Wiper Blade Motor** until the **Wiper Blade** is exposed.



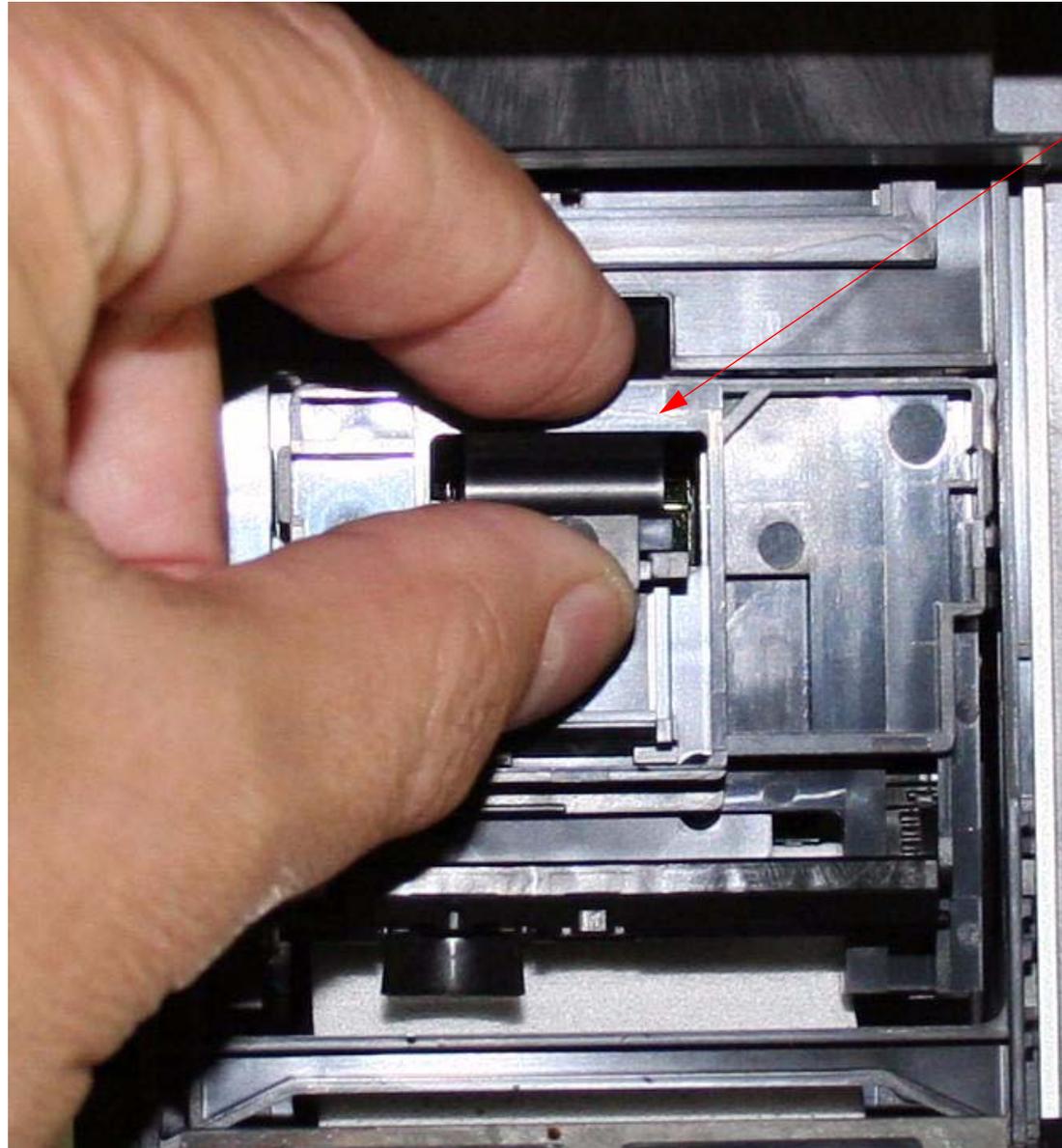
Rotate this Gear counter clockwise.....

Until the **Wiper Blade Assembly** is completely exposed

Wiper Blade Assembly.



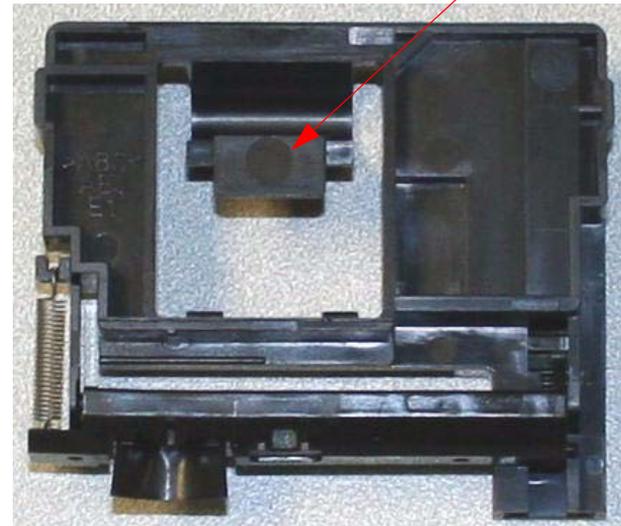
4. Remove the **Wiper Blade Assembly**.



1. Compress, and release, the **Wiper Blade Interlock**.

2. Lift out the **Wiper Blade Assembly**.

Wiper Blade Assembly Interlock



Wiper Blade Assembly

Troubleshooting

Printer Error Codes (Maintenance)

0002	Carriage Motor / Ink Tube is near end of life perform (<i>Clear Counter (when replacing CR motor)</i>)and (<i>Clear Counter (when replacing Ink Tube)</i>)
0008	RTC error (Replace the Battery and initialize the RTC with the Adjustment Wizard's <i>RTC & USBID</i> routine.
0010	Flushing Box Voltage error (Dirty flushing box grid or bad cable connection) Technician Required to repair.
0040	Cleaning Unit near end of life (<i>Clear Counter [when replacing Pump Motor]</i>)(Pump Assy, Pump Motor, Cap Assy, Wiper Blade, Flushing Box).
0080	Date is not set (initialize the RTC with the Adjustment Wizard's <i>RTC & USBID</i> routine.)
0088	RTC Battery low (Replace the battery, initialize the RTC with the Adjustment Wizard's <i>RTC & USBID</i> routine.)
0800	The Drip Pads in an Ink Bay is near end of life. <i>Clear Counter (when replacing Cartridge holder (Ink Pad)).</i>)
1000	The PK/MK Ink Selector is near end of life. <i>Clear Counter (when replacing Ink select motor).</i>
4000	After 2 attempts, the AID circuitry can detect no nozzles. Technician Required to repair.

Printer Error Codes (Service)

11xx Series Carriage Error Codes

Carriage Error Code	Error Name	Description	Remedy
1101	Carriage Motor End Of Life Error	The Carriage has made enough passes to wear out the Ink Tubes .	Inspect and replace the Ink Tubes if necessary, and reset the counters (Clear counter When replacing CR Motor) and (Clear counter When replacing Ink Tube)
1125	Carriage Home Position Error	The Carriage Home Position Sensor does not detect the Carriage Assembly.	<ol style="list-style-type: none"> 1. Check the CR HP Sensor. 2. Check for proper Carriage movement. 3. Check the Main Board.
1138	Over Current Error	The Carriage Motor Driver Circuit detects abnormal current draw.	<ol style="list-style-type: none"> 1. Check for proper Carriage movement (defective Carriage Bearings, etc.). 2. Check for proper Carriage Belt Tension. 3. Check the Carriage Motor.
113A	Over Current Error	The Carriage Motor Driver Circuit detects abnormal current draw.	<ol style="list-style-type: none"> 1. Check for proper Carriage movement (defective Carriage Bearings, etc.). 2. Check for proper Carriage Belt Tension. 3. Check the Carriage Motor.
113B	Carriage Over Speed Error	The Carriage Encoder signal does not look right to the Main Board .	<ol style="list-style-type: none"> 1. Check the CR Encoder Strip. 2. Check the CR Encoder. 3. Check the Carriage Motor.

Carriage Error Code	Error Name	Description	Remedy
113C	Carriage Encoder Reversing Error	The Carriage Encoder reports that the Carriage is moving in the wrong direction.	<ol style="list-style-type: none"> 1. Check the CR Encoder. 2. Check the Main Board.
113D	Carriage Encoder Movement Error	The Carriage Encoder reports that the Carriage is not moving or moving slow.	<ol style="list-style-type: none"> 1. Check the CR Encoder. 2. Check the CR Encoder Strip. 3. Check the Main Board.
113E	Carriage Encoder Velocity Error	The Carriage Encoder reports that the Carriage is moving at an irregular speed.	<ol style="list-style-type: none"> 1. Check the CR Encoder Strip. 2. Check the CR Encoder. 3. Check the Carriage Motor. 4. Check the Main Board.
113F	Carriage Encoder Velocity Error	The Carriage Encoder reports that the Carriage is moving at an irregular speed.	<ol style="list-style-type: none"> 1. Check Carriage Movement. 2. Check the CR Encoder Strip. 3. Check the CR Encoder. 4. Check the Carriage Motor. 5. Check the Main Board.

12xx Series Paper Feed Error Codes

Paper Feed Error Codes	Explanation	Description	Remedy
1223	Paper Feed Encoder Check Error	The Paper Feed Encoder signal does not look right to the Main Board .	<ol style="list-style-type: none"> 1. Check the PF Encoder Disk. 2. Check the PF Encoder. 3. Check the Paper Feed Motor.
1225	Paper Feed Motor Positioning Time Out	The Paper Feed Encoder reports that the Paper Feed Roller does not move properly.	<ol style="list-style-type: none"> 1. Check for proper Paper Feed Roller movement. 2. Check for proper Paper Feed Belt tension. 3. Check the Paper Feed Encoder. 4. Check the Paper Feed Encoder Disk. 5. Check the Paper Feed Motor
1227	Paper Feed Motor is out of step.	The Paper Feed Encoder reports that the Paper Feed Roller does not move properly.	<ol style="list-style-type: none"> 1. Check for proper Paper Feed Roller movement. 2. Check for proper Paper Feed Belt tension. 3. Check the Paper Feed Encoder. 4. Check the Paper Feed Encoder Disk. 5. Check the Paper Feed Motor

Paper Feed Error Codes	Explanation	Description	Remedy
122A	Paper Feed Motor Overload Error	The Paper Feed Motor Driver Circuit detects abnormal current draw.	<ol style="list-style-type: none"> 1. Check for proper Paper Feed Roller Pressurization (look for binding). 2. Check for proper Paper Feed Belt Tension. 3. Check the Paper Feed Encoder. 4. Check the Paper Feed Encoder Disk. 5. Check the Paper Feed Motor
122B	Paper Feed Motor overspeed error.	The Paper Feed Encoder reports that the Paper Feed Roller is moving too fast.	<ol style="list-style-type: none"> 1. Check the Paper Feed Encoder. 2. Check the Main Board
122C	Paper Feed Encoder Reversing Error	The Paper Feed Encoder reports that the Paper Feed Roller is moving in the wrong direction.	<ol style="list-style-type: none"> 1. Check the Paper Feed Encoder. 2. Check the Main Board.
123D	Paper Feed Encoder Movement Error	The Paper Feed Encoder reports that the Paper Feed Roller is not moving or moving slow.	<ol style="list-style-type: none"> 1. Check the Paper Feed Encoder. 2. Check the Paper Feed Encoder Disk. 3. Check the Main Board.

Paper Feed Error Codes	Explanation	Description	Remedy
122E	Paper Feed Motor Velocity error.	The Paper Feed Encoder reports that the Paper Feed Roller is moving at and irregular speed.	<ol style="list-style-type: none"> 1. Check for proper Paper Feed Roller Pressurization (look for binding). 2. Check for proper Paper Feed Belt Tension. 3. Check the Paper Feed Encoder. 4. Check the Paper Feed Encoder Disk. 5. Check the Paper Feed Motor
122F	Paper Feed Motor Velocity error.	The Paper Feed Encoder reports that the Paper Feed Roller is moving at and irregular speed.	<ol style="list-style-type: none"> 1. Check for proper Paper Feed Roller Pressurization (look for binding). 2. Check for proper Paper Feed Belt Tension. 3. Check the Paper Feed Encoder. 4. Check the Paper Feed Encoder Disk. 5. Check the Paper Feed Motor

13xx Ink Cover Error

Ink Cover Error Codes	Explanation	Description	Remedy
131B	Thermistor Sensor Error	The Thermistor on the Print Head Driver reports an over temperature condition	<ol style="list-style-type: none"> 1. Re-seat the Print Head Cables on the Main Board side. 2. Re-seat the Print Head Cables on the Print Head side. 3. Replace the Main Board. 4. Replace the Print Head.
13F0	Ink Cover Unlock Error	The Ink Cover Release Solenoid is not functioning.	<ol style="list-style-type: none"> 1. Check the Ink Cover Solenoid. 2. Check the Ink Cover Sensor. 3. Replace the Main Board.

14xx Series Ink System and Cap Assembly Errors

Ink System Error Codes	Explanation	Description	Remedy
1411	Selection Valve Home Position Error	The Photo/Matte Black Valve is not working properly.	<ol style="list-style-type: none"> 1. Check the Damper (Selector) Assembly. 2. Check the Main Board.
1412	Cleaning Pump end of life error	The Cleaning Pump has reached end of life.	<ol style="list-style-type: none"> 1. Replace the Ink System. 2. Reset the counter (Clear Counter when replacing Pump motor)
1419	Cleaning Pump release error	The Cleaning Pump does not disengage properly.	<ol style="list-style-type: none"> 1. Check the Ink System. 2. Check the Main Board.

Ink System Error Codes	Explanation	Description	Remedy
141A	Over Current Error	The Cleaning Pump Motor draws too much current	1. Check the Ink System . 2. Check the Main Board .
141B	Over Speed Error	The Cleaning Pump Motor spins too fast.	1. Check the Ink System . 2. Check the Main Board .
141C	Rotation Direction Error	The Cleaning Pump Motor spins in the wrong direction.	1. Check the Ink System . 2. Check the Main Board .
141D	Driving Time Out Error	The Cleaning Pump Motor does not spin, or spins too long.	1. Check the Ink System . 2. Check the Main Board .
141E	Velocity Deviation Error	The Cleaning Pump Motor spins at irregular speeds.	1. Check the Ink System . 2. Check the Main Board .
141F	Under Speed Error	The Cleaning Pump Motor spins too slow.	1. Check the Ink System . 2. Check the Main Board .
1427	CSIC Error	The CSIC (Ink Cartridge) is manufactured for a different country (market).	Replace the Ink Cartridge with one manufactured for the correct country (market).
1428	CSIC Error	Sub Board D (CSIC Board) on one or both of the Ink Bays is defective.	Replace the defective Sub Board D .
1430	Cartridge Holder Maintenance Error	The Ink Drip Pad located inside each Ink Bay could be filled.	1. Replace the Ink Bay 2. Reset the counter (Clear Counter when replacing Ink holder)

Ink System Error Codes	Explanation	Description	Remedy
1431	Ink Selector Life Error	The PK/MK Ink Selector Assembly has reached its end of life.	<ol style="list-style-type: none"> 1. Replace the Damper (Selector) Assembly. 2. Reset the counter (Clear Counter when replacing Ink select motor)
1434	Ink Cover Unlock Error	The Ink Cover Sensor does not report the Ink Cover opening.	<ol style="list-style-type: none"> 1. Check the operation of the Ink Cover. 2. Check the Ink Bay Cover Release / Sensor Assembly.
1438	Maintenance Tank Error	The Maintenance Tank is manufactured for a different country (market).	Replace the Maintenance Tank with one manufactured for the correct country (market).
1439	Cap Error	The Cap "home position" can not be detected.	<ol style="list-style-type: none"> 1. Cycle power to the Printer. 2. Replace the Cap Assembly.
143A	Cap Motor over current error	The Cap Motor draws too much current	<ol style="list-style-type: none"> 1. Check the Ink System. 2. Check the Main Board.
143B	Over Speed Error	The Cap Motor spins too fast.	<ol style="list-style-type: none"> 1. Check the Ink System. 2. Check the Main Board.
143C	Rotation Direction Error	The Cap Motor spins in the wrong direction.	<ol style="list-style-type: none"> 1. Check the Ink System. 2. Check the Main Board.
143D	Driving Time Out Error	The Cap Motor does not spin, or spins too long.	<ol style="list-style-type: none"> 1. Check the Ink System. 2. Check the Main Board.
143E	Velocity Deviation Error	The Cap Motor spins at irregular speeds.	<ol style="list-style-type: none"> 1. Check the Ink System. 2. Check the Main Board.

Ink System Error Codes	Explanation	Description	Remedy
143F	Under Speed Error	The Cap Motor spins too slow.	1. Check the Ink System . 2. Check the Main Board .
144A	Over Current Error	Air Pressure Motor draws too much current.	1. Check the Pressure Pump Assembly . 2. Check the Main Board .
144B	Over Speed Error	The Air Pressure Motor spins too fast.	1. Check the Pressure Pump Assembly . 2. Check the Main Board .
144C	Rotation Direction Error	The Air Pressure Moderations in the wrong direction.	1. Check the Pressure Pump Assembly . 2. Check the Main Board .
144D	Driving Time Out Error	The Air Pressure Motor does not spin, or spins too long.	1. Check the Pressure Pump Assembly . 2. Check the Main Board .
144E	Velocity Deviation Error	The Air Pressure Motor spins at irregular speeds.	1. Check the Pressure Pump Assembly . 2. Check the Main Board .
144F	Under Speed Error	The Air Pressure Motor spins too slow.	1. Check the Pressure Pump Assembly . 2. Check the Main Board .
1489	Wiper home position error	The Wiper's home position can not be detected	1. Check the Ink System . 2. Check the Main Board .
148A	Over Current Error	The Flushing Box Motor draws too much current	1. Check the Ink System . 2. Check the Main Board .
148B	Over Speed Error	The Flushing Box Motor spins too fast.	1. Check the Ink System . 2. Check the Main Board .

Ink System Error Codes	Explanation	Description	Remedy
148C	Rotation Direction Error	The Flushing Box Motor spins in the wrong direction.	1. Check the Ink System . 2. Check the Main Board .
148D	Driving Time Out Error	The Flushing Box Motor does not spin, or spins too long.	1. Check the Ink System . 2. Check the Main Board .
148E	Velocity Deviation Error	The Flushing Box Motor spins at irregular speeds.	1. Check the Ink System . 2. Check the Main Board .
148F	Under Speed Error	The Flushing Box Motor spins too slow.	1. Check the Ink System . 2. Check the Main Board .
1494	Ink Selector Error	Switching between PK/MK does not work	1. Replace the Damper (Selector) Assembly . 2. Check the Main Board .
1496	Ink Selector Error	Switching between PK/MK does not work	1. Replace the Damper (Selector) Assembly . 2. Check the Main Board .

Ink System Error Codes	Explanation	Description	Remedy
1497	Switching Time Out Error	Switching between PK/MK does not work	<p>Note: Corrupted or incorrect <i>Parameters</i> can cause this error. For example: <i>Selector Sensor</i> set to Photo Black and the <i>Parameters</i> set to Matte Black.</p> <ol style="list-style-type: none"> 1. Test the <i>Selector Assembly</i> using the Self Testing/Mecha Adjustment/Selector Check function. 2. Install <i>Generic Parameters</i> that match the <i>Printers</i> current mode (ie: <i>Photo Black Parameters</i> on a <i>Printer</i> in photo black mode etc.) 3. Replace the <i>Damper (Selector) Assembly</i>. 4. Check the <i>Main Board</i>.
149D	Driving Time Out Error	Switching between PK/MK takes too long.	<ol style="list-style-type: none"> 1. Replace the <i>Damper (Selector) Assembly</i>. 2. Check the <i>Main Board</i>.

15xx Series Auto Platen Gap and Ink System Errors

APG and ASF Errors	Explanation	Description	Remedy
1501	Release Phase Detection Error	The <i>Pinch Roller Release Home Position Sensor</i> does not report to the <i>Main Board</i> .	<ol style="list-style-type: none"> 1. Check the operation of the <i>Pinch Roller Release Mechanism</i>. 2. Check the <i>Pinch Roller Release Home Position Sensor</i>. 3. Check the <i>Pinch Roller Release Motor</i>. 4. Check the <i>Main Board</i>.
150C	Platen Gap Home Position Detection Error	The <i>Platen Gap Home Position Sensor</i> does not report to the <i>Main Board</i> .	<ol style="list-style-type: none"> 1. Check the operation of the <i>Platen Gap Mechanism</i>. 2. Check the <i>Platen Gap Home Position Sensor</i>. 3. Check the <i>Platen Gap Motor</i>. 4. Check the <i>Main Board</i>.
151A	Over Current Error	The <i>Platen Gap Motor</i> draws too much current	<ol style="list-style-type: none"> 1. Check the <i>Platen Gap Motor</i>. 2. Check the <i>Main Board</i>.
151B	Over Speed Error	The <i>Platen Gap Motor</i> spins too fast.	<ol style="list-style-type: none"> 1. Check the <i>Platen Gap Motor</i>. 2. Check the <i>Main Board</i>.
151C	Rotation Direction Error	The <i>Platen Gap Motor</i> spins in the wrong direction.	<ol style="list-style-type: none"> 1. Check the <i>Platen Gap Motor</i>. 2. Check the <i>Main Board</i>.
151D	Driving Time Out Error	The <i>Platen Gap Motor</i> does not spin, or spins too long.	<ol style="list-style-type: none"> 1. Check the <i>Platen Gap Motor</i>. 2. Check the <i>Main Board</i>.

APG and ASF Errors	Explanation	Description	Remedy
151E	Velocity Deviation Error	The Platen Gap Motor spins at irregular speeds.	1. Check the Platen Gap Motor . 2. Check the Main Board .
151F	Under Speed Error	The Platen Gap Motor spins too slow.	1. Check the Platen Gap Motor . 2. Check the Main Board .
152A	Over Current Error	The Rewind Motor draws too much current	1. Check the Rewind Motor . 2. Check the Main Board .
152B	Over Speed Error	The Rewind Motor spins too fast.	1. Check the Rewind Motor . 2. Check the Main Board .
152C	Rotation Direction Error	The Rewind Motor spins in the wrong direction.	1. Check the Rewind Motor . 2. Check the Main Board .
152D	Driving Time Out Error	The Rewind Motor does not spin, or spins too long.	1. Check the Rewind Motor . 2. Check the Main Board .
152E	Velocity Deviation Error	The Rewind Motor spins at irregular speeds.	1. Check the Rewind Motor . 2. Check the Main Board .
152F	Under Speed Error	The Rewind Motor spins too slow.	1. Check the Rewind Motor . 2. Check the Main Board .
1530	Pinch Roller Release Home Position Detection Error	The Pinch Roller Release Home Position Sensor does not report to the Main Board .	1. Check the Pinch Roller Release Motor . 2. Check the Pinch Roller HP Sensor . 3. Check the Main Board .

APG and ASF Errors	Explanation	Description	Remedy
1536	Pressure Sensor Error	The Air Pressure Sensor always reports pressure.	<ol style="list-style-type: none"> 1. Visually check the Pressure sensor on the Pressure Pump Assembly 2. Replace the Pressure Pump Assembly. 3. Replace the Main Board.
1537	Air Pressurization Error	The Air Pressure Sensor reports insufficient air pressure.	<ol style="list-style-type: none"> 1. Check Ink Cartridges. 2. Check Pressure Pump. 3. Check Ink Bays.
153A	Over Current Error	The Pinch Roller Release Motor draws too much current	<ol style="list-style-type: none"> 1. Check the Pinch Roller Release Motor. 2. Check the Main Board.
153B	Over Speed Error	The Pinch Roller Release Motor spins too fast.	<ol style="list-style-type: none"> 1. Check the Pinch Roller Release Motor. 2. Check the Main Board.
153C	Rotation Direction Error	The Pinch Roller Release Motor spins in the wrong direction.	<ol style="list-style-type: none"> 1. Check the Pinch Roller Release Motor. 2. Check the Main Board.
153D	Driving Time Out Error	The Pinch Roller Release Motor does not spin, or spins too long.	<ol style="list-style-type: none"> 1. Check the Pinch Roller Release Motor. 2. Check the Main Board.
153E	Velocity Deviation Error	The Pinch Roller Release Motor spins at irregular speeds.	<ol style="list-style-type: none"> 1. Check the Pinch Roller Release Motor. 2. Check the Main Board.
153F	Under Speed Error	The Pinch Roller Release Motor spins too slow.	<ol style="list-style-type: none"> 1. Check the Pinch Roller Release Motor. 2. Check the Main Board.

APG and ASF Errors	Explanation	Description	Remedy
1540	Cutter Home Position Detection Error	The Cutter Home Position Sensor does not report to the Main Board .	<ol style="list-style-type: none"> 1. Check the Cutter Motor. 2. Check the Cutter HP Sensor. 3. Check the Main Board.
1541	Cutter Return Error	The Cutter does not return to "Home Position" properly.	<ol style="list-style-type: none"> 1. Check the Cutter Motor. 2. Check the Cutter HP Sensor. 3. Check the Main Board.
1549	Motor Error	The Cutter Motor draws no current	<ol style="list-style-type: none"> 1. Check the Cutter Motor. 2. Check the Main Board.
154A	Over Current Error	The Cutter Motor draws too much current	<ol style="list-style-type: none"> 1. Check the Cutter Motor. 2. Check the Main Board.
154B	Over Speed Error	The Cutter Motor spins too fast.	<ol style="list-style-type: none"> 1. Check the Cutter Motor. 2. Check the Main Board.
154C	Rotation Direction Error	The Cutter Motor spins in the wrong direction.	<ol style="list-style-type: none"> 1. Check the Cutter Motor. 2. Check the Main Board.
154D	Driving Time Out Error	The Cutter Motor does not spin, or spins too long.	<ol style="list-style-type: none"> 1. Check the Cutter. 2. Check the Main Board.
154E	Velocity Deviation Error	The Cutter Motor spins at irregular speeds.	<ol style="list-style-type: none"> 1. Check the Cutter. 2. Check the Main Board.
154F	Under Speed Error	The Cutter Motor spins too slow.	<ol style="list-style-type: none"> 1. Check the Cutter Motor. 2. Check the Main Board.

APG and ASF Errors	Explanation	Description	Remedy
1551	Paper Thickness Sensor Error		
1561	Paper Thickness Sensor Error		

18xx Series AID (Auto Ink Detection) Error

1800	AID (Auto Ink Detector) Voltage Error.	The AID circuitry counted enough failures to have reached a counter limit. A failure is defined as 3 auto ink detection and cleaning sequences in a row without clearing up the missing nozzles. The failures could be caused by missing nozzles that can not be cleared, or bad AID components.	<ol style="list-style-type: none"> 1. Determine why the AID operation is failing (missing nozzles or bad Aid Components.) 2. Repair the cause of the failure. 3. Using the Adjustment Wizard, perform Clear Counter AID. <p>Note: Adjustment Wizard 1.04 or higher is necessary to perform Clear Counter AID. Earlier versions do not work.</p>
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1Axx, 20xx, Fxxx Series Main Board and Print Head Errors

Main Board Errors	Explanation	Description	Remedy
1A23	RTC Analysis error	The RTC data on the Main Board is invalid.	<ol style="list-style-type: none"> 1. Using the Adjustment Wizard run the RTC USBID adjustment. 2. Check the Battery. 3. Replace the Main Board.

Main Board Errors	Explanation	Description	Remedy
1A26	RTC Communication Error	The RTC circuit on the Main Board is malfunctioning.	<ol style="list-style-type: none"> 1. Unplug the Printer. 2. Remove the Battery for 30 seconds. 3. Re-install the Battery. 4. Using the Adjustment Wizard run the RTC USBID adjustment. 5. Replace the Main Board.
1A37	Thermistor Sensor Error	The Thermistor on the Print Head reports an over temperature condition	<ol style="list-style-type: none"> 1. Re-seat the Print Head Cables on the Main Board side. 2. Re-seat the Print Head Cables on the Print Head side. 3. Replace the Main Board. 4. Replace the Print Head.
1A38	Transistor Environment Temperature Error	The Thermistor on the Print Head reports temperature out of range.	<ol style="list-style-type: none"> 1. Replace the Print Head.
1A39	Print Head Error	The Print Head reports an error.	<ol style="list-style-type: none"> 1. Replace the Print Head.
1A40	IC22 Error	The Destination Setting (Country Setting) on the Main Board is wrong	<ol style="list-style-type: none"> 1. Correct the destination setting. 2. Replace the Main Board.
1A41	Head Rank Id Input Error	Head Rank Data is wrong	<ol style="list-style-type: none"> 1. Re-enter the Head Rank Data. 2. Replace the Main Board.

Main Board Errors	Explanation	Description	Remedy
1A50	Carriage Board Error	Carriage Board does not communicate with the Main Board .	1. Check the Carriage Board . 2. Check the Main Board
1A51	Carriage Board Error	Carriage Board does not communicate with the Main Board .	1. Check the Carriage Board . 2. Check the Main Board
1A52	Sub Board B Error	Sub Board B does not communicate with the Main Board .	1. Check the Sub Board B . 2. Check the Main Board
1A53	Sub Board C Error	Sub Board C does not communicate with the Main Board .	1. Check the Sub Board C . 2. Check the Main Board
2000	Memory Error	Memory Error	Replace the Main Board
2002	Memory Error	Memory Error	
2003	Memory Error	Memory Error	
200A	Firmware Loading Error	There is a problem with the SDRAM	1. Re-install Firmware. 2. Replace the Main Board .
200D	System Interrupt Time Out Error.	Main Board or Firmware Problem	1. Re-install Firmware. 2. Replace the Main Board .
200E	Board Error	Board Error	Replace the Main Board

Main Board Errors	Explanation	Description	Remedy
2010	Board Error	Board Error	<ol style="list-style-type: none"> 1. Check <i>Ink Bay Cable Connections.</i> 2. Reseat all other <i>Foil Cables.</i> 3. Replace the <i>Main Board</i>
3000	AC Shut Off Error	AC Power was interrupted.	<ol style="list-style-type: none"> 1. Check AC source. 2. Replace the <i>Power Supply.</i> 3. Replace the <i>Main Board.</i>
FXXX	CPU Error	<i>Main Board</i> or Firmware Problem	<ol style="list-style-type: none"> 1. Re-install Firmware. 2. Replace the <i>Main Board.</i>
DXXX	CPU Error	<i>Main Board</i> or Firmware Problem	<ol style="list-style-type: none"> 1. Re-install Firmware. 2. Replace the <i>Main Board.</i>
D131	AID Error	The AID function does not work.	<ol style="list-style-type: none"> 1. Check the <i>AID Board.</i> 2. Check the <i>Main Board.</i> 3. Check the <i>Cleaning Station.</i>

Printer Options Error Codes

Error Code	Error Name	Description	Remedy
01	XRITE Head Mounting Error	The XRITE Head Detection Sensor does not detect the presence of a XRITE Head.	<ol style="list-style-type: none"> 1. Reinstall the Xrite Head. 2. Check the Detection Sensor.
12	Paper Pressing Plate Home Position Error	The Paper Pressing Plate Home Position Sensor does not detect movement of the Plate .	<ol style="list-style-type: none"> 1. Verify movement of the Paper Pressing Plate. 2. Check the Paper Pressing Plate Home Position Sensor. 3. Check the Main Board.
13	Paper Pressing Plate Movement Error	The Paper Pressing Plate does not move correctly.	<ol style="list-style-type: none"> 1. Check for proper Paper Pressing Plate movement (binding). 2. Check the Paper Pressing Plate Motor. 3. Check the Main Board.
14	Paper Pressing Plate Home Position Error	The Paper Pressing Plate Home Position Sensor does not detect correct movement of the Plate .	<ol style="list-style-type: none"> 1. Verify movement of the Paper Pressing Plate. 2. Check the Paper Pressing Plate Home Position Sensor. 3. Check the Main Board.

Error Code	Error Name	Description	Remedy
15	Carriage Home Position Error	The Carriage Home Position Sensor does not detect correct movement of the Carriage Mechanism .	<ol style="list-style-type: none"> 1. Check the correct installation of the Backing Plate. 2. Check the correct installation of the Calibration Tile. 3. Check for proper Carriage Mechanism movement (binding). 4. Check for proper Paper Pressing Plate movement (binding).
16	Paper Pressing Plate Movement Error	The Paper Pressing Plate does not move correctly.	<ol style="list-style-type: none"> 1. Check for proper Paper Pressing Plate movement (binding). 2. Check the Paper Pressing Plate Motor. 3. Check the Main Board.
17	Take Up Reel Motor Current Error	The Take Up Reel Motor draws too much current.	<ol style="list-style-type: none"> 1. Check for proper Spindle movement (binding). 2. Check for proper Gear movement. 3. Check the Take Up Reel Motor.
20	Paper Slack Sensor Time Out Error	The Paper Slack Sensor does not detect a change within a specified time period.	<ol style="list-style-type: none"> 1. Check for movement of the media. 2. Check the problems with the Paper Slack Sensor.
30	Paper Pressing Plate Time Out Error	The Paper Pressing Plate Encoder does not detect the correct timing for movement of the Plate .	<ol style="list-style-type: none"> 1. Check for proper Paper Pressing Plate movement (binding). 2. Check the Paper Pressing Plate Motor. 3. Check the Paper Pressing Plate Encoder. 4. Check the Main Board.

Error Code	Error Name	Description	Remedy
31	Paper Pressing Plate Current Error	The Paper Pressing Plate Motor draws too much current.	<ol style="list-style-type: none"> 1. Check for proper Paper Pressing Plate movement (binding). 2. Check the Paper Pressing Plate Motor. 3. Check the Main Board.
32	Paper Pressing Plate over speed Error	The Paper Pressing Plate Encoder does not detect the correct timing for movement of the Plate .	<ol style="list-style-type: none"> 1. Check for proper Paper Pressing Plate movement. 2. Check the Paper Pressing Plate Motor. 3. Check the Paper Pressing Plate Encoder 4. Check the Main Board.
33	Paper Pressing Plate Reverse Error	The Paper Pressing Plate Encoder detects that the Paper Pressing Plate is moving in the wrong direction.	<ol style="list-style-type: none"> 1. Check for proper Paper Pressing Plate movement. 2. Check the Paper Pressing Plate Motor. 3. Check the Paper Pressing Plate Encoder 4. Check the Main Board.
34	Paper Pressing Plate Irregular Speed Error	The Paper Pressing Plate Encoder does not detect the correct timing for movement of the Plate .	<ol style="list-style-type: none"> 1. Check for proper Paper Pressing Plate movement. 2. Check the Paper Pressing Plate Motor. 3. Check the Paper Pressing Plate Encoder 4. Check the Main Board.

Error Code	Error Name	Description	Remedy
35	Paper Pressing Plate under speed Error	The Paper Pressing Plate Encoder does not detect the correct timing for movement of the Plate .	<ol style="list-style-type: none"> 1. Check for proper Paper Pressing Plate movement. 2. Check the Paper Pressing Plate Motor. 3. Check the Paper Pressing Plate Encoder 4. Check the Main Board.
40	Take Up Motor Time Out Error	The Take Up Motor Encoder does not detect the correct timing for movement of the Motor .	<ol style="list-style-type: none"> 1. Check for proper Take Up Motor movement. 2. Check the Gear Assembly. 3. Check the Main Board.
41	Take Up Motor Current Error	The Take Up Motor draws too much current.	<ol style="list-style-type: none"> 1. Check for proper Gear movement (binding). 2. Check the Take Up Motor. 3. Check the Main Board.
42	Take Up Motor over speed Error	The Take Up Motor Encoder does not detect the correct timing for movement of the Motor .	<ol style="list-style-type: none"> 1. Check for proper Gear movement (binding). 2. Check the Take Up Motor. 3. Check the Main Board.
43	Take Up Motor Reverse Error	The Take Up Motor Encoder detects that the Take Up Motor is moving in the wrong direction.	<ol style="list-style-type: none"> 1. Check for proper Gear movement. 2. Check the Take Up Motor. 3. Check the Main Board.

Error Code	Error Name	Description	Remedy
44	Take Up Motor Irregular Speed Error	The Take Up Motor Encoder does not detect the correct timing of the Take Up Motor .	<ol style="list-style-type: none"> 1. Check for proper Gear movement. 2. Check the Take Up Motor. 3. Check the Main Board.
45	Take Up Motor under speed Error	The Take Up Motor Encoder does not detect the correct timing of the Take Up Motor .	<ol style="list-style-type: none"> 1. Check for proper Gear movement. 2. Check the Take Up Motor. 3. Check the Main Board.
65	Cooling Fan Error	The Cooling Fan does not draw the correct current.	<ol style="list-style-type: none"> 1. Check for proper Fan rotation (binding). 2. Check the Fan. 3. Check the Main Board.
D3	Take Up Reel Error	General Error	<ol style="list-style-type: none"> 1. Check for proper Gear movement (binding). 2. Check the Take Up Motor. 3. Check the Main Board.
D6	Paper Pressing Plate Error	General Error	<ol style="list-style-type: none"> 1. Check for proper Paper Pressing Plate movement. 2. Check the Paper Pressing Plate Motor. 3. Check the Paper Pressing Plate Encoder 4. Check the Main Board.

1537 Error

Note: The 1537 error code indicates that the Ink System Pressure Sensor reports low pressure.

Note: This error usually is caused by an Ink Cartridge that leaks pressure.

1. Test each **Ink Cartridge** for pressure leaks.



1. Place a tube on the **Air Pressure Inlet** for each **Cartridge**.

2. Blow gently into the tube to inflate the **Cartridge**.

3. A **Cartridge** with pressure leak will never fully inflate. A good **Cartridge** will stop accepting air, eventually.



AID Issue Troubleshooting

Overview

The **AID** (Auto Ink Detection) feature is designed to perform auto nozzle checks. It has 3 settings that were added with a recent firmware revision. There are 3 options in the:

User Menu: Printer Settings / AUTO NOZZLE CHECK: ON:PERIODICALLY*, ON:EVERY JOB, OFF.

Even if the **Auto Nozzle Check** is set to **OFF**, the **Aid Circuitry** is still used after a cleaning cycle to verify the results.

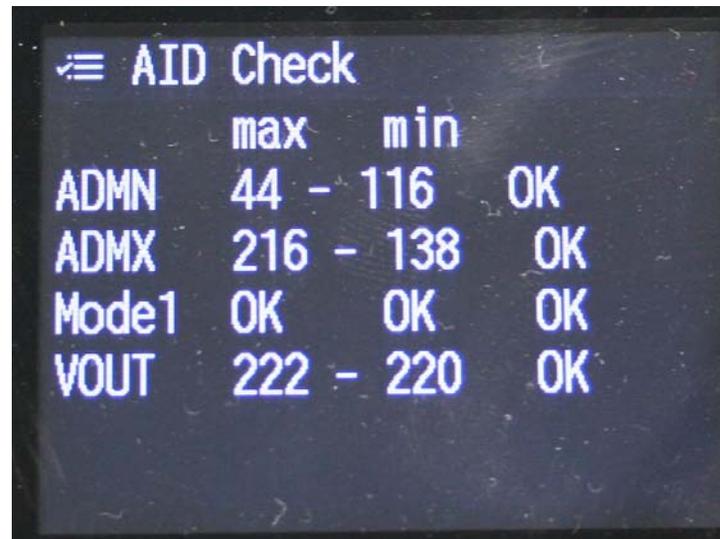
Troubleshooting

1. Verify that the latest firmware is installed.
 - 1.1 The latest firmware has been adjusted for more consistent operation of the AID process.
 - 1.2 The latest firmware has improved customer options. The user has control over how many times the Printer repeats a cleaning cycle when the AID reports missing nozzles.
 - 1.2.1 **Maintenance Mode 1: AUTO CLEANING TIMES: 1, 2, 3**
2. Perform a nozzle check and verify that all of the **Printer's** nozzles are working.
 - 2.1 Missing nozzles on a Print Head can be misinterpreted as an AID error.
3. Perform an **AID Check**.
 - 3.1 Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
 - 3.2 Navigate to **SELF TESTING\Mecha Adjustment\AID Check**
 - 3.3 Press the **Right Arrow**.

3.4 Press the **OK** button to begin the test.



1. The Printer will display **Please Wait**.



2. The **Printer** will display 6 **OK**'s if the **AID Circuitry** passes the test.

4. If **Mode1** has 1 or more **NG**'s instead of **OK**'s:

4.1 Clean the **AID Grid**, or replace the **Cleaning Unit** (the **AID Grid** is on the **Cleaning Unit**).

4.1.1 Retest.

4.2 Replace the **AID Board**.

4.2.1 Retest.

5. IF **ADMN**, **ADMX**, or **VOUT** has a **NG** instead of an **OK**:

5.1 Replace the **Main Board**, the **AID Cable** (runs from the **Main Board** to the **AID Board**) and the **AID Board** at once. **Do not replace the Boards separately, the issue can be passed from one board to the other. The Cable can be replaced separately.**

5.1.1 Retest.

5.2 Replace the Print Head (even if the nozzle check looks good), and retest.

Borderless Printing Errors

Ensure that the media is one of the supported sizes. The media should be exactly on of the sizes listed below.

7700: 10", 12", 13",16", 17",and 24"

9700: 10", 12", 13",16", 17" ,24", 36", and 44".

The image being printed must be at least 1/4" bigger than the media.

Perform the **TBS POS** Adjustment. This adjustment calibrates the Printers ability to measure paper properly.

Color Shift

Note: Most color shift issues are not caused by a printer problem, but by the customers “work flow”. “work flow” refers to the customers color management. Usually the printer will accurately print the image that it is sent. If the customer is un-aware of the true color of the image, because of a “work flow” issue, the customer will blame the Printer for the perceived color inaccuracy.

Missing **Nozzles** can impact color, so they should be checked. Verify that 8 colors are printed, and all the nozzles for each color are working.

Use your computer, driver, image, and paper to verify the operation of the **Printer**. Ensure that you use the proper driver setting for the media being used. If the color appears normal, then the user’s “work flow” is the issue.

Verify that the Printer is filled with Epson Ink. Non-Epson Ink can cause a color shift.

If the color is incorrect using your materials, and the customers, replacing the **Main Board** and the **Print Head** at the same time may correct the issue.

Grainy or Ghosting

Note: *Grainy* refers to an image that does not have smooth tonal transitions, or sharp resolution.

Note: *Ghosting* refers to components of an image that are intended to be on top of each other (or adjacent) but are offset.

Note: A low resolution image can be mis-diagnosed as *Grainy*.

Using your **Computer**, **Driver**, and **Application**, verify that it is not the users equipment that is causing the print quality issue.

- Non-Epson media or improper media settings in the driver can cause grainy images.
- Non-Epson Ink can cause Grainy print quality.
- A non-Epson Driver can cause Grainy print quality.

Grainy or ghosted images are usually caused by electronic or mechanical adjustments. The following is a list of adjustments that should be checked.

- **CR Heat Slant** adjustment
- **PF Slant** adjustment
- **Gap Adj: Auto Bi-D** adjustment
- **Gap Adj: Auto Uni-D** adjustment

Additionally the proper **Print Head** to media gap should be verified (Standard, Narrow, Wide, Wider, and Widest). Most media prints best at the Standard Gap (one gap away from the closest).

Intermittent or missing Nozzles may also be a factor.

The following components occasionally cause the issue.

- **Carriage Encoder**
- **Carriage Encoder Strip**
- **Carriage Motor**
- **Carriage Belt Tension**

Horizontal Banding

Note: *Horizontal Banding is either paper feed related, or Print Head related.*

Horizontal Banding is caused by vertical dot placement errors.

Feed Related

Feed related horizontal banding is always spaced at the same interval as the **MicroWeave** step. Observe the area of the image that is currently being printed (the image directly under the **Print Head**). That area exhibits the **MicroWeave** step. Compare the interval of the **MicroWeave** step with the interval of the horizontal banding. If the two have the same interval, the banding is probably feed related.

Increase or decrease (increase or decrease to the extreme limit) the feed step and observe the impact on the banding. Use the **Paper Config** section of the driver, or **Custom Paper** section of the **Printer's** user menu, and increase or decrease the feed step all the way. If the banding is affected, it is feed related. If the banding is not changed, or a new banding is added, it is not feed related.

Use another **Computer** with the Epson **Driver** and Epson Media to eliminate the users equipment.

Verify that the proper **tension setting** is being used. Check the **Paper Config** section of the driver, or **Custom Paper** section of the **Printer's** user menu

Verify that the media does not bind coming off the roll.

Use **Remote Panel** to verify that the user has not modified the paper feed table value for the media that is banding.

Print Head Related

If the horizontal banding is **Print Head** related, it is usually due to missing, deflected or sympathetic **Nozzles**. the service level **Nozzle Check**, is the best way to inspect the **Print Head's** accuracy. A slightly deflected **Nozzle** can cause horizontal banding, depending on the **Nozzle's** location in the **Nozzle** array.

If all of the nozzles appear to be functioning properly, the horizontal banding may still be caused by the print head.

Missing or deflected **Nozzles** may be caused by problems with the **Cleaning Station**. Before attempting to clear **Nozzle** issues, the **Cap**, **Wiper Blade**, **Wiper Blade Cleaner**, and the **Print Head Nozzle Plate** should be cleaned. Additionally the **Borderless Pads** and **Flushing Box** should be checked to verify that they are not out of position or dirty. If a build up of contaminants makes contact with the **Nozzle Plate**, it will cause reoccurring **Nozzle** drop out.

INK CARTRIDGE ERROR: REPLACE INK CARTRIDGE

Error Message: **INK CARTRIDGE ERROR: REPLACE INK CARTRIDGE**

Explanation of Error:

The **CSIC Chip** reports ink in the **Cartridge**, but the **Ink Out Sensor** (located where the ink leaves the **Cartridge**) reports no ink.

Cause of Error:

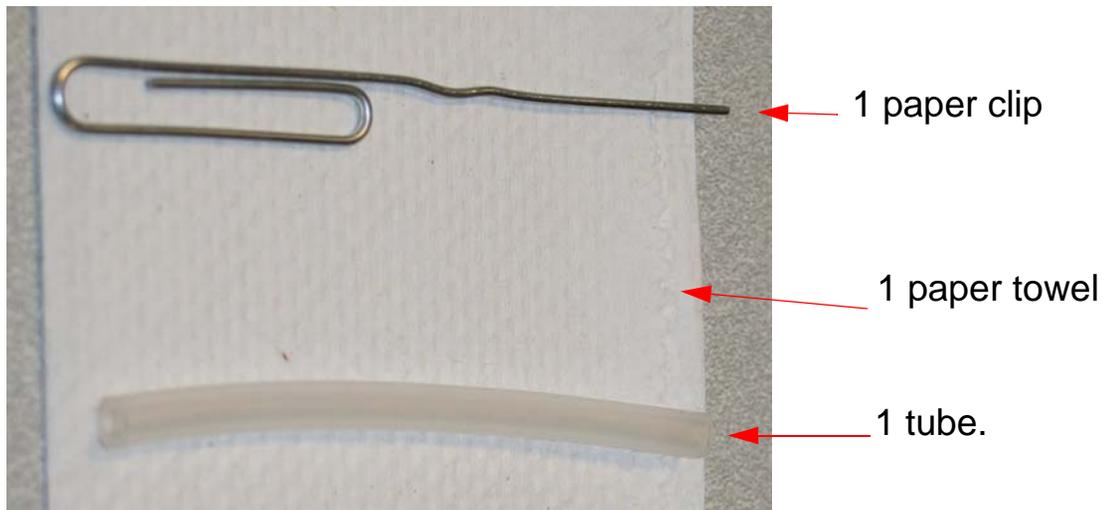
Tiny air bubbles in the **Ink Out Sensor**.

Repair Strategy:

Remove the tiny air bubbles from the **Ink Out Sensor**.

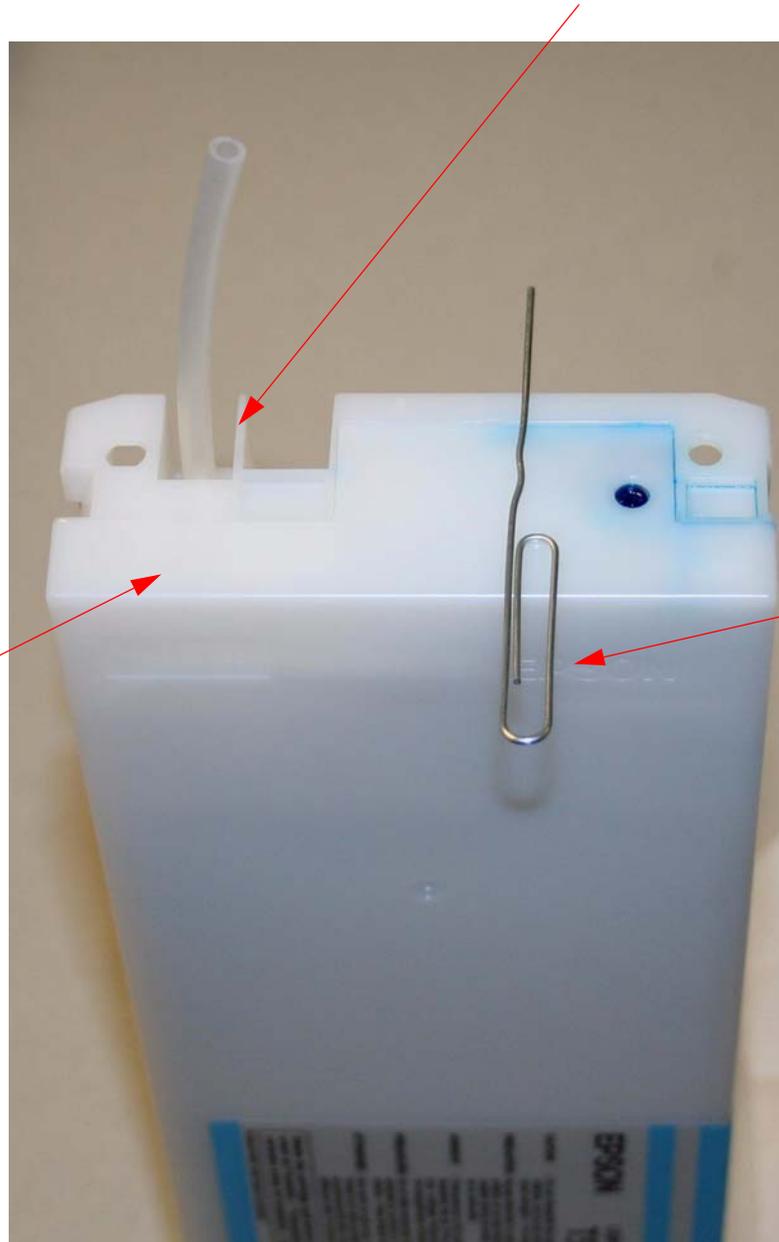
Repair Detail:

1. Assemble tools.



2. Prepare to inflate the ***Ink Cartridge***.

Attach the hollow tube to the ***Air Pressure Insert Nipple***.



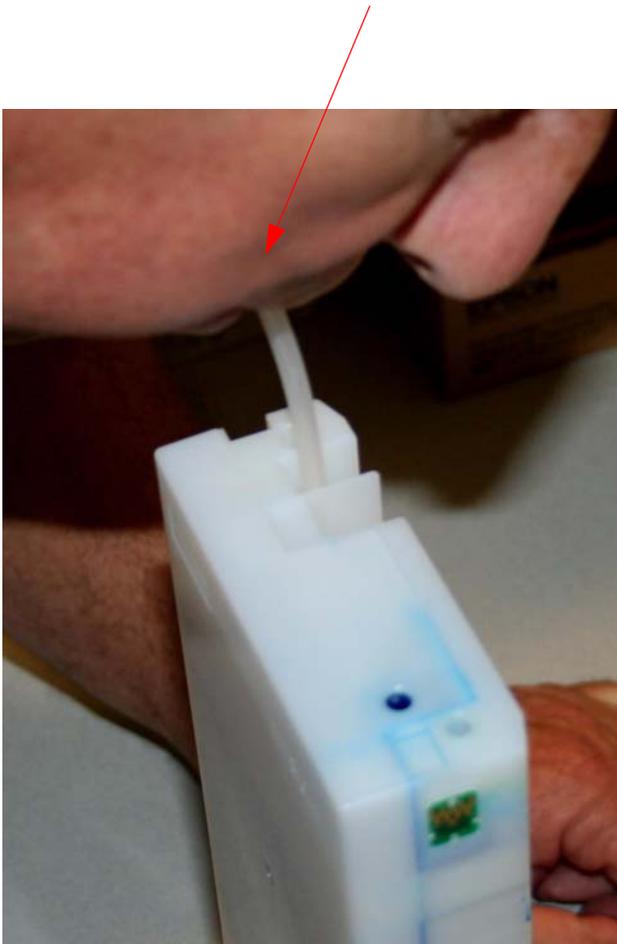
Place the ***Ink Cartridge*** on a flat surface, with this side up.

Ensure that the paper clip is handy.

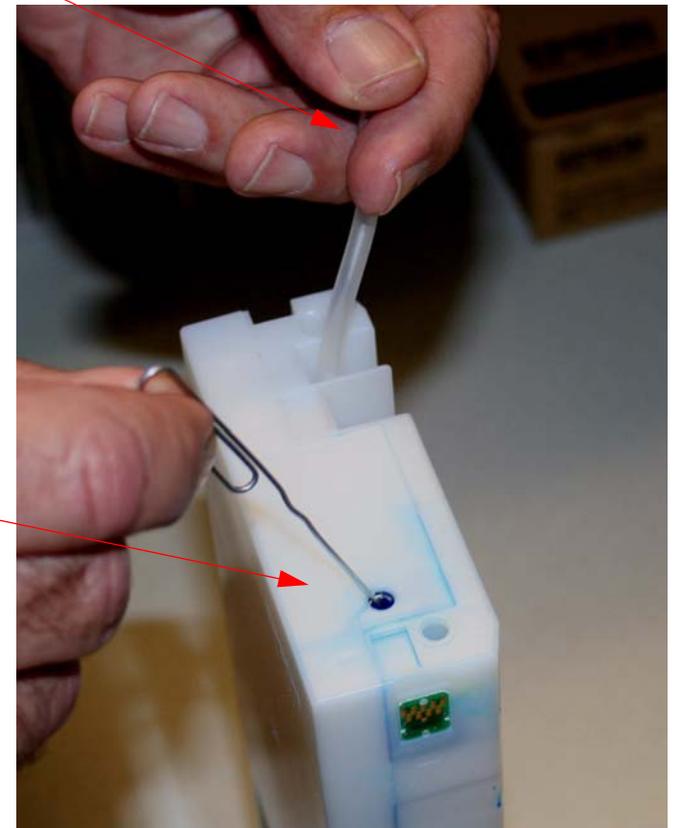
3. Inflate the **Cartridge** and bleed it.

Note: *The ink is in a bag, inside of the sealed Ink Cartridge. When the Cartridge is inflated, the air pressure squeezes the bag of ink, placing the ink under pressure.*

1. Inflate the inside of the **Cartridge**.

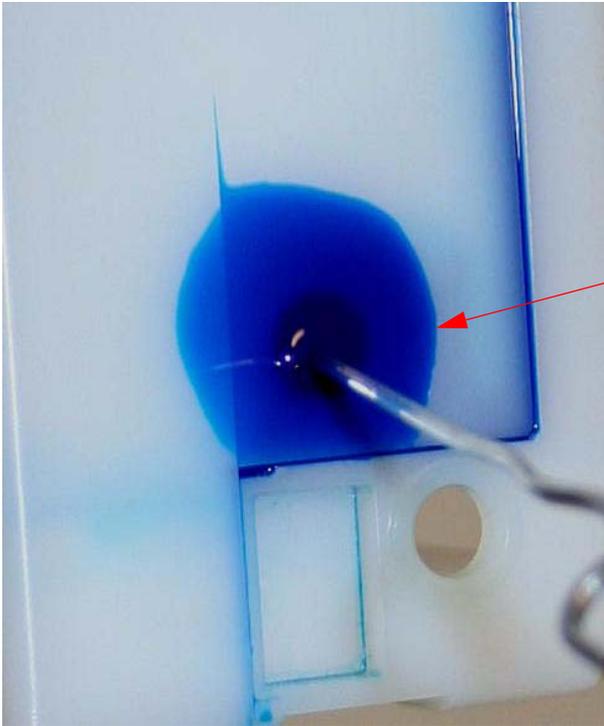


2. Seal the tube trapping the pressure in the **Cartridge**.



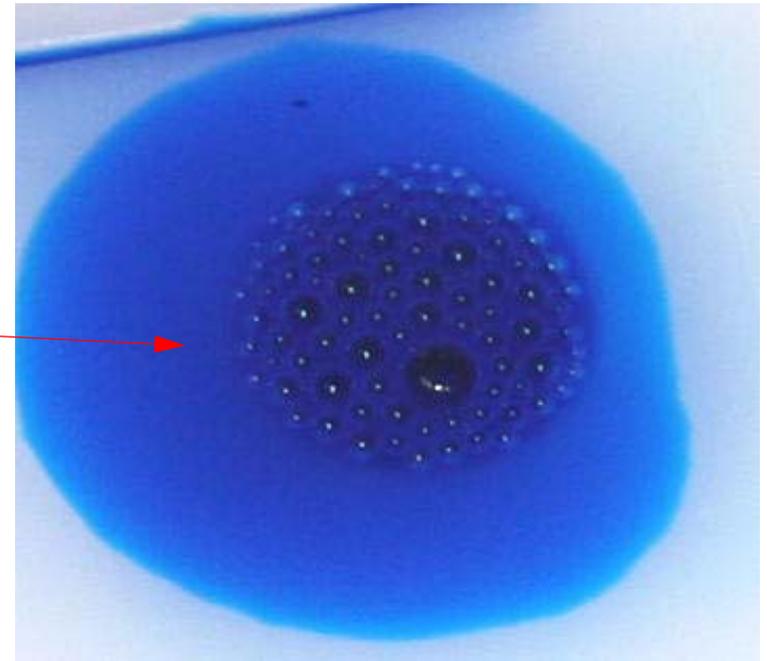
3. Use the paper clip to open the **Ink Valve**, and release a small amount of ink and the trapped air. (See next page)

4. Inspect the released ink.



This image shows the approximate amount of ink that should be released from the **Cartridge**. This particular **Cartridge** did not contain air bubbles in the **ink**.

This **Cartridge** did contain air bubbles in the ink. The small amount of air in the ink is enough to cause the error.



5. Clean up the released ink.



Use the paper towel to absorb the “frothy” Ink. ***The Cartridge should now work.***

Missing Nozzle Diagnosis

Note: *It is important to completely clean the Printer before following the troubleshooting advice in this chapter. This is because a dirty printer will cause any of the symptoms listed. Follow the cleaning advice in the Service Procedure chapter in the reference section.*

Definitions

Channel: a column of 360 nozzles.

Color Pair: 2 channels that share a Cap on the Cleaning Station.

Reverse Flow: a term describing a condition that exists after a strong cleaning cycle. The **Ink System** pulls backwards drawing air into the **Print Head's Nozzle Plate**. The air in the **Nozzle Plate** causes missing nozzles until the air is expelled.

Overview

There are 5 categories of Missing Nozzles. Read them all, and decide which scenario fits the issue.

1 Channel Missing (completely, or almost completely).

The most likely cause is an Ink supply issue. The ink is not reaching the Print Head effectively.

1. Test the **Ink Cartridge**.

- 1.1 To test the **Ink Cartridge**, manually pressurize the **Cartridge**, and manually open the **Valve** to verify that ink will flow. See the INK CARTRIDGE ERROR: REPLACE INK CARTRIDGE chapter in the Troubleshooting section.

2. Replace the related **Damper**. It is recommended that you replace all **5 Dampers**.

3. Replace the **Print Head**.

Note: *If this symptom is caused by the Print Head, then the ink inlet for the missing channel is clogged.*

It can be verified by gently injecting water into the suspected inlet. If the channel accepts water, the Print Head is probably not the issue. Because of the cost of the Print Head, verification is recommended.

4. Replace the ***Ink Bay***.

Color Pair Missing (completely, or almost completely)

The most likely cause of a missing color pair is poor cleaning by the Cleaning Station. That is because the only thing in common with a color pair is the Cleaning Station.

1. Replace the ***Cleaning Station***.

All Channels Missing (completely, or almost completely)

This symptom can be caused by Ink Supply issues, Main Board issues, or Cleaning Issues.

1. Execute a “Normal” cleaning, and observe the ***Waste Ink Tube (Ink Exit Tube)*** from the ***Cleaning Unit***.
 - 1.1 If the ink flow in the ***Waste Ink Tube*** looks normal, replace the ***Main Board***.
2. Replace the ***Cleaning Unit***.
3. Replace the ***Ink Bay***.

Some Nozzles Missing (but not all) (1 or more channels)

This condition is normal after a period of inactivity. It can also indicate a defective Print Head. It is complicated by “reverse flow”. This procedure describes how to differentiate the issue.

1. Perform a Nozzle Check and mark it as #1.

2. Perform a Cleaning Cycle on the missing nozzles (Color Pair cleaning is the most efficient use of Ink).
3. Perform a Nozzle Check and mark it as #2.
 - 3.1 Compare Nozzle Check 1 to 2.
 - 3.1.1 If the missing nozzles on nozzle check 1 have cleared up, and new ones have appeared:
 - 3.1.1.1 Stop Cleaning, this is reverse flow.
 - 3.1.1.1.1 Print a sample print (Stress Test is recommended) that uses all colors to “print out” the air that is in the **Nozzle Plate**.
 - 3.1.2 If one or more nozzles have not cleared up:
 - 3.1.2.1 Repeat steps 1 - 3.
 - 3.1.2.1.1 If 3 cleaning cycles does not clear up 1 or more of the same nozzles, replace the **Print Head**.

Note: If the same nozzle or nozzles are always missing, this indicates that the Print Head has a problem mechanically or electrically.

Some Nozzles Drop Out While Printing (1 or more channels)

Nozzle drop out while printing indicates a ink supply issue. The Print Head demands ink during the printing process, and the Ink System does not deliver it properly. The Print Head slowly “starves” for

Ink. A cleaning cycle delivers a much stronger demand on the Ink System and will refill the Print Head with Ink. The process of printing will once again “starve” the Print Head.

1. Determine the amount of printing that it takes for the Nozzles to drop out.

1.1 Note that interval.

2. Perform a Power Cleaning cycle.

2.1 Perform a nozzle check and ensure that all of the nozzles are working.

The purpose of the Power Cleaning cycle is to remove the any air in the Dampers that might restrict ink flow.

3. Print until the interval in step 1 has been exceeded (2 times the interval is recommended).

4. If the issue persists, replace the related ***Damper***. It is recommended that you replace all **5 Dampers**.

PCU (Plate Curing Unit) Troubleshooting

Overview

The **Plate Curing Unit (PCU)** is a **whole unit exchange**. Troubleshooting the PCU consists of testing its ability to heat a **Plate**. If it can not heat a Plate evenly and sufficiently, the unit should be exchanged.

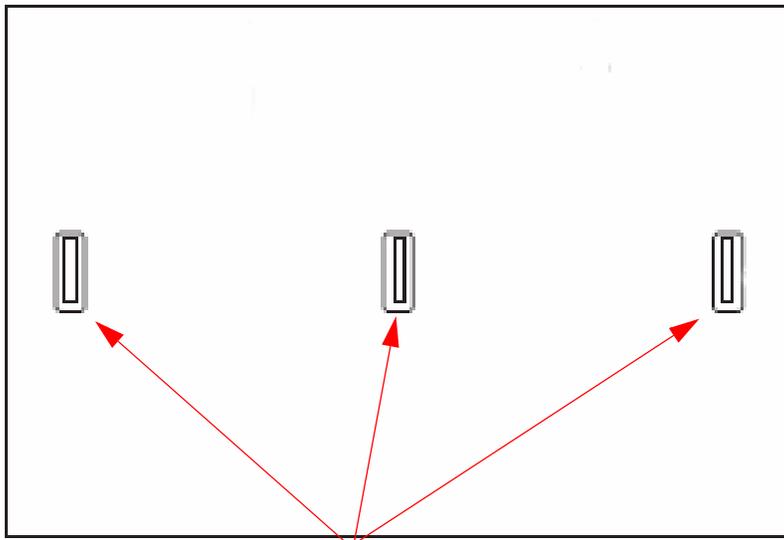
Required Equipment

3 Plates

1 package of 10 Thermax Strips.

Test Procedure

1. Prepare a **Plate**.



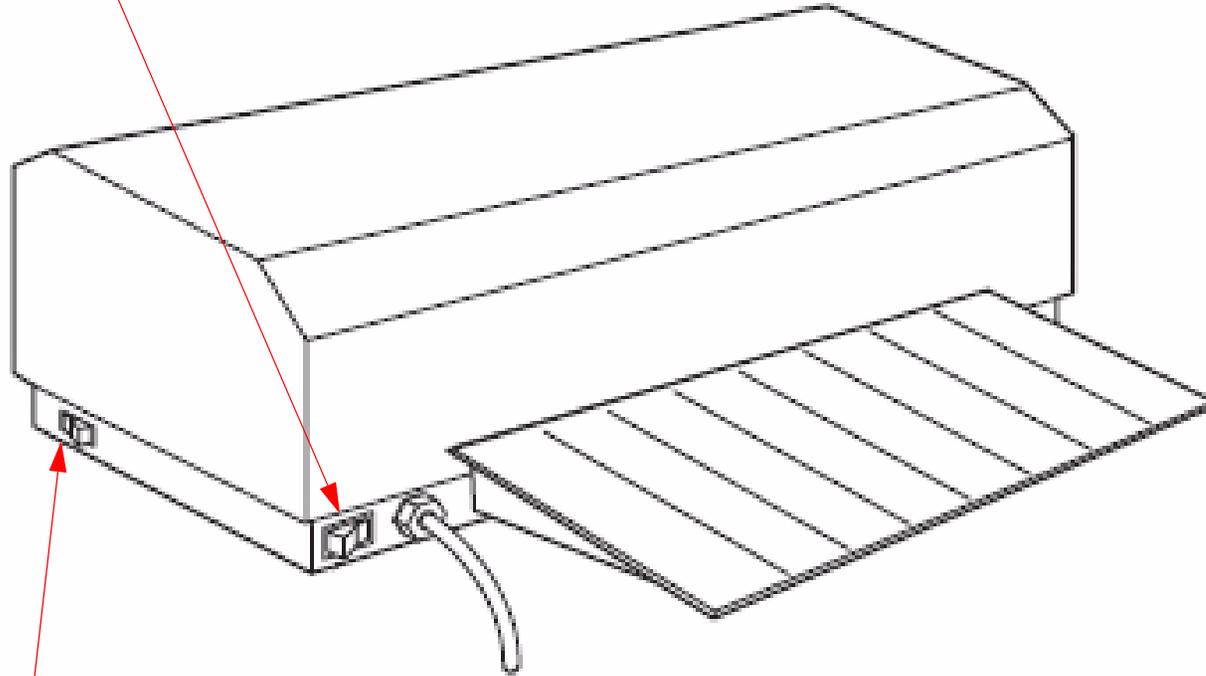
Stick **3 Thermax Strips** to **1 Plate** as shown.



Thermax Strips

2. Turn on the **PCU**.

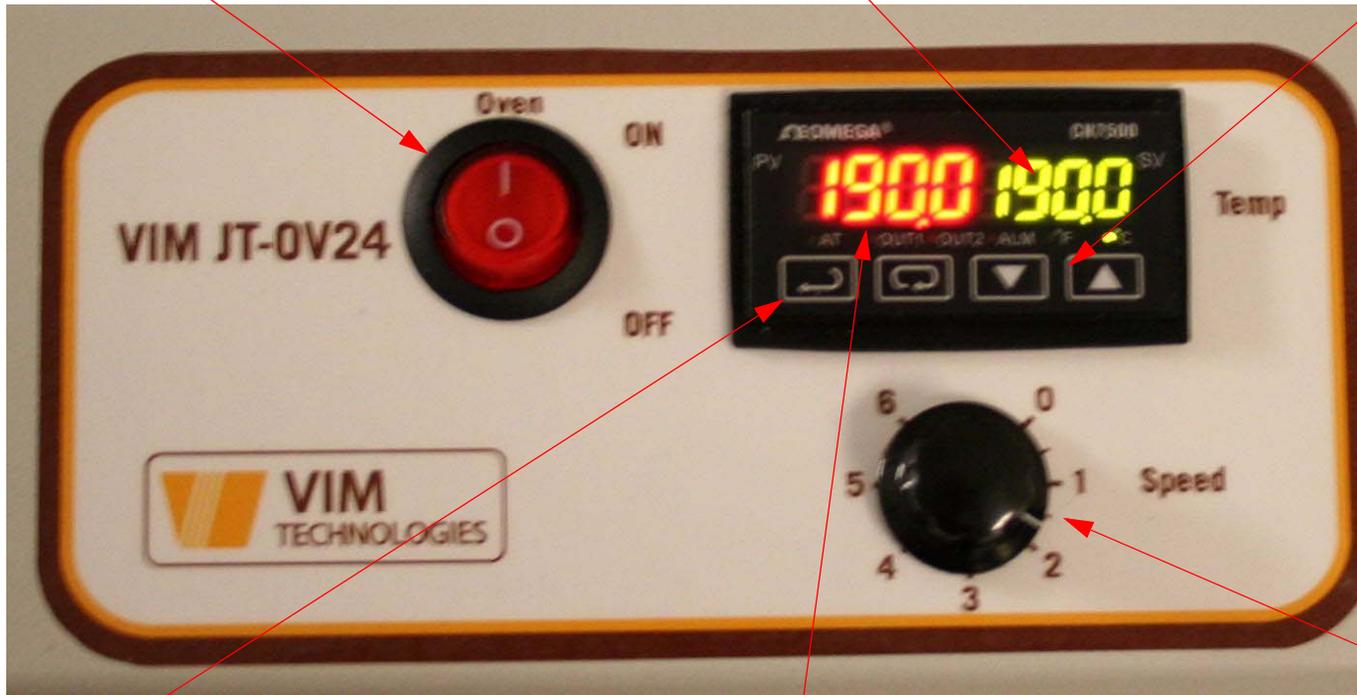
Turn on the **Power Switch**. This switch supplies power to the **PCU**. The **Transport Belt** internal to the **PCU** will start moving.



This **Switch** changes the direction that the **Transport Belt** travels.

3. Configure the **PCU**.

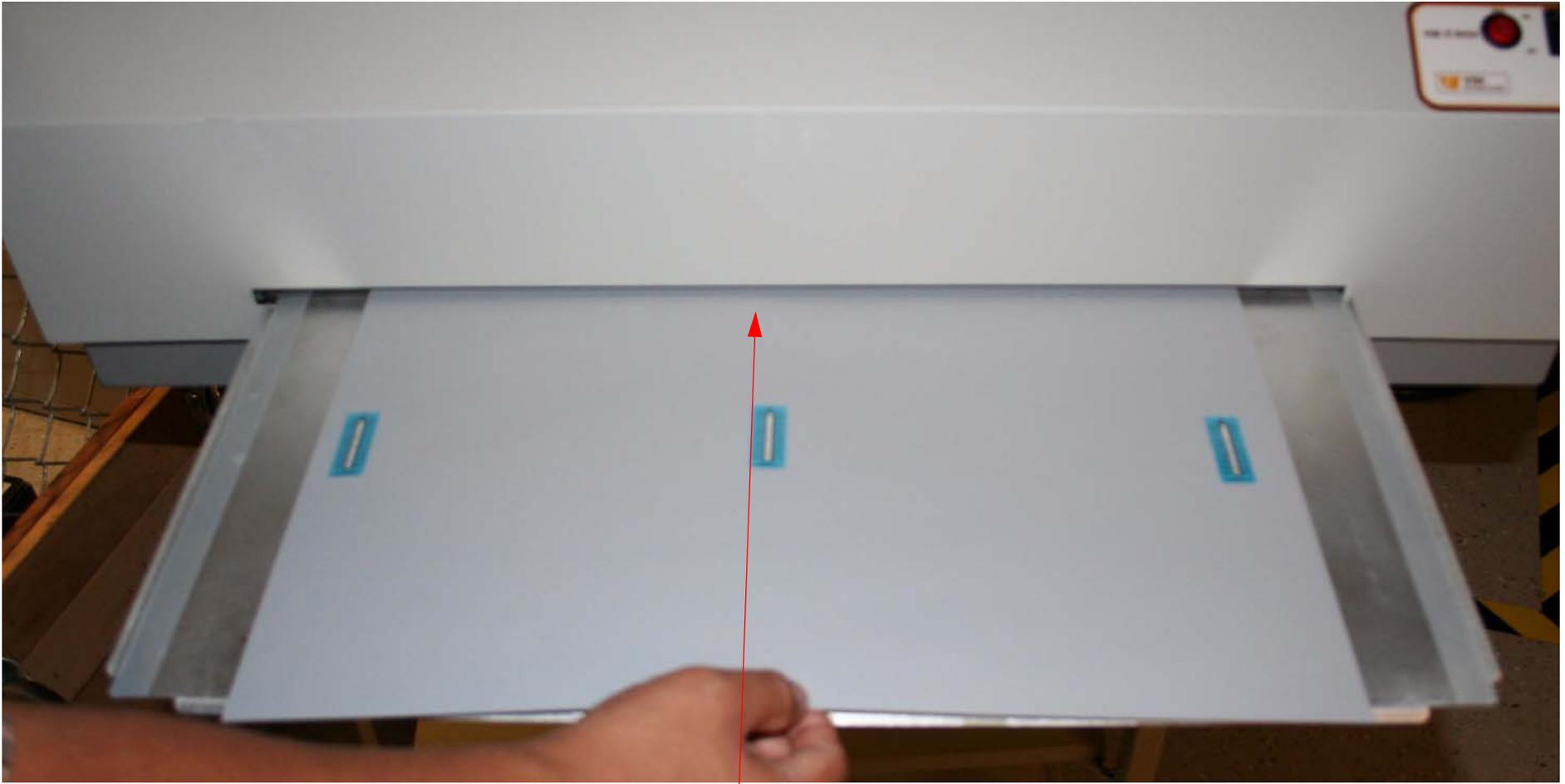
1. Turn on the **Oven**.
2. Set the Temperature to **190.0** (Centigrade). Use the **Up** and **Down Arrows**.



3. Press this **button** to “Lock In” the temperature setting.
4. Turn this **Knob** to **1.5**.
5. Wait for the temperature to reach **190.0** (Centigrade).

Note: It is critical that the Transport Belt is moving while the heater is above 100.0 Centigrade. Do not turn off the Main Power Switch until the Oven is turned off, and the temperature drops below 100.0 Centigrade. When the Main Power Switch is turned off, the Transport Belt stops moving.

4. Insert the **Plate** with the **Thermax Strips**.



Gently insert the leading edge of the **Plate** (Landscape) into the front of the **PCU** .

Note: *If the Transport does not pick up the Plate, change the direction of the Transportation Belts's movement. (See the diagram on step 2). If the Transportation Belt does not work, exchange the PCU.*

5. Remove the **Plate** from the rear of the **PCU**, and inspect the **Thermax Strips**.



1. Wait for the **Plate** to be released onto the **Exit Tray** of the **PCU**.

2. Inspect the **Thermax Strips**.

There should be no more than a 10% difference between between the 3 Strips. If there is, exchange the PCU.

All **3 Strips** should read between **150** and **160** degrees Centigrade.

If the temperature for the **3 strips** is **under** the correct temperature range **decrease** the **Transport's** speed.

If the temperature for the **3 strips** is **over** the correct temperature range **increase** the **Transport's** speed.

Prepare a new **Plate** with **Thermax Strips** and retest when necessary.

Random Nozzle Firing

Note: *Random Nozzles refers to Nozzles that fire when they are not commanded to.*

Random **Nozzle** firing is caused by 1 or more of 6 components

- Head Cables**
- Print Head**
- Main Board**
- Power Supply**
- Carriage Encoder and Encoder Strip**

Head Cable

Inspect the **Head Cables** for worn insulation. The data is sent to the **Print Head** by a **Serial Data Bus**. There is 1 data path for each color. A 0 volt potential on the **Data Bus** equals data. A 5 volt potential on the **Data Bus** equals no data. A short to ground on the data path causes all **Nozzles** on the shorted **Bus** to fire, as long as the short is in place. Insulate the worn **Cable** with tape, or replace the **Cable**.

Print Head or Main Board

If the random **Nozzle** firing is caused by serial communication problems between the **Main Board** and the **Print Head**, the frequency of the random **Nozzle** firing changes when the printing resolution is changed. If changing the printing resolution affects the random **Nozzle** firing, change the **Main Board** and the **Print Head**. Change them one at a time in any order. Test between each change.

Power Supply

Sometimes (very rare) a noisy **Power Supply** causes random **Nozzle** firing.

Encoder and Encoder Strip

There is some evidence that random nozzle firing (especially yellow nozzles) can be triggered by a dirty **Carriage Encoder Strip** or a **Carriage Encoder** that is not properly aligned to the **Encoder Strip**.

Scratch

Note: A scratch is damage to the media surface caused by contact with a roller or other Printer components. Sometimes scratches occur before the media is inserted into the Printer.

Some media is very sensitive to surface abrasions. Contact between the **Pinch Rollers**, the **Paper Feed Roller**, and the media is necessary to support and move it. If the media's coating is too fragile, the **Pinch Rollers** (the **Rollers** that contact the media's coating) can scratch the coating.

Inserting the scratched media back into the paper path, and compare the location of the scratch on the media to adjacent rollers. Check the adjacent rollers for issues.

If the **Print Head** makes contact with the media, it can cause scratching. Usually **Print Head** contact leaves ink residue as well. **Print Head** contact is usually because of excessive media curl, or incorrect platen gap.

Smear

Note: A smear is caused by something “smearing” the intended image, after the image is printed.

Many times smearing is a result of non-Epson media or ink. Non-Epson ink or media may dry too slowly, resulting in a smear after the image leaves the **Printer**. Adjusting the **User Menu: Custom Paper: Drying Time:** setting can slow down the **Printer**, allowing the image to dry properly.

Inspect the image while it is being printed. Look for any component or object that is making contact with the image while the image is still in the **Printer**.

Use another **Computer** with the Epson **Driver** and Epson Media to eliminate the user's equipment over saturating the media.

If the **Print Head** makes contact with the media, it can cause smearing. **Print Head** contact is usually because of excessive media curl, or incorrect platen gap.

Smudge

Note: A smudge is a mark left on the media by contact. It can be caused by contact with the **Print Head**, or contact with a dirty **Roller**.

Dirty Roller

A dirty **Roller** usually leaves a mark that repeats at an interval that is equal to the circumference of the **Roller**. Placing the image with the smudge back into the paper path, and aligning the smudge with the **Printer's Rollers** will indicate which **Roller** is dirty.

Print Head

Most **Print Head** contact with the media is the result of the media curling up to meet the **Print Head**. It can also be caused by a build up of contaminants on the **Print Head**, that decrease the distance between the **Print Head** and the media.

Sometimes the platen gap (the distance between the **Print Head** and the media) is set improperly. It can be incorrect because of user settings or because of incorrect measurement of the media thickness. Most media uses the **Standard** platen gap. The **Standard** platen gap is always one step back from the closest platen gap. If the platen gap is incorrect, the **Paper Thickness Sensor** should be checked, as well as the user platen gap settings found in the user menu.

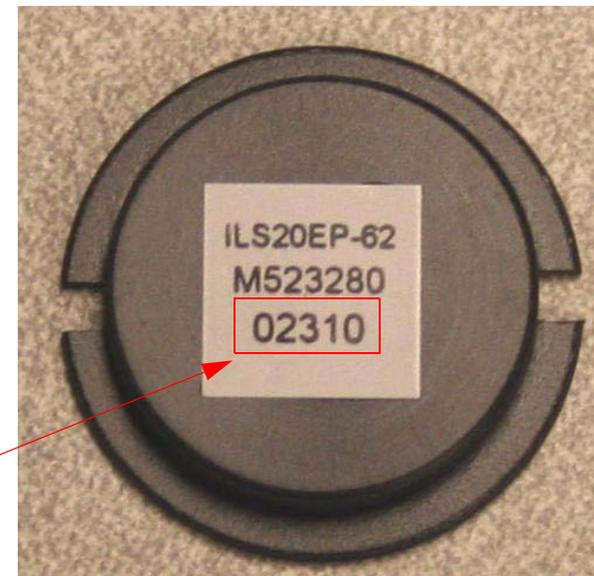
Sometimes there is a build up of contaminants on the nose of the **Print Head** which makes contact with the media. Check for a dirty **Cap**, **Wiper**, **Flushing Box**, or **Borderless Pads**.

SpectroProofer Troubleshooting

Note: This document is intended to provide a step by step procedure for verifying the correct installation and initialization of the SpectroProofer assembly.

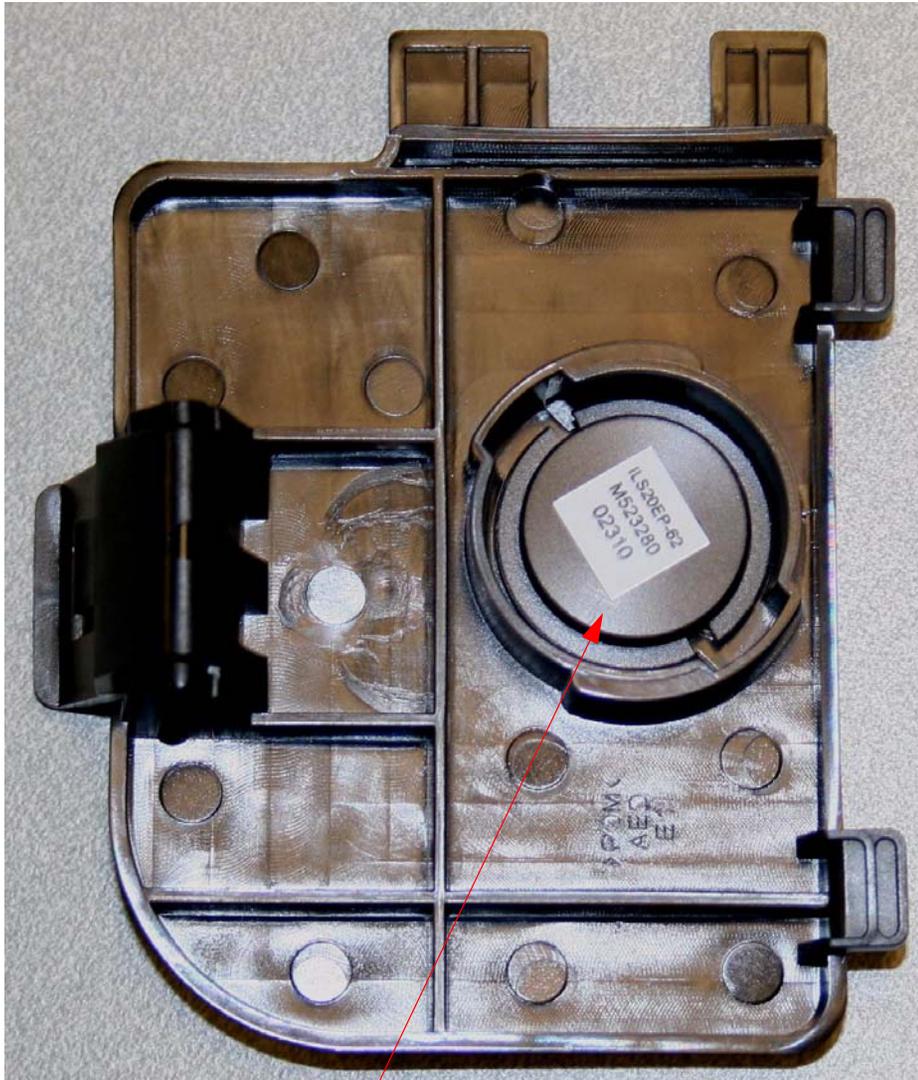
Install and Connect the SpectroProofer

1. Unplug the **Printer**.
2. Install the **Guides**.
3. Install the **Backing Plate** (there is a black and a white Backing Plate).
4. Verify that the **ILS Head** and the **Backing Tile** serial #'s match.

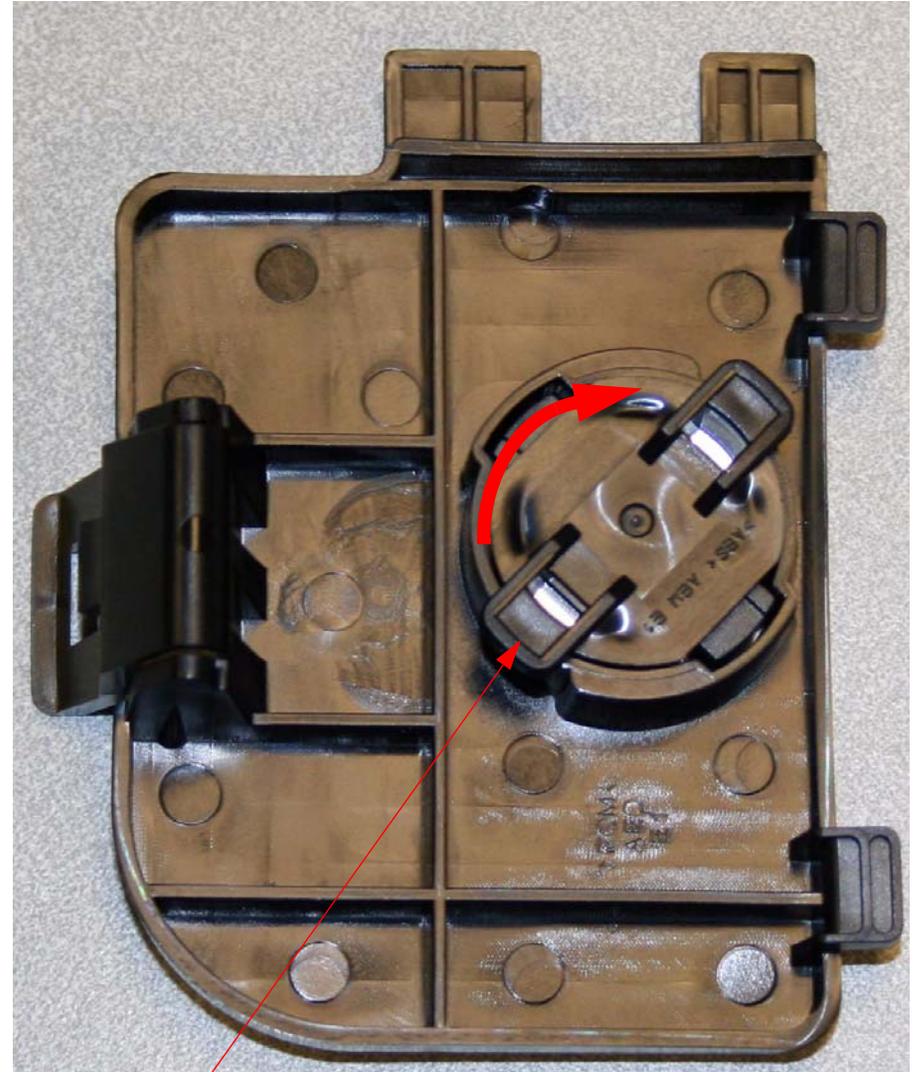


Serial #'s

5. Install the **Calibration Tile** into the **Calibration Tile Holder**.

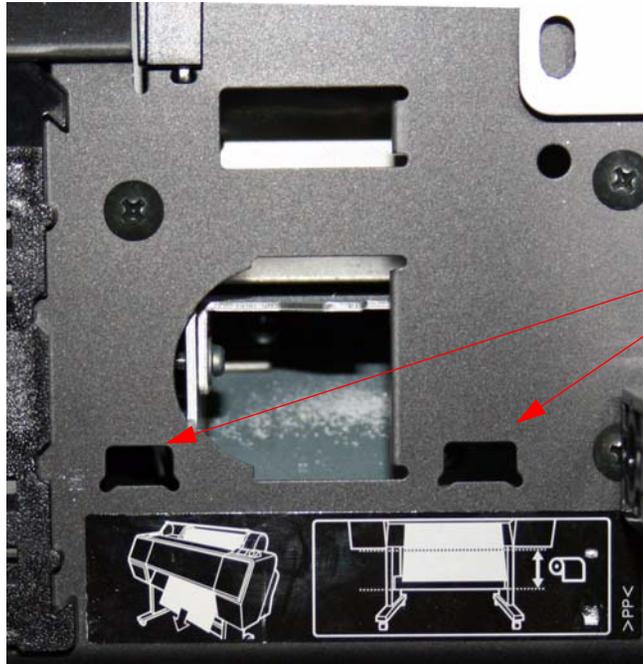


1. Place the **Calibration Tile** in position.



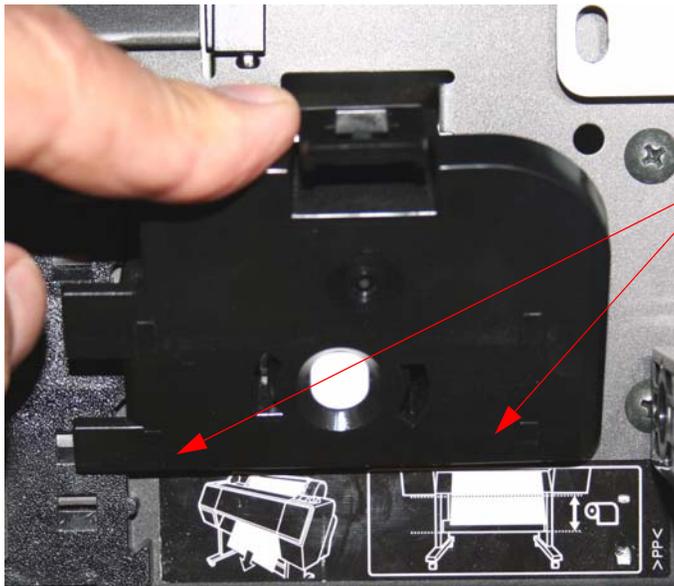
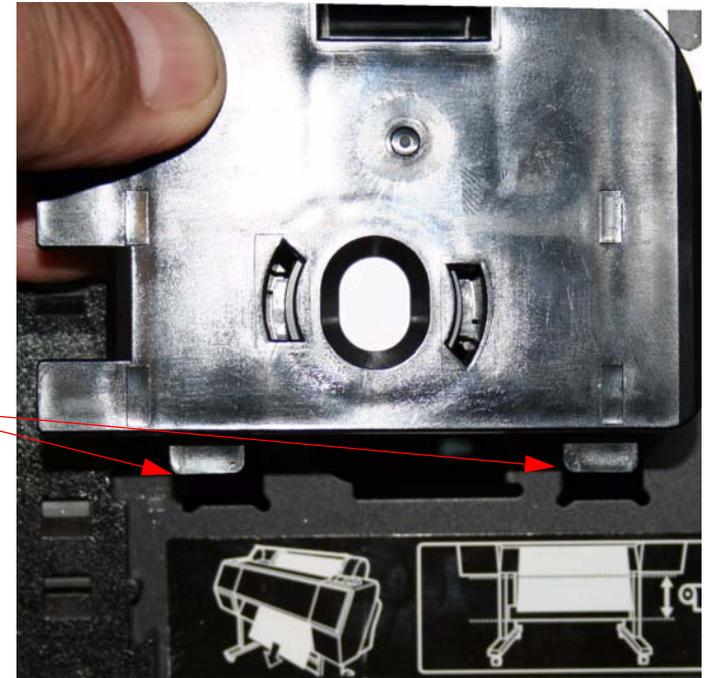
2. Place the **Calibration Tile Fastener** in position and lock it in place.

6. Install the **Calibration Tile Holder**.



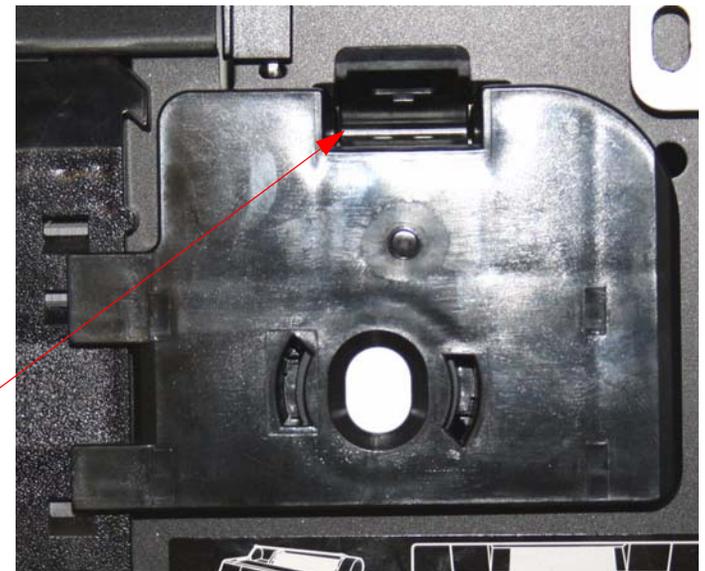
1. Locate the **2 Holes** for the **Calibration Tile Holder Tabs**.

2. Align the **Calibration Tile Holder Tabs** with the **2 Holes**.



3. Place the **Calibration Tile Holder Tabs** into the **2 Holes**.

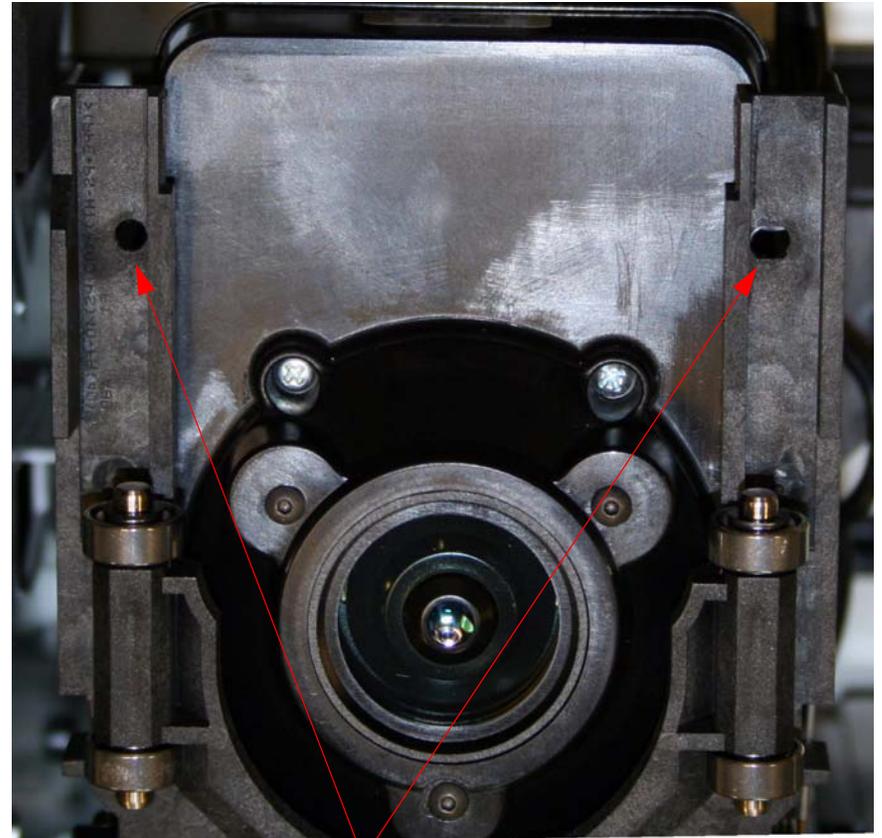
4. Lock it in place.



7. Install the **ILS Head** into it's correct position.



Correct with the **Pins** in these **Holes**.



Incorrect with the **Pins** not in these **Holes**.

8. Plug in the **2 cables** to the **ILS Head**.
9. Verify that the **ILS Head** is **still seated** correctly.
10. Place the **SpectroProofer** on the **Printer**.
11. Connect the **USB Cable** from the **Printer** to the **SpectroProofer**.

12. Connect the **Power Cables** to the **SpectroProofer** and the **Printer**.
13. Turn on the **Printer** and observe the **SpectroProofer's** initialization sequence.
 - 13.1 The **Green Light** on the **SpectroProofer** will blink.
 - 13.2 The **SpectroProofer Carriage** will find it's home position reference.
 - 13.3 The **ILS Head** will sample it's **Calibration Tile** (shine it's light on it).
 - 13.4 The **SpectroProofer Track** will lower into position.
 - 13.5 The **ILS Head** will sample the **Backing Plate**.
 - 13.6 The **SpectroProofer Carriage** will return to it's home position.
 - 13.7 The **SpectroProofer Track** will return to it's raised position.
 - 13.8 The **Green Light** will stop blinking and remain on.
14. Load Epson Paper (necessary for step 16).
15. Check the **Printer's** configuration.
 - 15.1 Verify that **Paper Setup/Paper Type** is correctly set to match the paper loaded in the previous step.
 - 15.2 Verify that **Printer Setup/PAPER SIZE CHK:** is set to **ON**
 - 15.3 Verify that **Printer Setup/PAPER SKEW CHECK:** is set to **ON**
16. Perform the **Options Setup:/SpectroProofer/Device Alignment**.
17. Verify that the **Printer** comes **Ready**.
18. Check the **ILS Head's** reading of the **Backing Plate**.
 - 18.1 Navigate to **Options Setup:/SpectroProofer/Status Information/Backing Color**.
 - 18.1.1 It should display **Black** or **White** to match the color of the Backing Plate.
 - 18.1.2 If it displays **Gray**, there is a problem.

18.1.2.1 Generally this issue requires a new ***ILS Head*** to fix.

18.1.2.2 Occasionally this issue requires a new ***SpectroProofer Mechanism*** to fix.

Stuck In Cut Sheet Mode

Note: *Stuck In Cut Sheet Mode* refers to the Printer always returning to sheet mode after loading paper.

Note: *Historically, this symptom has been caused by the Paper Thickness Sensor registering very thick media. The Printer assumes that very thick media must be cut sheet media.*

Note: *If the symptom is caused by the Paper Thickness Sensor, the Printer will print at the “Wide”, “Wider”, or “Widest” platen gap.*

1. Verify that the **Paper Thickness Sensor** is not mechanically binding.
2. Perform the **Paper Thickness Sensor** Adjustment.

Vertical Banding

Note: *Vertical Banding is caused by horizontal dot placement errors.*

Saturation Related Vertical Banding

If the vertical banding is caused by paper over saturation, the banding will correspond to rippling of the media. The rippling will be visible on the back of the media. This kind of vertical banding is usually about an inch wide.

Under saturated images causes a type of vertical banding that is usually about 1/3 of an inch wide. Use another **Computer** with the Epson Driver and Epson Media to eliminate the users equipment. Non-Epson drivers effect vertical banding if the amount of ink that is applied to the media is too low. Using the Epson driver should look better, if that is the case. Non-Epson media can impact vertical banding if the amount of ink that is required to correctly saturate the media is not applied by the Epson driver or a non-Epson driver.

Alignment Related Vertical Banding

Print an image in bi-directional mode, and in uni-directional mode (**High Speed** checked = bi-directional mode). If the vertical banding is more evident in bi-directional mode, the most likely cause is an improper **Bi-D** alignment. The **Uni-D** adjustment effects vertical banding in both bi-directional mode, and in uni-directional mode.

Carriage Motor Related Vertical Banding

If the vertical banding is more evident in uni-directional mode, the most likely cause is **Carriage Motor** vibration. Replacing the **Carriage Motor** may improve the banding.

Dirty Rails or Encoder Strip

Clean the Carriage Encoder and the Carriage Rails.

Adjustments

AID Check Test

Purpose: The **AID Check** verifies the correct operation of the AID (Auto Ink Detection) circuitry.

Note: If the AID Check fails, verify that the Print Head does not have missing nozzles. Missing nozzles on the Print Head will cause the test to fail.

1. Start the **AID Check** test.
 - 1.1 Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
 - 1.2 Navigate to **SELF TESTING\Mecha Adjustment\AID Check**
 - 1.3 Press the **Right Arrow**.
 - 1.4 Press the **OK** button to begin the test.
 - 1.4.1 The Printer will display **Please Wait**.



1. The Printer will display **Please Wait**.



2. The **Printer** will display 6 **OK**'s if the **AID Circuitry** passes the test.

Note: Mode1 displaying 3 OK's indicates that the AID Circuitry is reading Print Head Nozzles correctly.

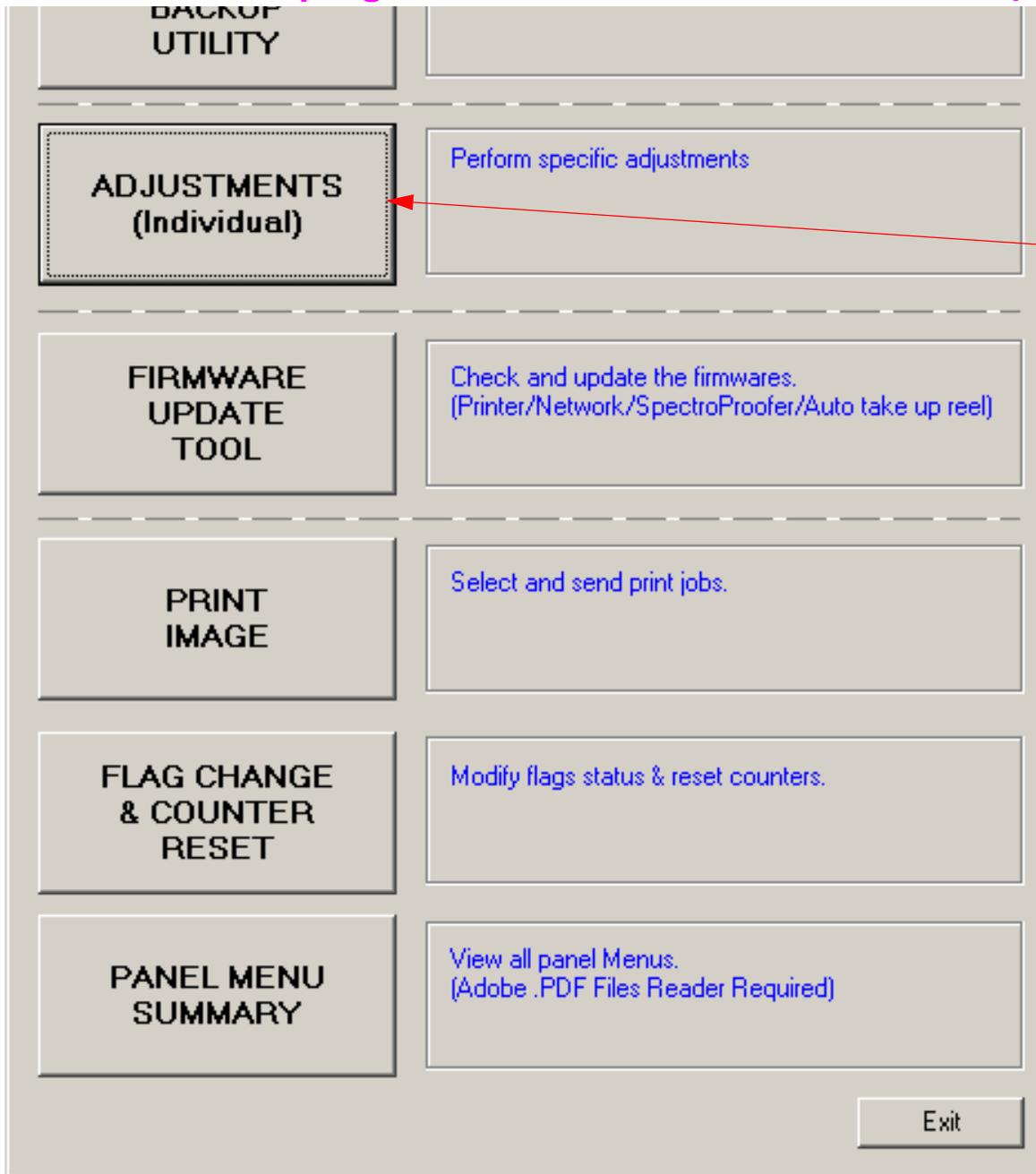
Check Network Communication

Note: *The Check Network Communication adjustment item tests the Ethernet Port on the Printer.*

1. Prepare the **Printer's Ethernet Port** for the test.
 - 1.1 Enter the User **Menu** on the **Printer**, and navigate to **NETWORK SETUP**.
 - 1.1.1 Set the **NETWORK SETUP** to **ENABLE**.
 - 1.2 Navigate within the **NETWORK SETUP** menu to **IP ADDRESS SETTING**.
 - 1.2.1 Set the **IP ADDRESS SETTING** to **AUTO**.
2. Connect the **Printer's Ethernet Port** to a DHCP network.
 - 2.1 The DHCP network will assign an IP Address to the **Printer**.
3. Determine the IP Address assigned to the **Printer** by the DHCP network.
 - 3.1 Enter the User **Menu** on the **Printer**, and navigate to **TEST PRINT**.
 - 3.2 Navigate within the **TEST PRINT** menu to **NETWORK STATUS SHEET**.
 - 3.2.1 Print the **NETWORK STATUS SHEET**.
 - 3.3 Locate the **Printer's** IP Address on page 1 of the Network Status Sheet print out.
4. Load paper into the **Printer** (any kind).

Note: *Steps 1 - 3 describe a method for assigning an IP Address using a network that supports DHCP protocol. It is also possible to use a direct connection between a computer and the Printer. An ethernet cable and a manual IP Address must be used for a direct connection. Note: Manual IP 169.254.1.2 Subnet 255.255.0.0 works with most computers.*

1. From the **Servprog.exe** for the 7900 and 9900, select **Adjustments (Individual)**.



Click on **Adjustments (Individual)**

2. Check the *Printer's Ethernet Port* operation.

Check Network Communication

Check the printer communication through the Network connection.

Procedure:

1. Make sure the printer and your computer are connected to the Network.
2. Input the relevant IP Address, click the [Run] button and check the communication succeeded.

Click the [Finish] or the [Next] button when you are done.



IP address

136 . 239 . 96 . 152

Run

< Back Finish Cancel

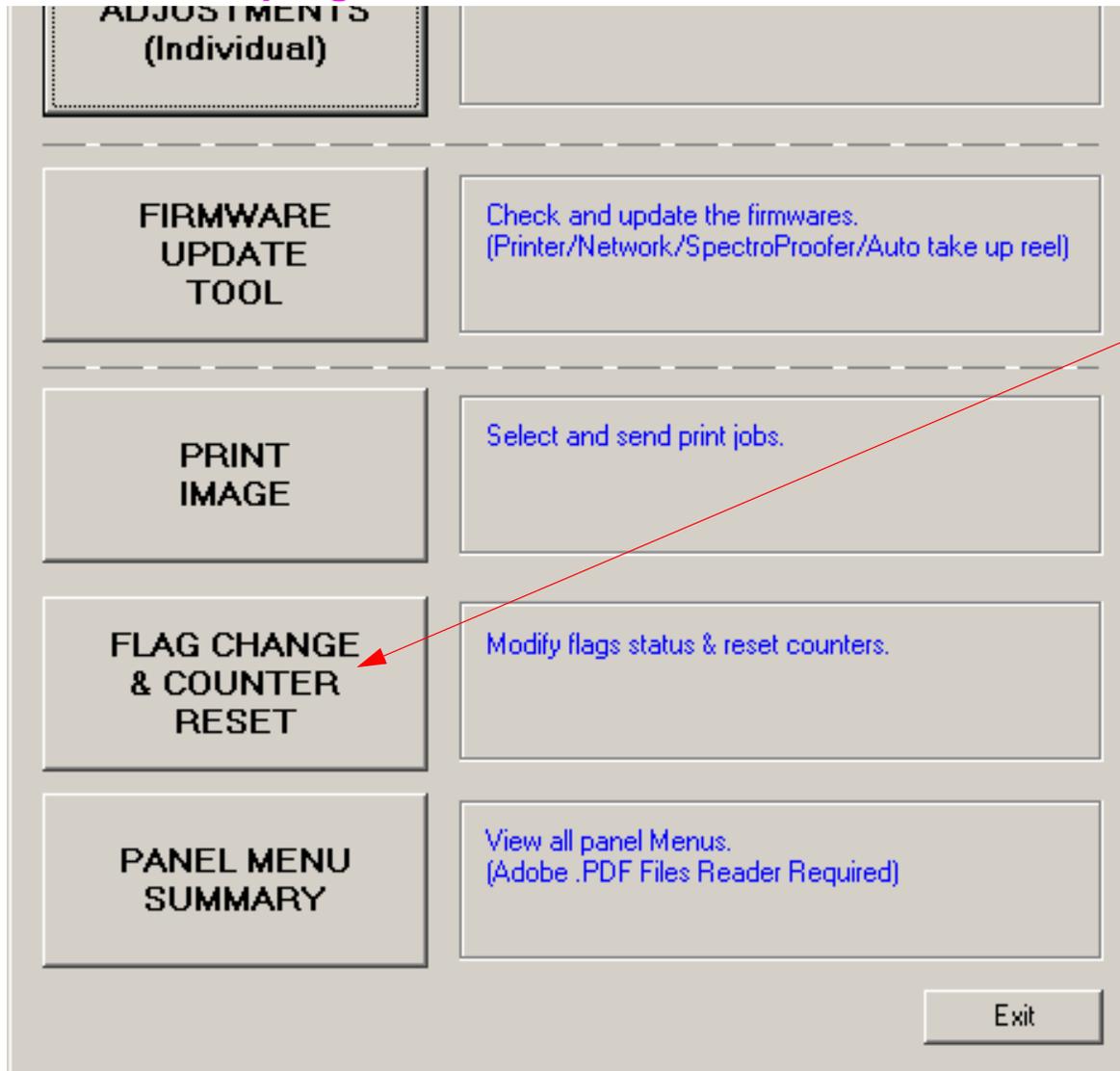
**Note: Manual
IP169.254.1.2
Subnet
255.255.0.0
works with
most
computers.**

1. Enter the *Printer's* IP Address.
2. Click on the *Run* button to start the test.
3. The *Printer* will print out a Status Sheet (test print).
4. Click on *Finish* to return to the main menu.

Clear Counter [when replacing AID]

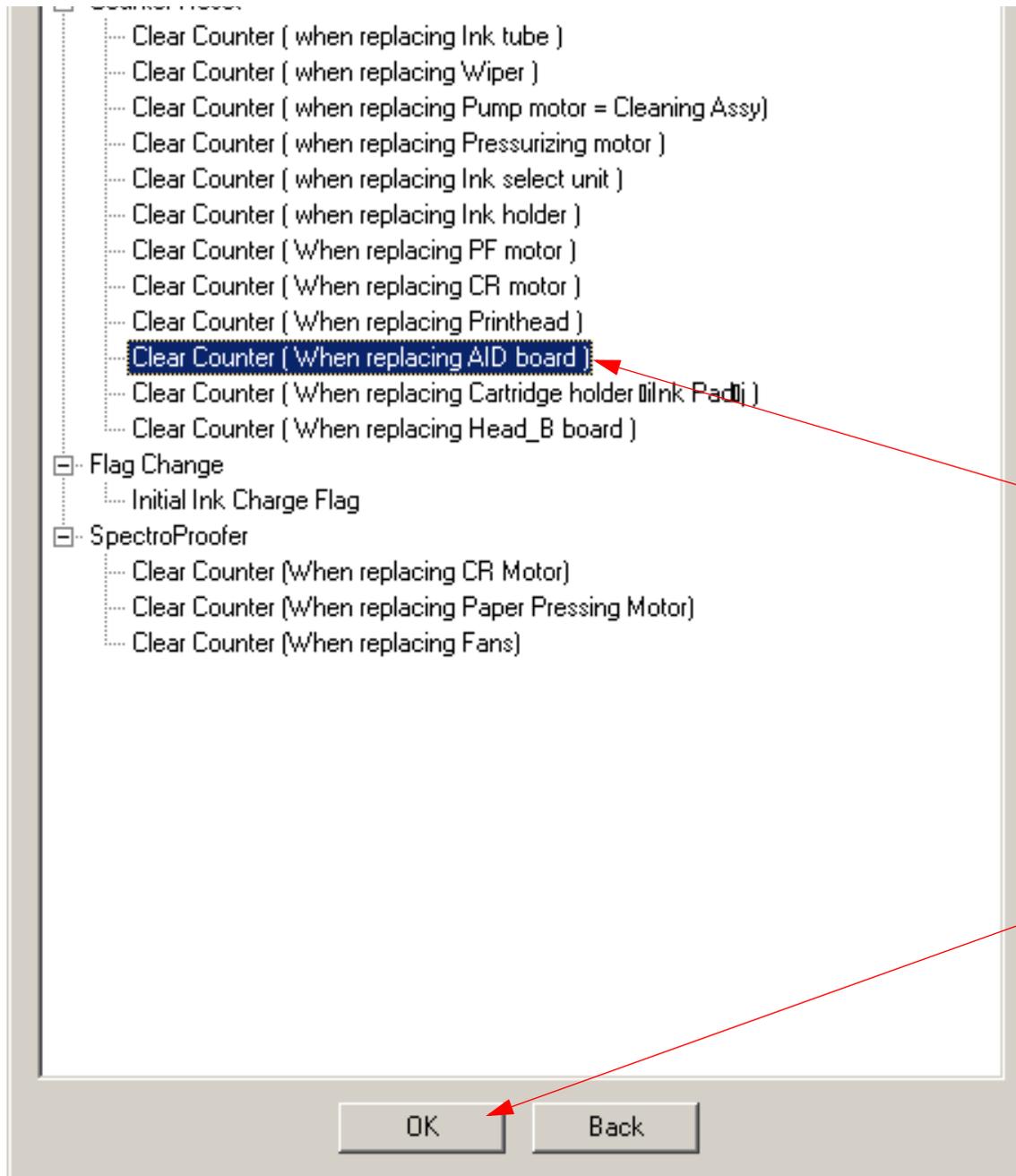
Note: *Clear Counter [when replacing AID board]* resets the AID Board Life Counter.

1. From the **Servprog.exe** for the 7900 and 9900, select **FLAG CHANGE & COUNTER RESET**.



Click on **FLAG CHANGE & COUNTER RESET**.

2. From the **FLAG CHANGE & COUNTER RESET** menu, select **Clear Counter [when replacing AID board]**.



1. Click on **Clear Counter [when replacing AID board]**.

2. Click on **OK**.

3. Reset the **AID Board** life counter.

Clear Counter (When replacing AID board)

After Replacing the AID Board, you should reset its counter.
Click [Run] to reset the value.
Click the [Finish] or the [Next] button when you are done.



PN2123402

Run

< Back Finish Cancel

1. Click on **Run**.

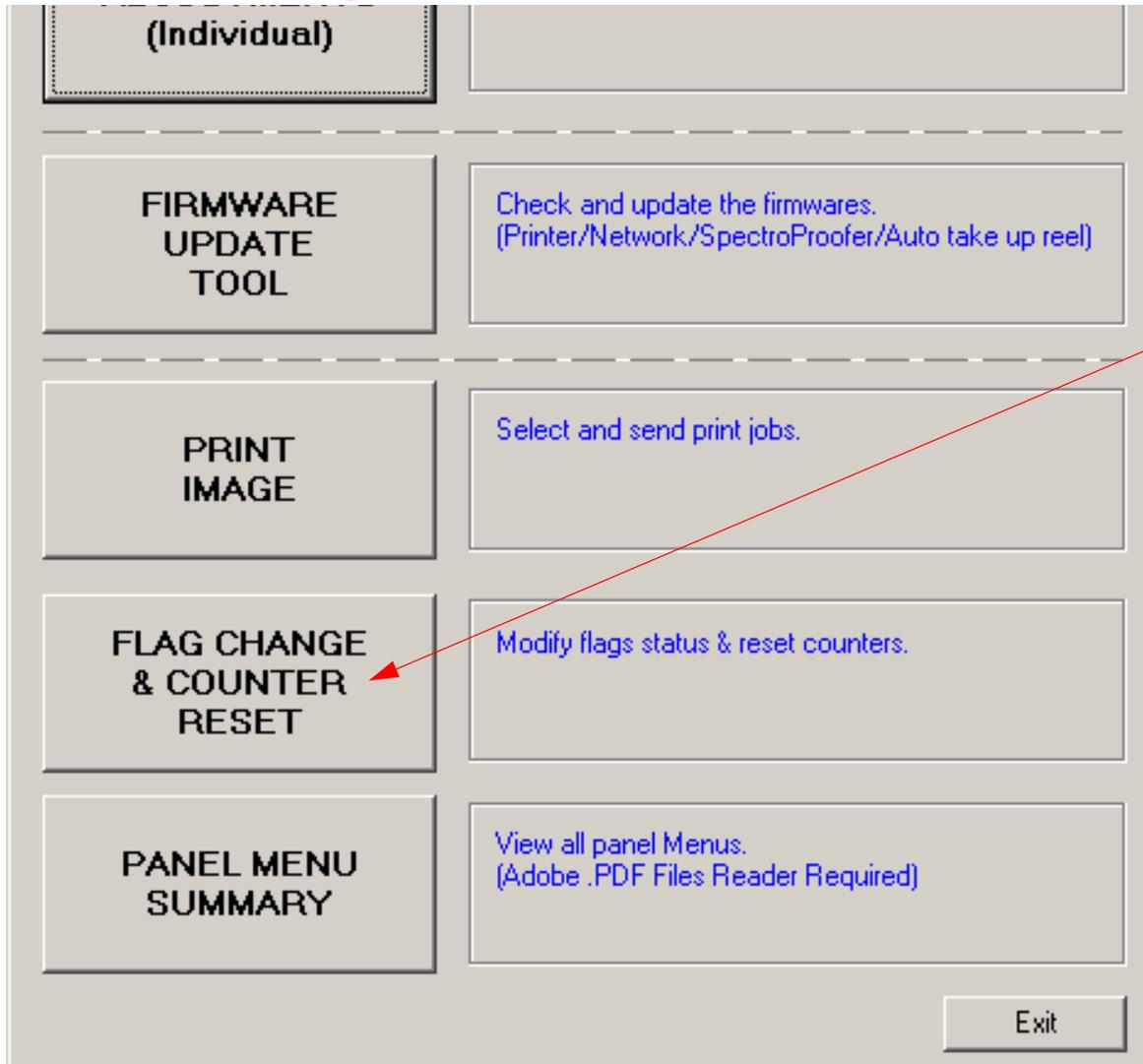
2. Click on **Finish**.

Clear Counter [when replacing Cartridge Holder Ink Pad]

Note: *Clear Counter [when replacing Cartridge holder Ink Pad]* resets the Ink Bay Drip Pad Life Counter.

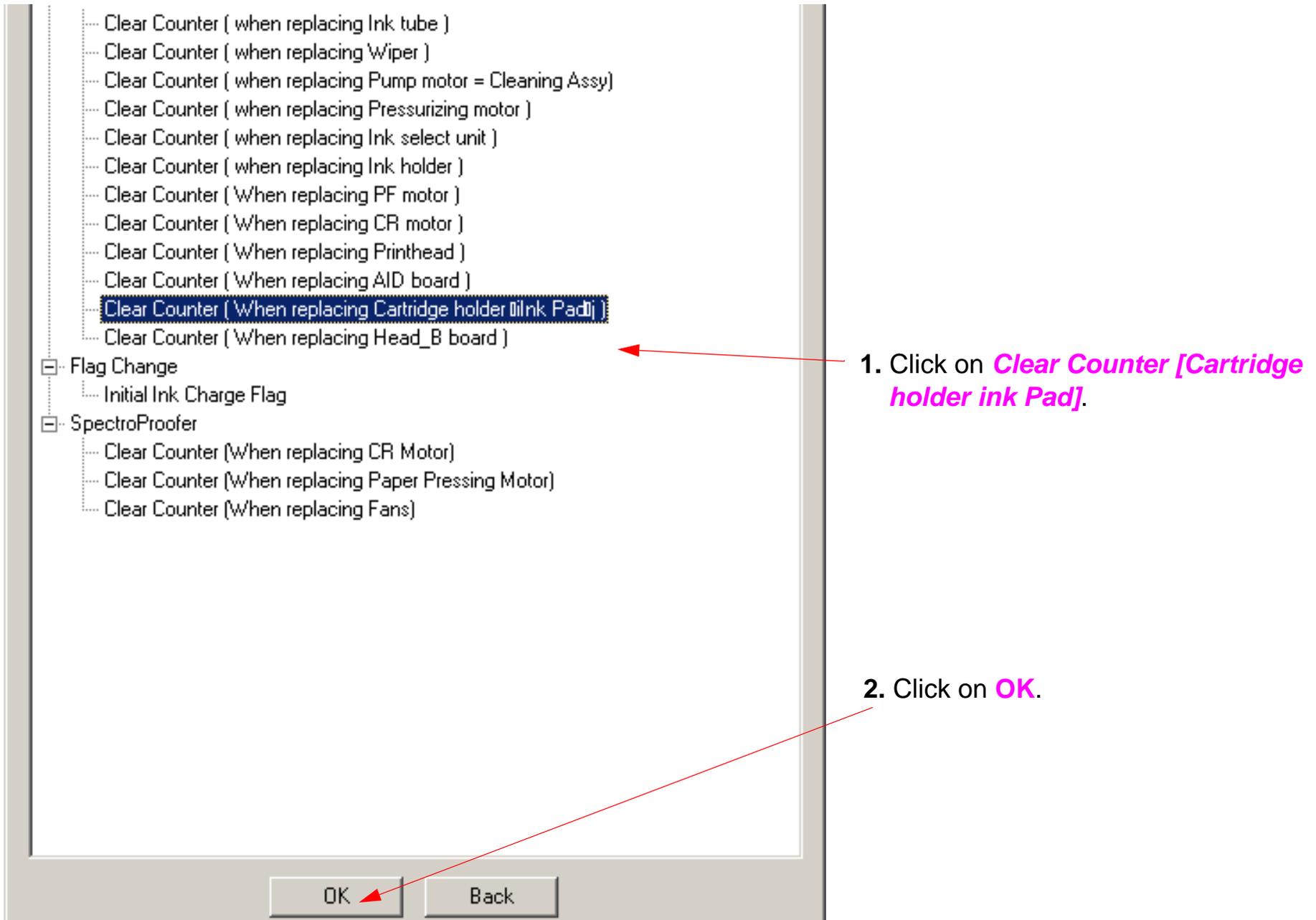
Note: *Clear this counter when replacing either Ink Bay.*

1. From the **Servprog.exe** for the 7900 and 9900, select **FLAG CHANGE & COUNTER RESET**.



Click on **FLAG CHANGE & COUNTER RESET**.

2. From the **FLAG CHANGE & COUNTER RESET** menu, select **Clear Counter [when replacing Cartridge holder ink Pad]**.



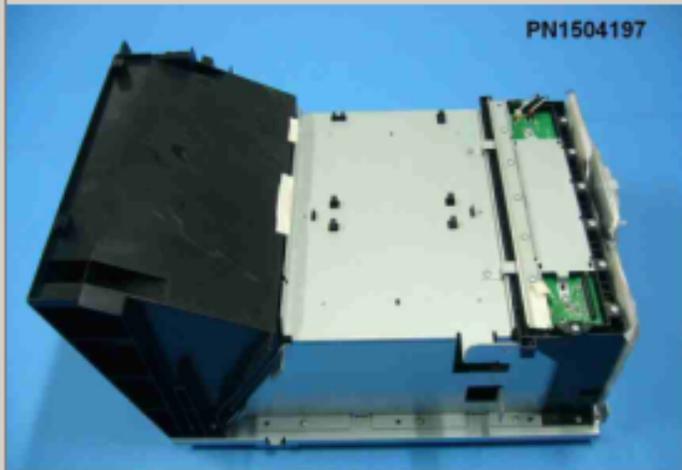
3. Reset the *Drip Pad in the Ink Bay* life counter.

Clear Counter (When replacing Cartridge holder Ink Pad)

After Replacing the Ink pad of the Ink holder, you should reset its counter.

Click [Run] to reset the value.

Click the [Finish] or the [Next] button when you are done.



Run

1. Click on *Run*.

2. Click on *Finish*.

< Back

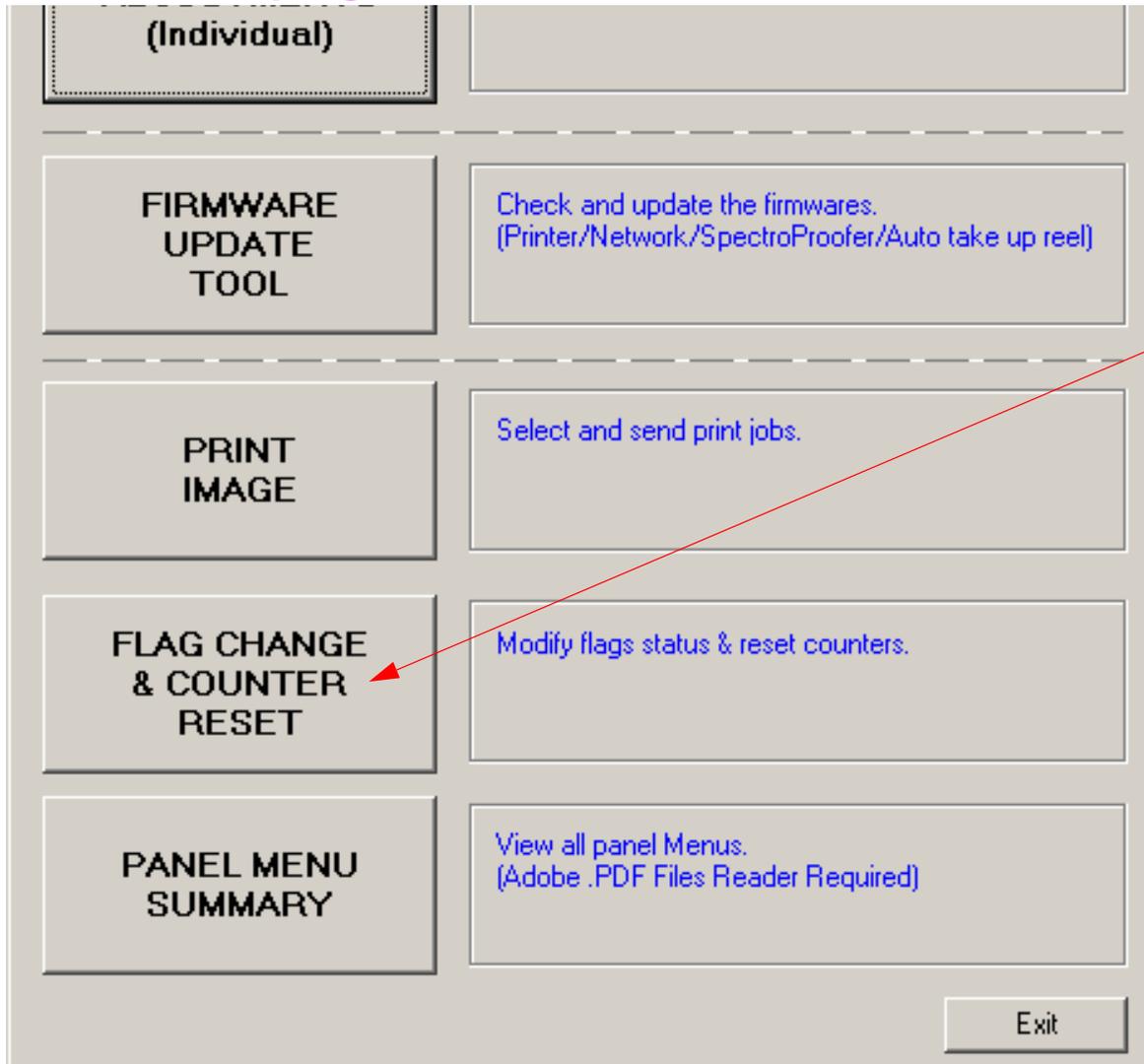
Finish

Cancel

Clear Counter [when replacing CR Motor]

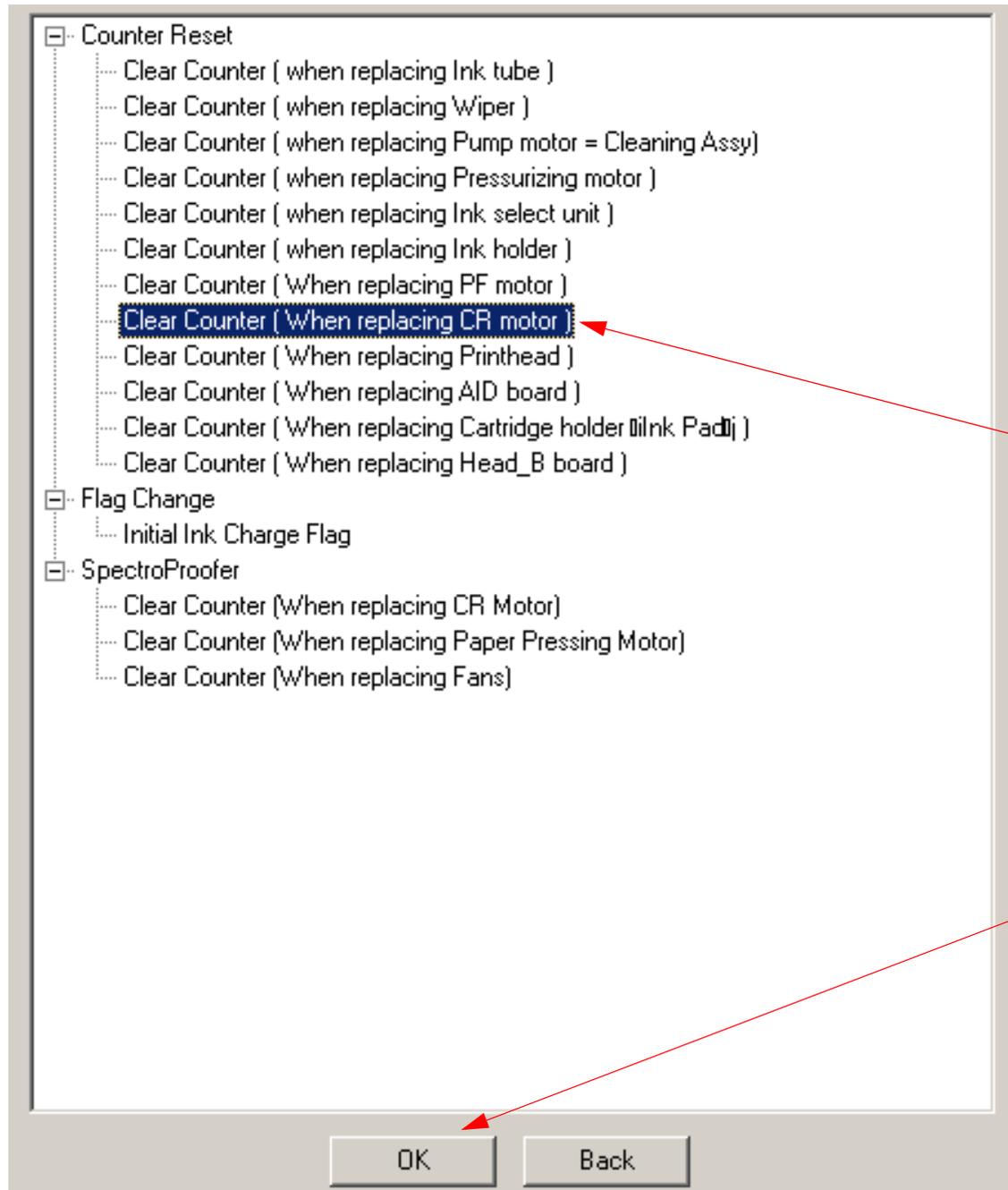
Note: *Clear Counter [when replacing CR motor]* resets the Carriage Motor Life Counter.

1. From the **Servprog.exe** for the 7900 and 9900, select **FLAG CHANGE & COUNTER RESET**.



Click on **FLAG CHANGE & COUNTER RESET**.

2. From the **FLAG CHANGE & COUNTER RESET** menu, select **Clear Counter [when replacing CR motor]**.



1. Click on **Clear Counter [when replacing CR motor]**.

2. Click on **OK**.

3. Reset the **Carriage Motor** life counter.

Clear Counter (When replacing CR motor)

After Replacing the CR Motor, you should reset its counter.

Click [Run] to reset the value.

Click the [Finish] or the [Next] button when you are done.



Run

< Back

Finish

Cancel

1. Click on **Run**.

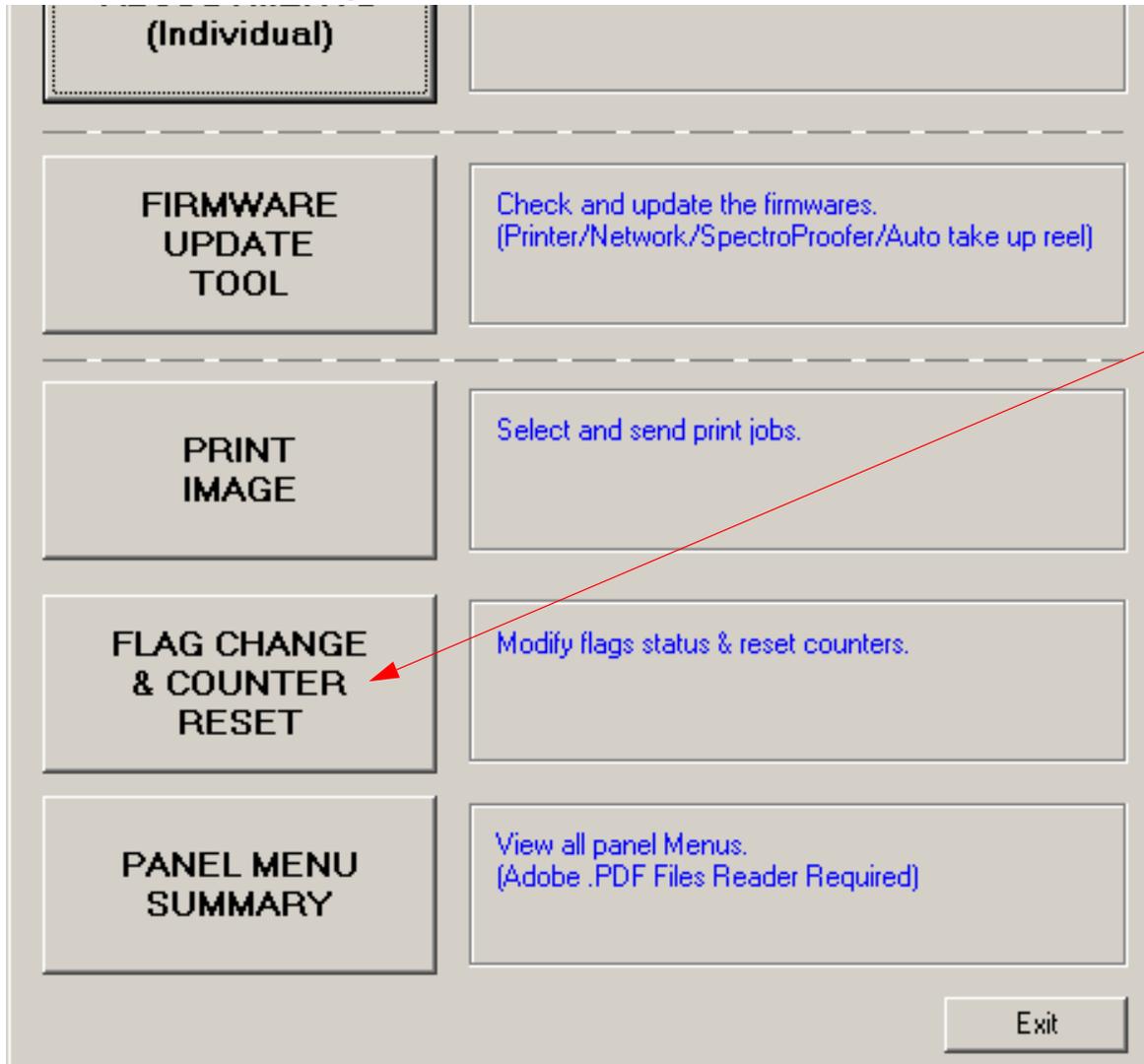
2. Click on **Finish**.

Clear Counter [when replacing Ink holder]

Note: *Clear Counter [when replacing Ink holder]* resets the Ink Bay Life Counter.

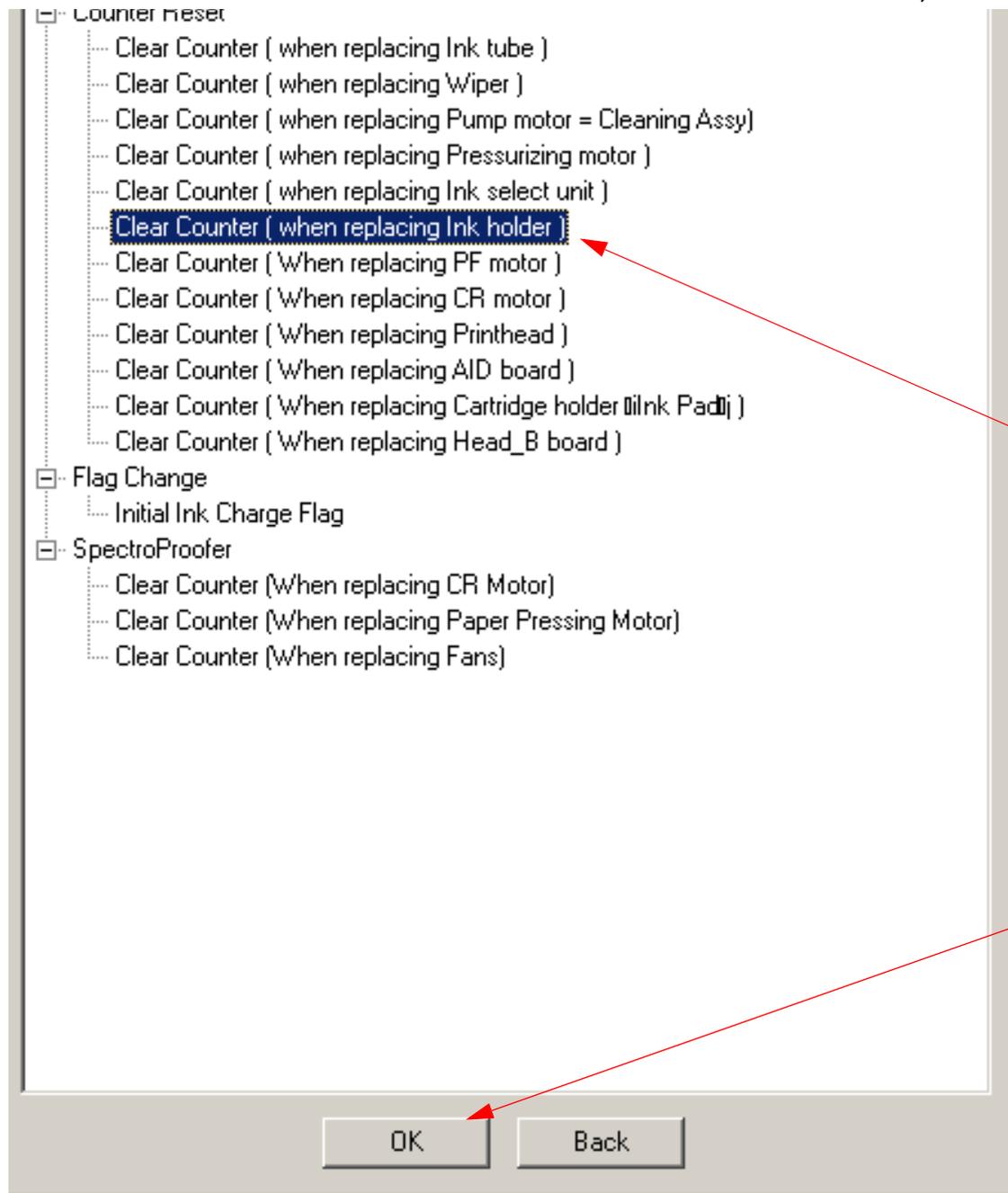
Note: *Clear this counter even if 1 Ink Bay is replaced.*

1. From the **Servprog.exe** for the 7900 and 9900, select **FLAG CHANGE & COUNTER RESET**.



Click on **FLAG CHANGE & COUNTER RESET**.

2. From the **FLAG CHANGE & COUNTER RESET** menu, select **Clear Counter [when replacing Ink holder]**.



1. Click on **Clear Counter [when replacing Ink holder]**.

2. Click on **OK**.

3. Reset the *Ink Bay* life counter.

Clear Counter (when replacing Ink holder)

After Replacing the Ink Holder, you should reset its counter.
Click [Run] to reset the value.
Click the [Finish] or the [Next] button when you are done.



PN1504197

Run

< Back Finish Cancel

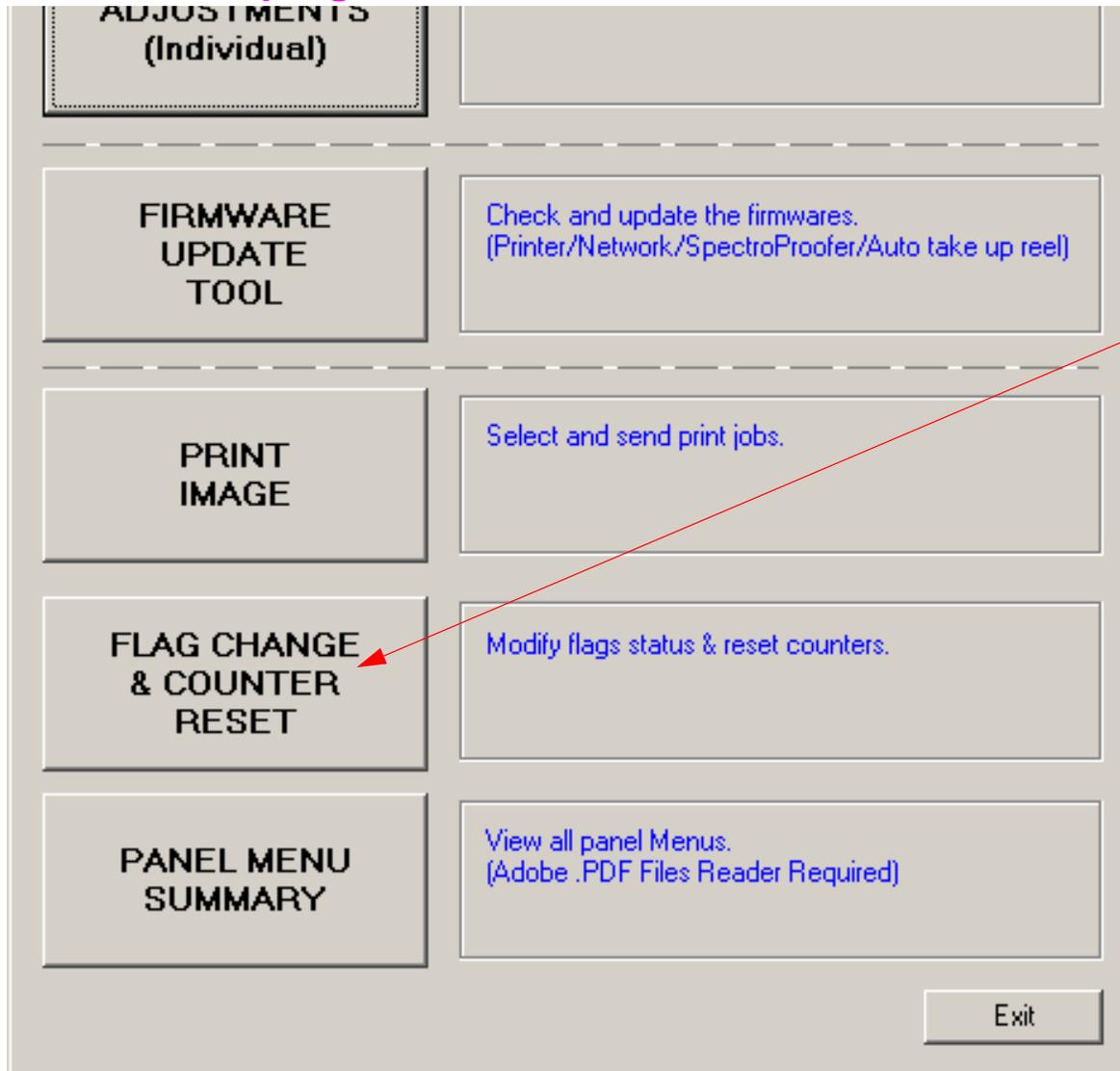
1. Click on *Run*.

2. Click on *Finish*.

Clear Counter [when replacing Ink tube]

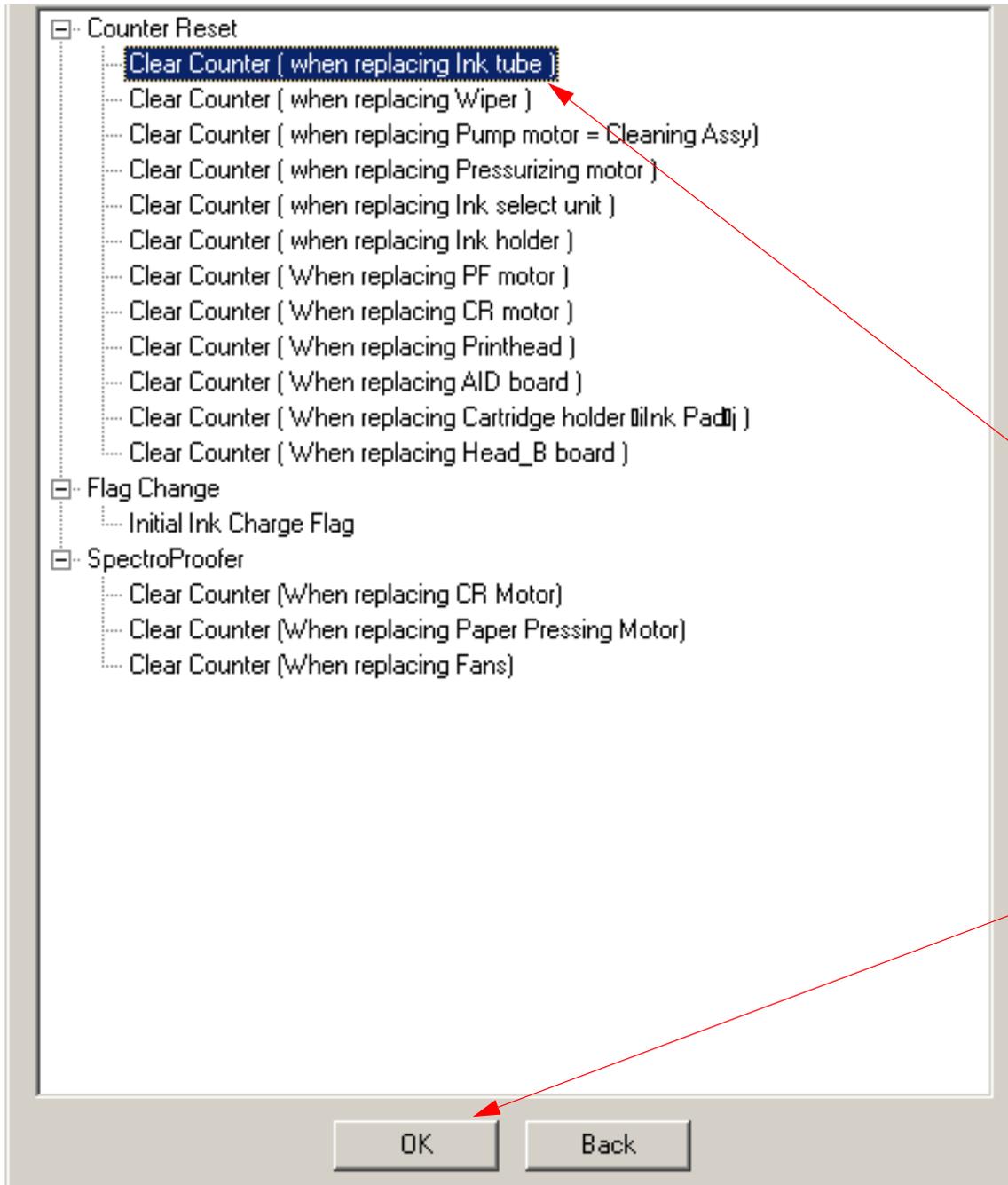
Note: *Clear Counter [when replacing Ink tube]* resets the Ink tube's Life Counter.

1. From the **Servprog.exe** for the 7900 and 9900, select **FLAG CHANGE & COUNTER RESET**.



Click on **FLAG CHANGE & COUNTER RESET**.

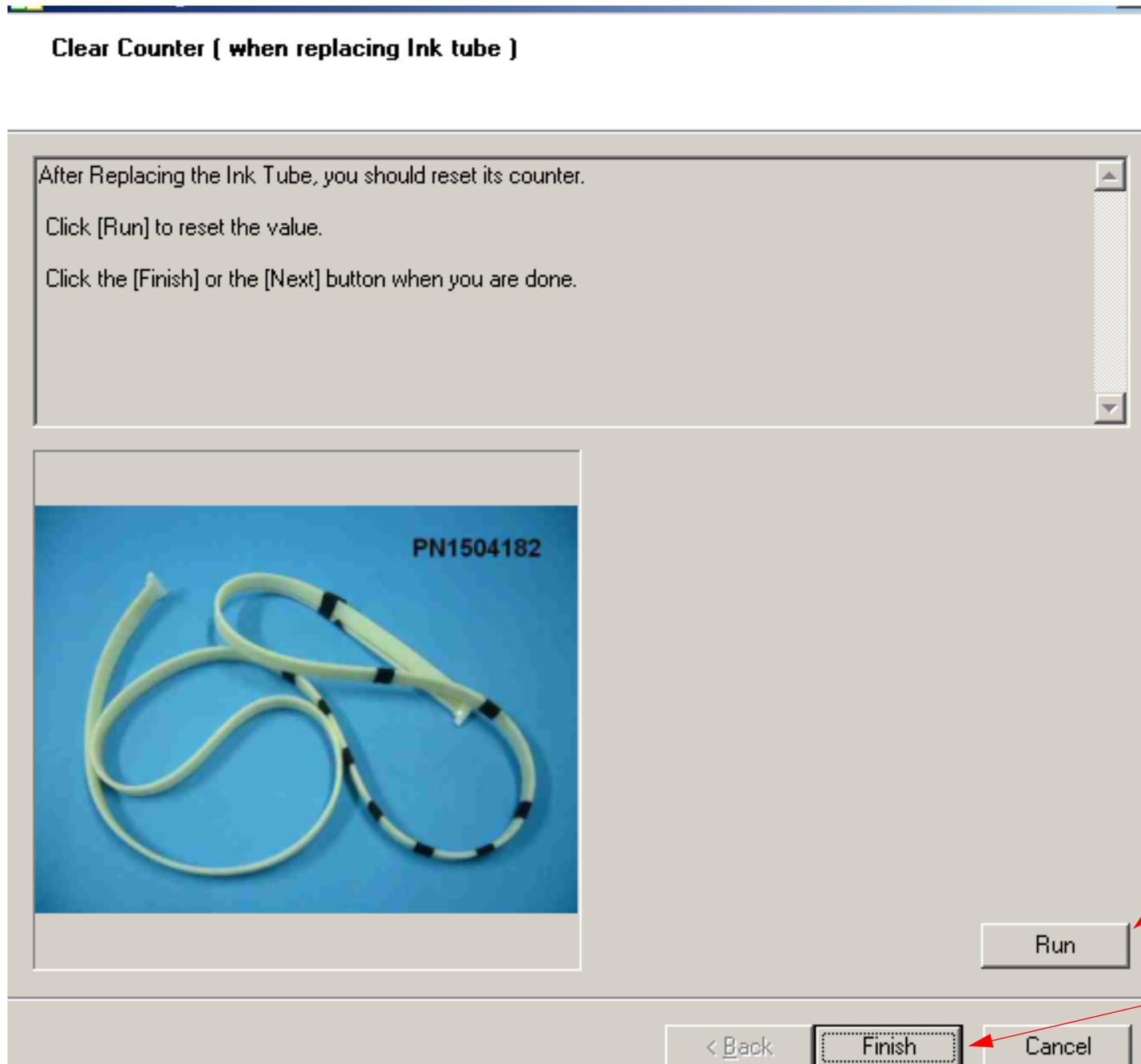
2. From the **FLAG CHANGE & COUNTER RESET** menu, select **Clear Counter [when replacing Ink tube]**.



1. Click on **Clear Counter [when replacing Ink tube]**.

2. Click on **OK**.

3. Reset the *Ink Tube* life counter.



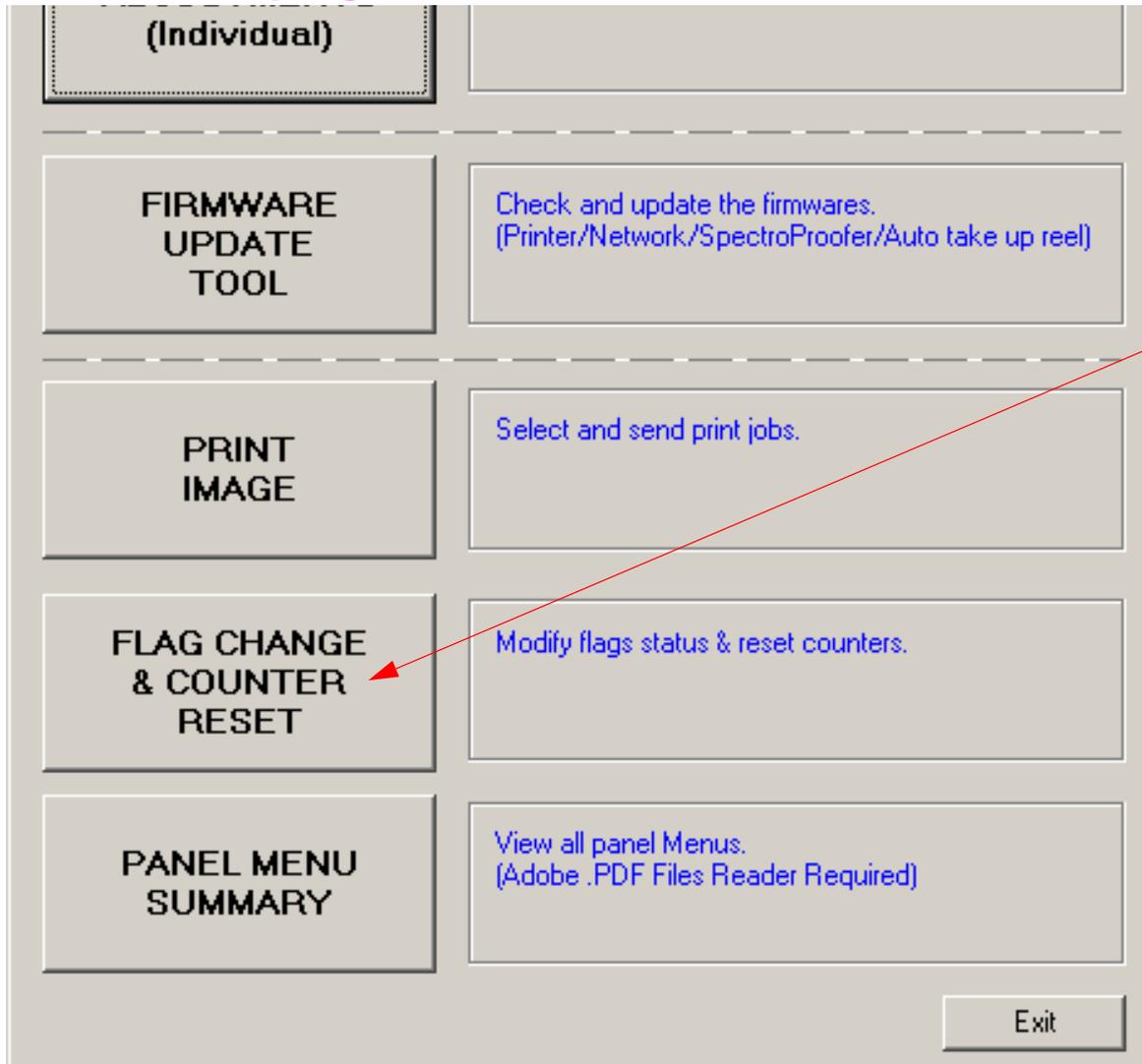
1. Click on *Run*.

2. Click on *Finish*.

Clear Counter [when replacing PF Motor]

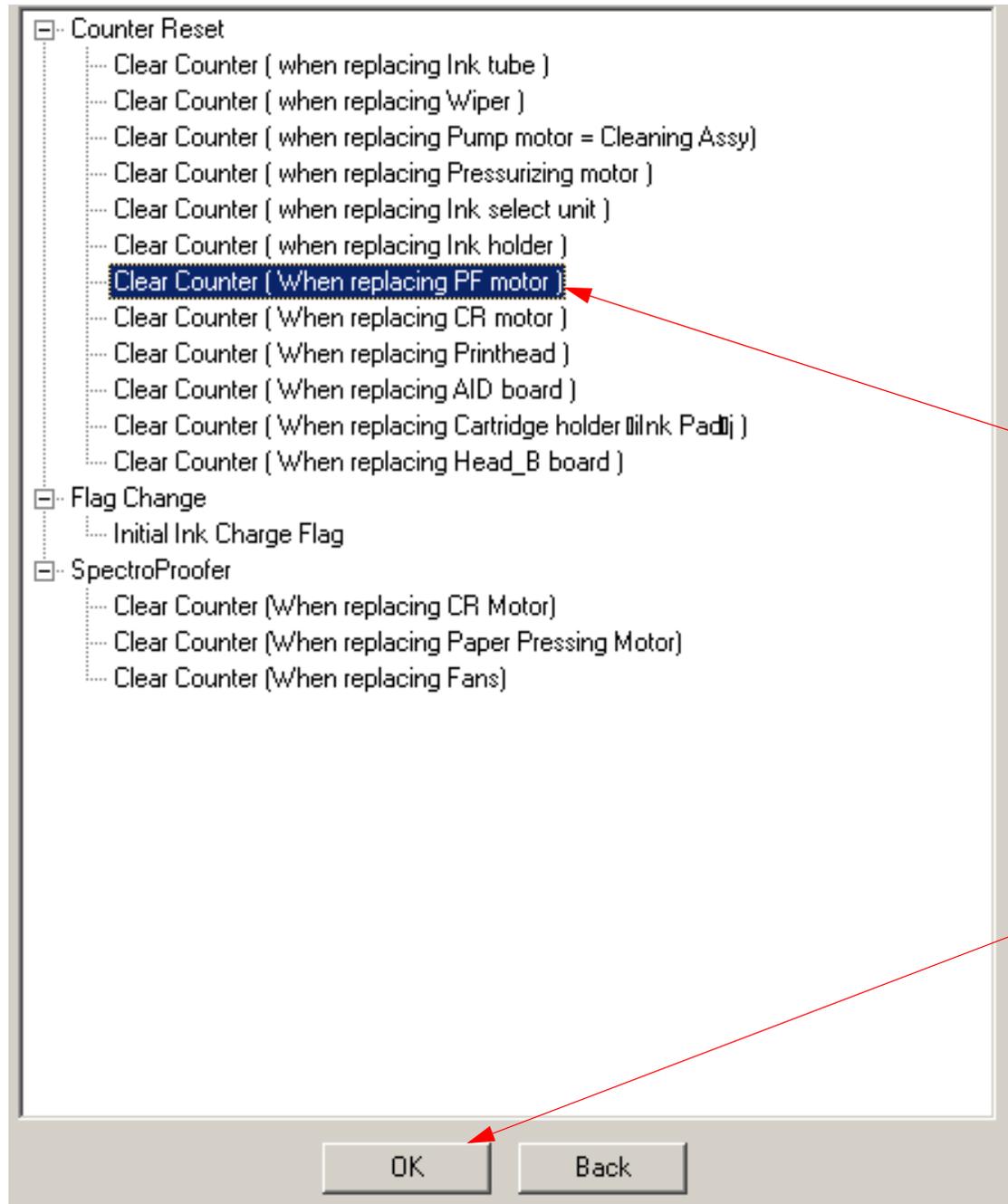
Note: *Clear Counter [when replacing PF motor]* resets the Paper Feed Motor Life Counter.

1. From the **Servprog.exe** for the 7900 and 9900, select **FLAG CHANGE & COUNTER RESET**.



Click on **FLAG CHANGE & COUNTER RESET**.

2. From the **FLAG CHANGE & COUNTER RESET** menu, select **Clear Counter [when replacing PF motor]**.



1. Click on **Clear Counter [when replacing PF motor]**.

2. Click on **OK**.

3. Reset the **Paper Feed Motor** life counter.

Clear Counter (When replacing PF motor)

After Replacing the PF Motor, you should reset its counter.

Click [Run] to reset the value.

Click the [Finish] or the [Next] button when you are done.



Run

< Back

Finish

Cancel

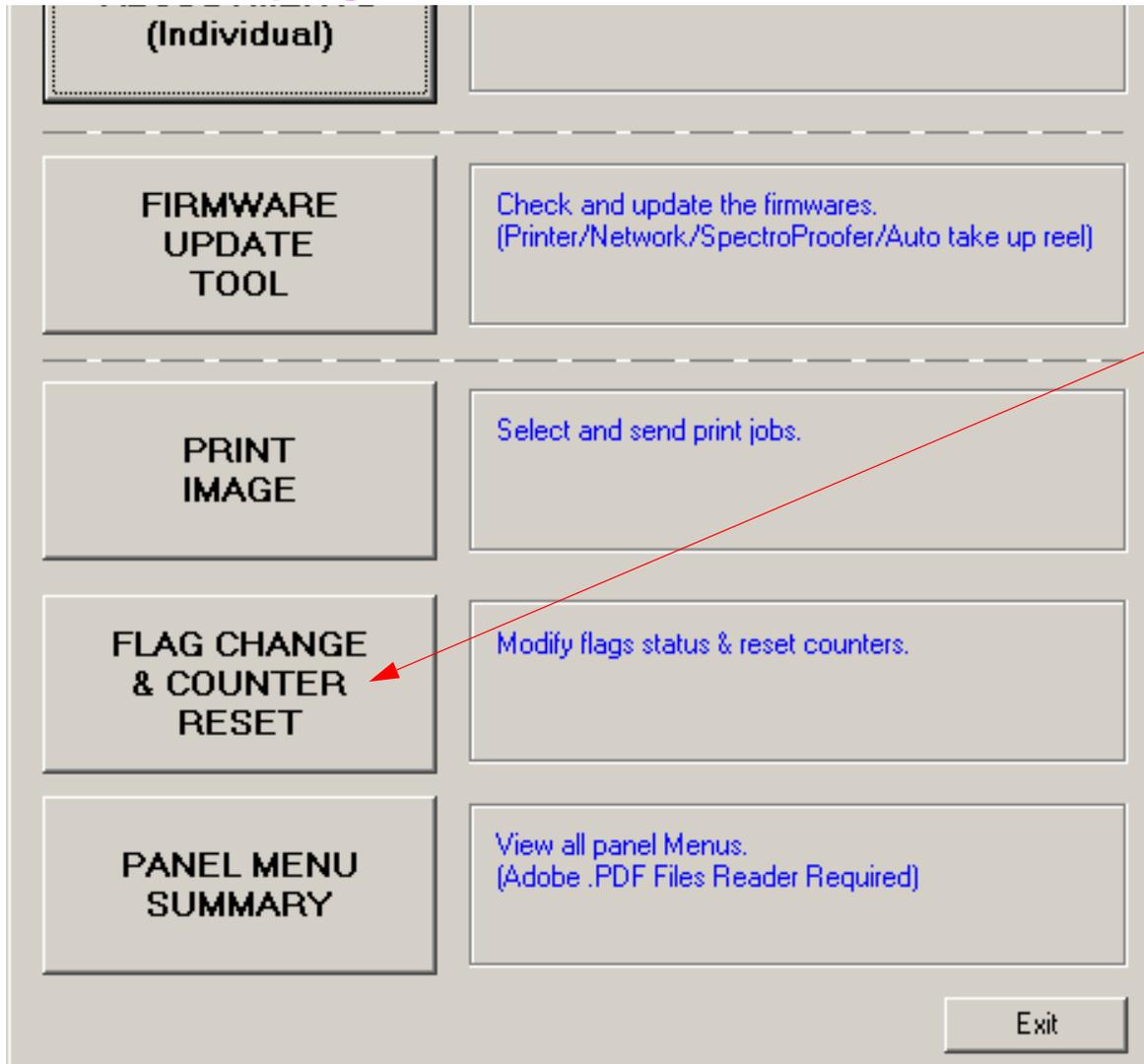
1. Click on **Run**.

2. Click on **Finish**.

Clear Counter [when replacing Pressurizing motor]

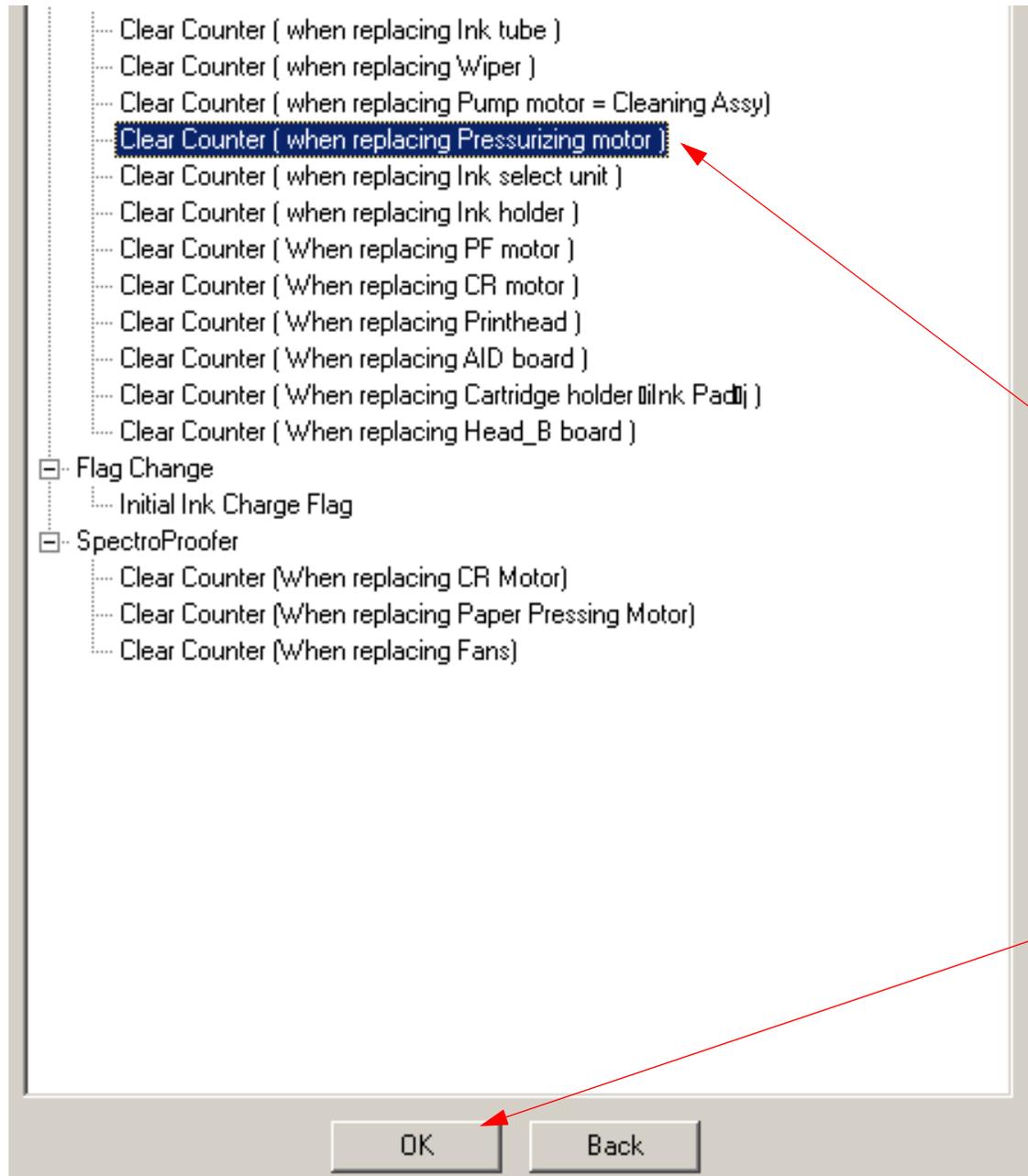
Note: *Clear Counter [when replacing Pressurizing motor]* resets the Pressure Pump Life Counter.

1. From the **Servprog.exe** for the 7900 and 9900, select **FLAG CHANGE & COUNTER RESET**.



Click on **FLAG CHANGE & COUNTER RESET**.

2. From the **FLAG CHANGE & COUNTER RESET** menu, select **Clear Counter [when replacing Pressurizing motor]**.



1. Click on **Clear Counter [when replacing Pressurizing motor]**.

2. Click on **OK**.

3. Reset the **Pressure Pump** life counter.

Clear Counter (when replacing Pressurizing motor)

After Replacing the Pressurizing Motor, you should reset its counter.

Click [Run] to reset the value.

Click the [Finish] or the [Next] button when you are done.



PN1504215

Run

< Back Finish Cancel

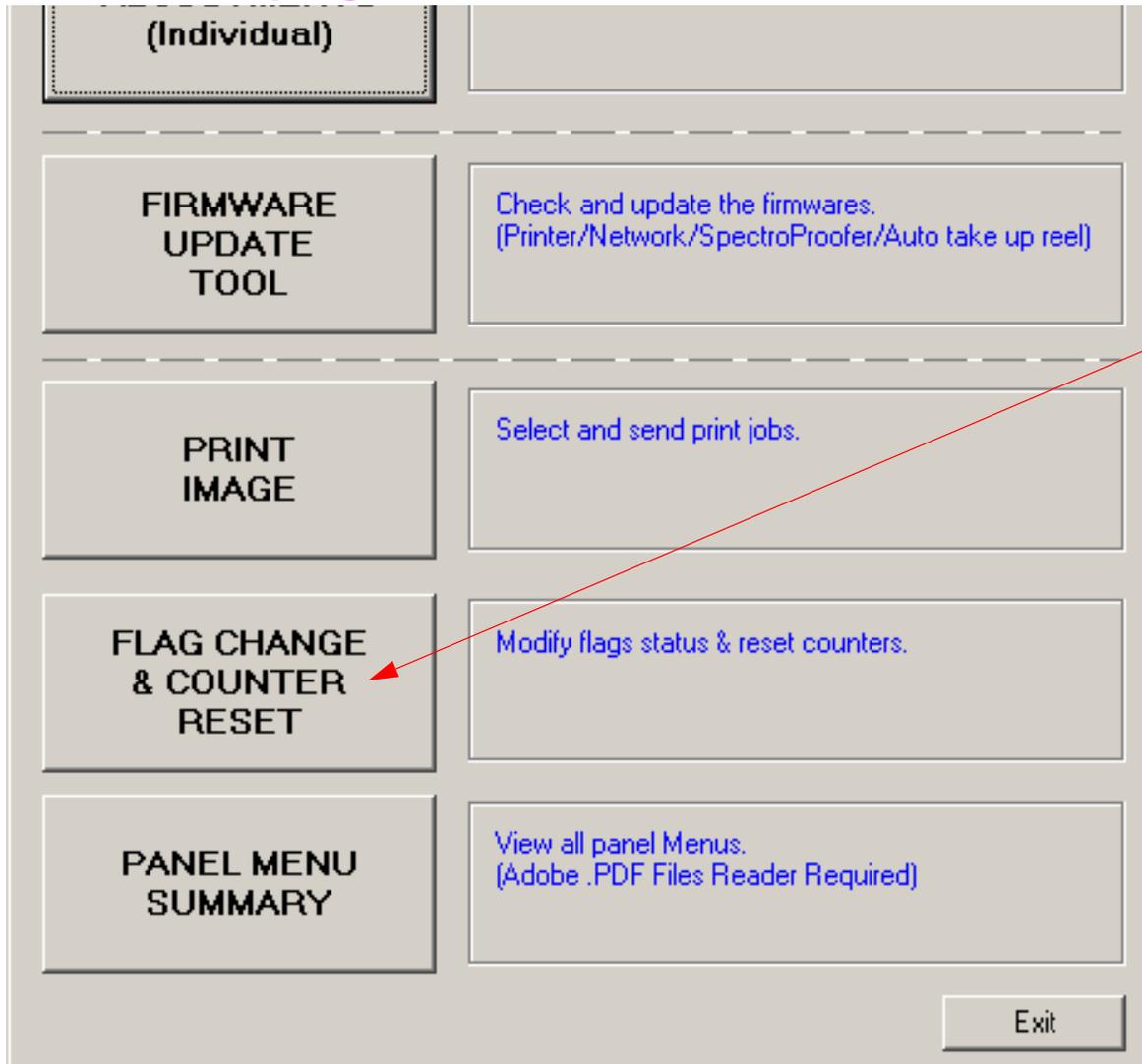
1. Click on **Run**.

2. Click on **Finish**.

Clear Counter [when replacing Printhead]

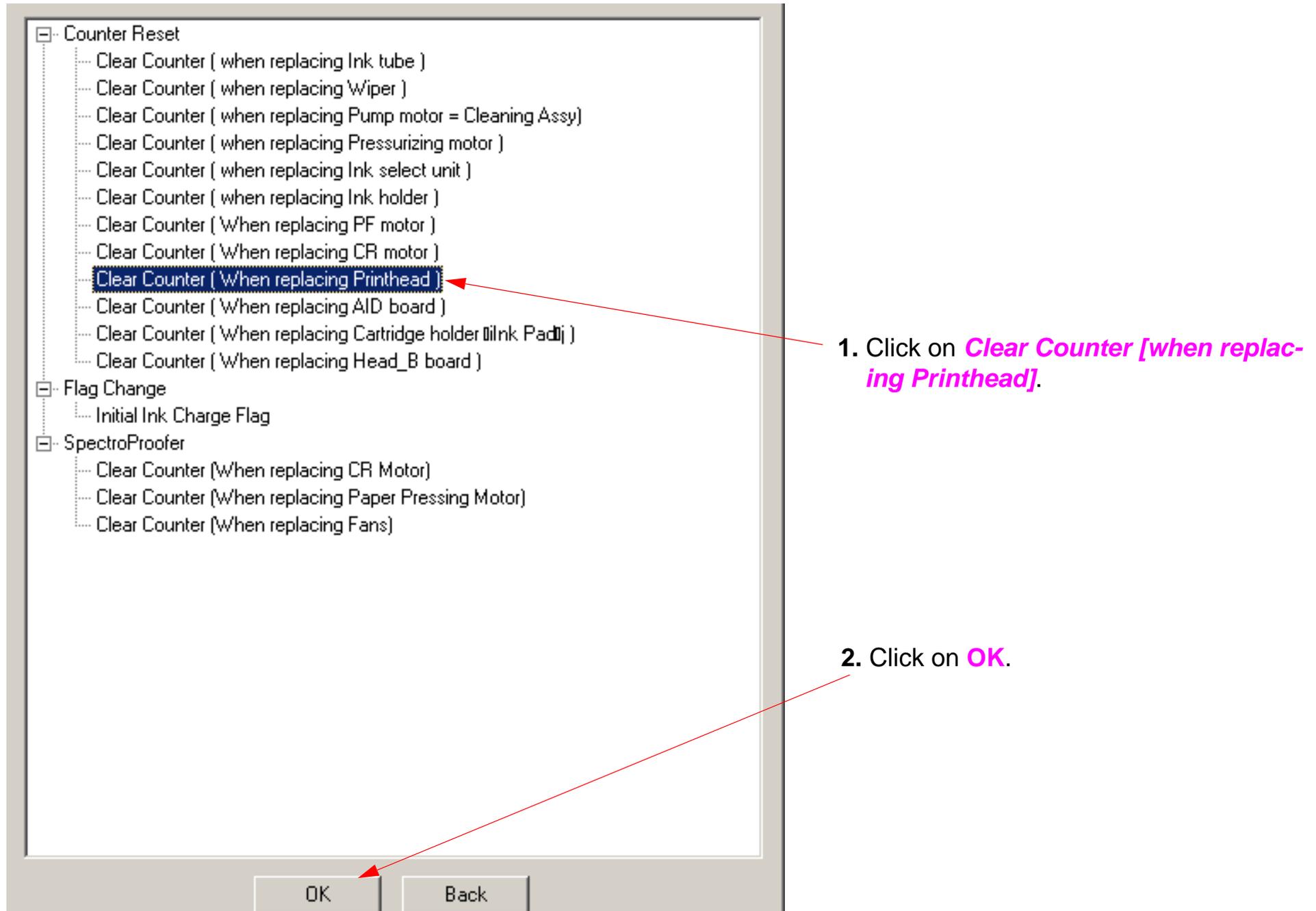
Note: *Clear Counter [when replacing Printhead]* resets the Print Head Life Counter.

1. From the **Servprog.exe** for the 7900 and 9900, select **FLAG CHANGE & COUNTER RESET**.



Click on **FLAG CHANGE & COUNTER RESET**.

2. From the **FLAG CHANGE & COUNTER RESET** menu, select **Clear Counter [when replacing Printhead]**.



3. Reset the **Print Head** life counter. Clear Counter (When replacing Printhead)

After Replacing the Printhead, you should reset its counter.

Click [Run] to reset the value.

Click the [Finish] or the [Next] button when you are done.



Run

1. Click on **Run**.

2. Click on **Finish**.

< Back

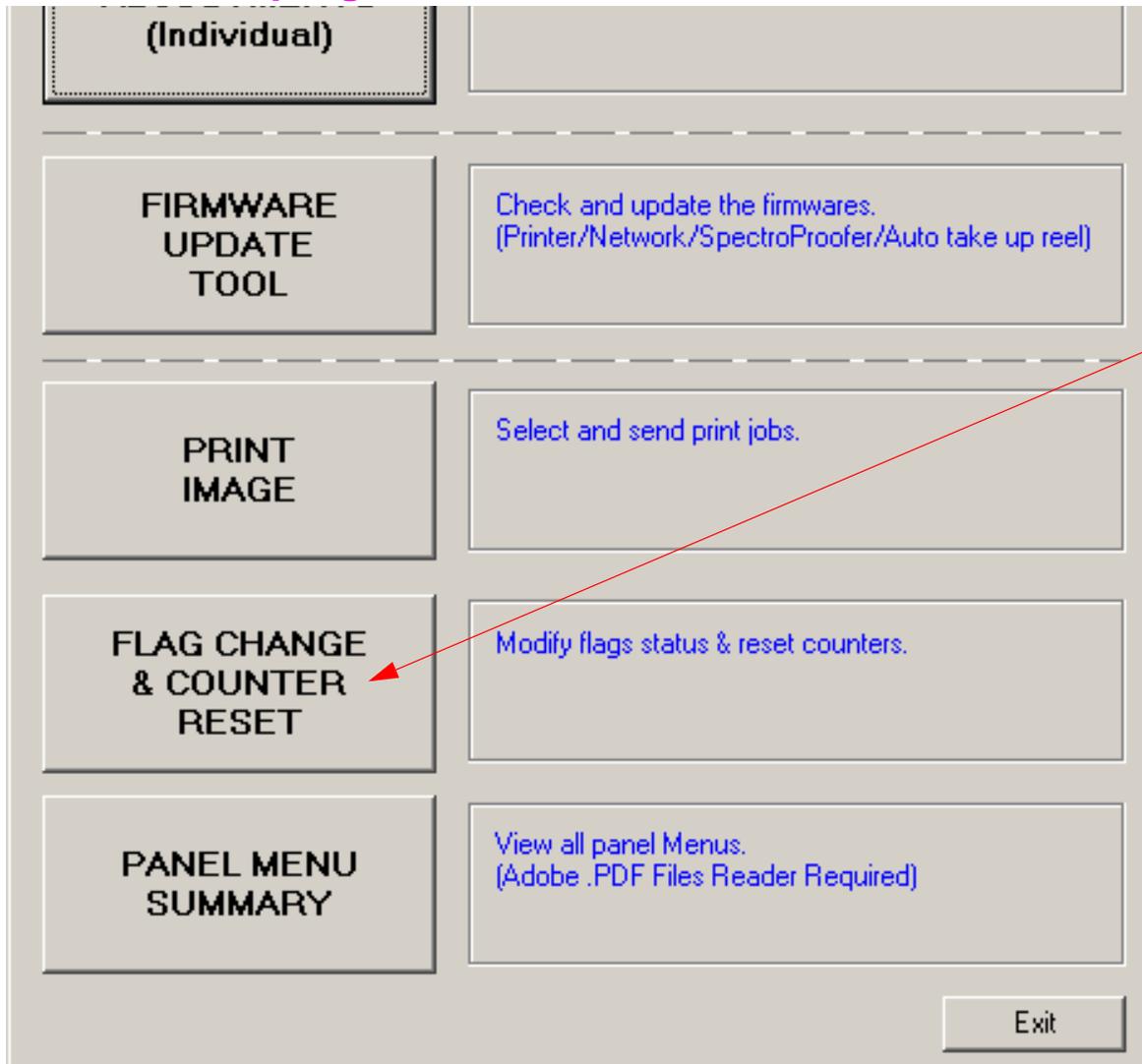
Finish

Cancel

Clear Counter [when replacing Pump motor = ...]

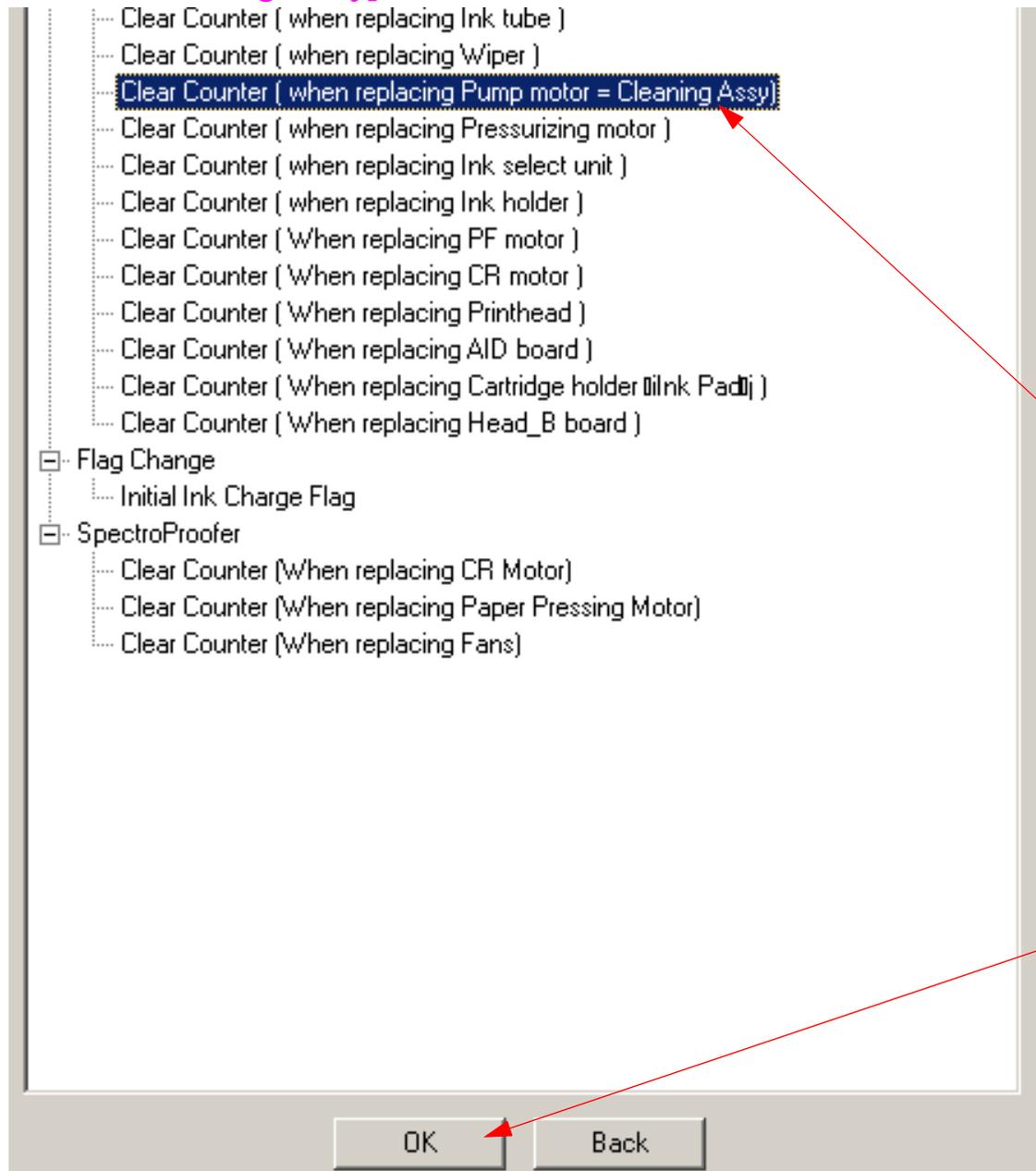
Note: *Clear Counter [when replacing Pump motor = Cleaning Assy]* resets the Cleaning Units Life Counter.

1. From the **Servprog.exe** for the 7900 and 9900, select **FLAG CHANGE & COUNTER RESET**.



Click on **FLAG CHANGE & COUNTER RESET**.

2. From the **FLAG CHANGE & COUNTER RESET** menu, select **Clear Counter [when replacing Pump motor = Cleaning Assy]**.



1. Click on **Clear Counter [when replacing Pump motor = Cleaning Assy]**.

2. Click on **OK**.

3. Reset the **Cleaning Unit** life counter.

Clear Counter (when replacing Pump motor = Cleaning Assy)

After Replacing the Pump Motor, you should reset its counter.

Click [Run] to reset the value.

Click the [Finish] or the [Next] button when you are done.



Run

1. Click on **Run**.

2. Click on **Finish**.

< Back

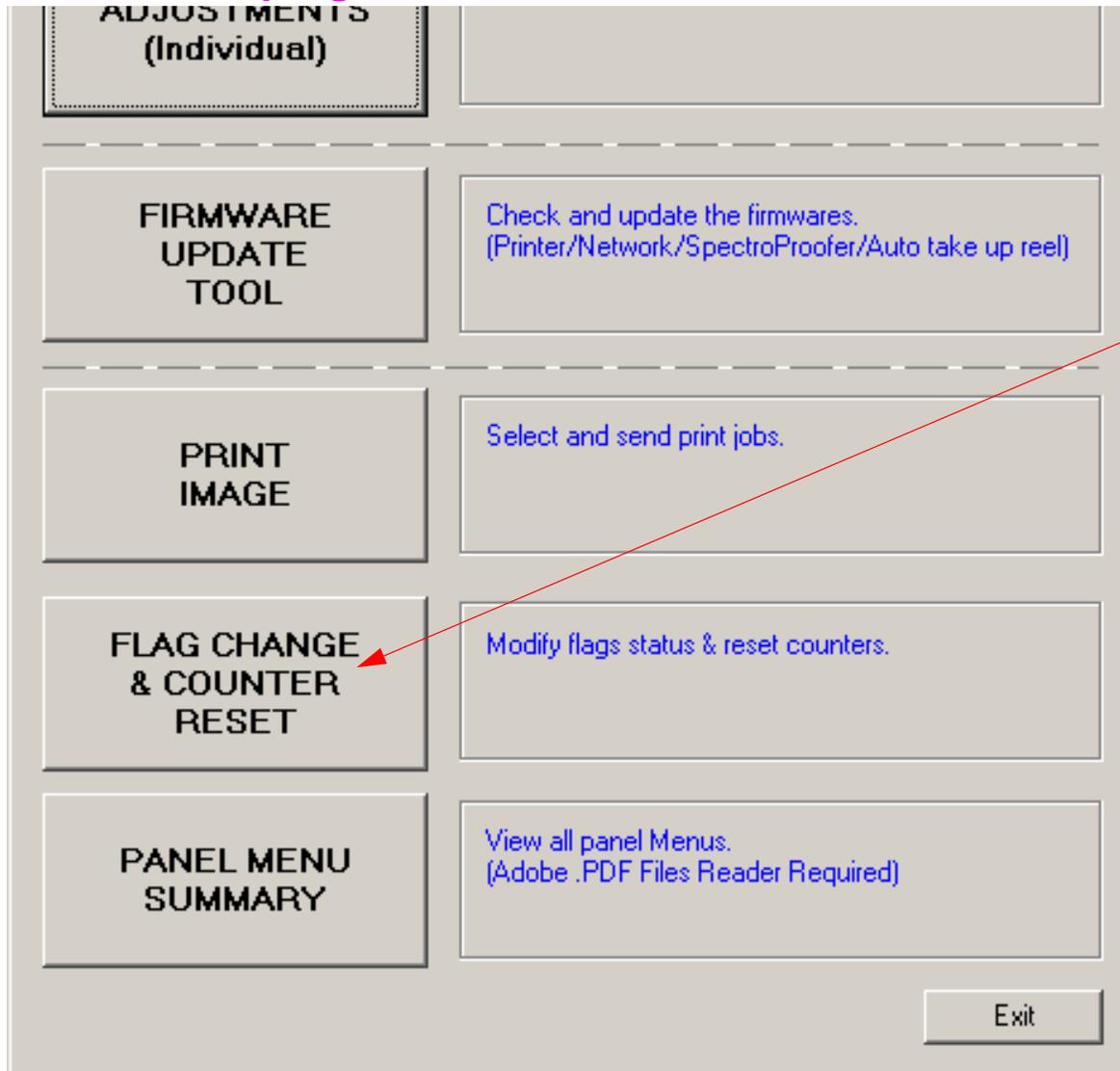
Finish

Cancel

Clear Counter [when replacing Wiper]

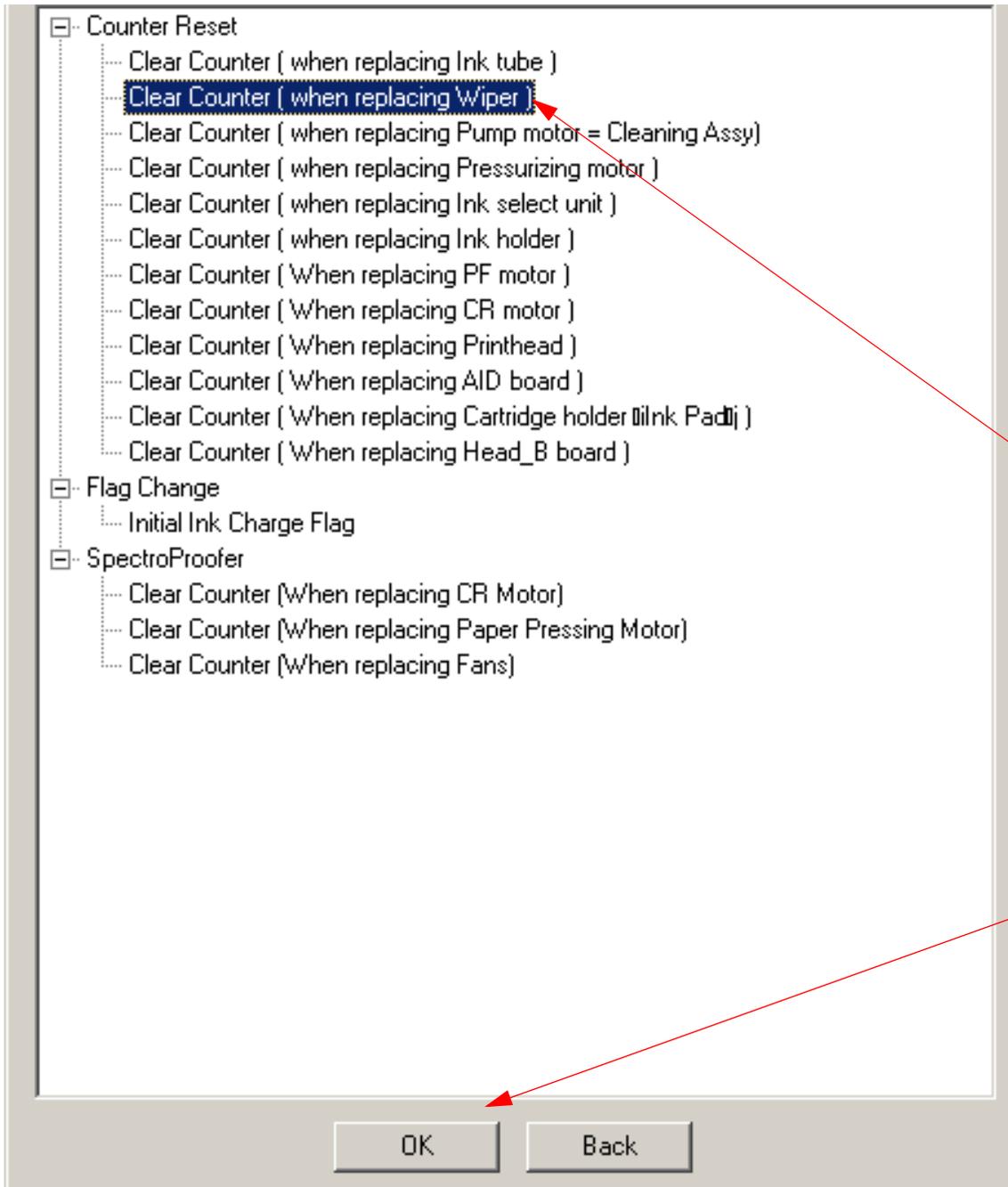
Note: *Clear Counter [when replacing Wiper]* resets the Wiper Blade Life Counter.

1. From the **Servprog.exe** for the 7900 and 9900, select **FLAG CHANGE & COUNTER RESET**.



Click on **FLAG CHANGE & COUNTER RESET**.

2. From the **FLAG CHANGE & COUNTER RESET** menu, select **Clear Counter [when replacing Wiper]**.



1. Click on **Clear Counter [when replacing Wiper]**.

2. Click on **OK**.

3. Reset the **Wiper Blade** life counter.

Clear Counter (when replacing Wiper)

After Replacing the Wiper, you should reset its counter.

Click [Run] to reset the value.

Click the [Finish] or the [Next] button when you are done.



Run

< Back

Finish

Cancel

1. Click on **Run**.

2. Click on **Finish**.

Cleaning PG Adjustment

Purpose: The **Cleaning PG** adjustment measures the gap between the *Print Head's Nozzle Plate* and the *AID Grid* located on the *Flushing Box*.

Note: *There are 2 possible settings for the Cleaning PG adjustment. (2.2 Stop and 2.8 Stop)*

Overview

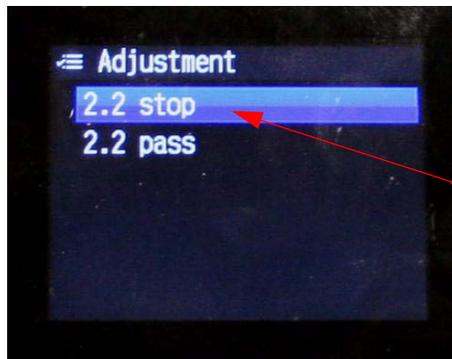
1. Select **2.2 Stop**.
2. Test the *AID Components* using the **AID Check** function.
 - 2.1 If the **AID Check** indicates a working system, the adjustment is completed.
 - 2.2 If the **AID Check** fails, continue to step 3.
3. Select **2.8 Stop**.
4. Test the *AID Components* using the **AID Check** function.
 - 4.1 If the **AID Check** indicates a working system, the adjustment is completed.
 - 4.2 If the **AID Check** fails, troubleshoot all components.

How to set **2.2 Stop** and **2.8 Stop**

(Detail on the following pages)

Set 2.2 Stop.

1. Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
2. Navigate to **SELF TESTING\Mecha Adjustment\Cleaning PG\Adjustment**
3. Press the **Right Arrow** to begin the adjustment.
 - 3.1 The Printer will display **Please Wait**.
4. Select **2.2 Stop**.



1. Highlight **2.2 stop**.

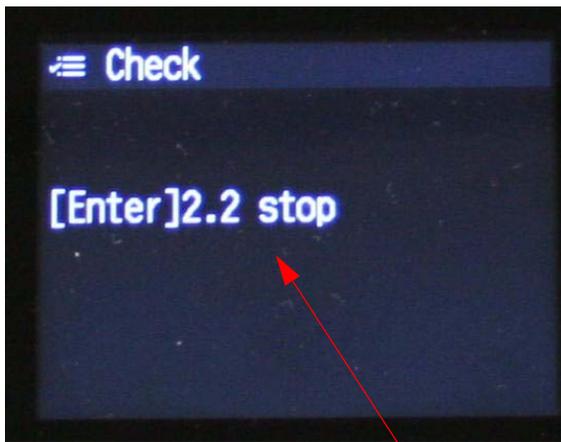
2. Press the **OK** button.



3. The Printer will display **Please Wait**, then complete the adjustment.

Set 2.8 Stop.

1. Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
2. Navigate to **SELF TESTING\Mecha Adjustment\Cleaning PG\Check**
 - 2.1 Press the **Right Arrow** to begin the adjustment.
3. Select **2.2 Stop**.



1. The Printer will display **[Enter]2.2 Stop**.



2. Press the **OK** button.

4. The Printer will display **Please Wait**.

5. Select **2.8 Stop**.

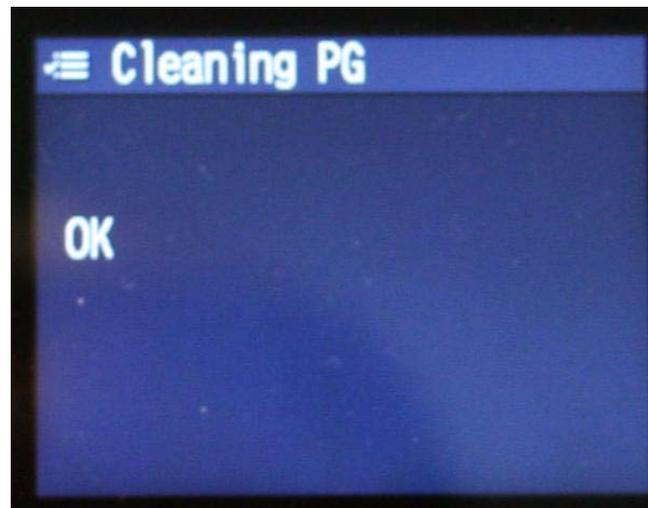


1. Highlight **2.8 Stop**.



2. Press the **OK** button.

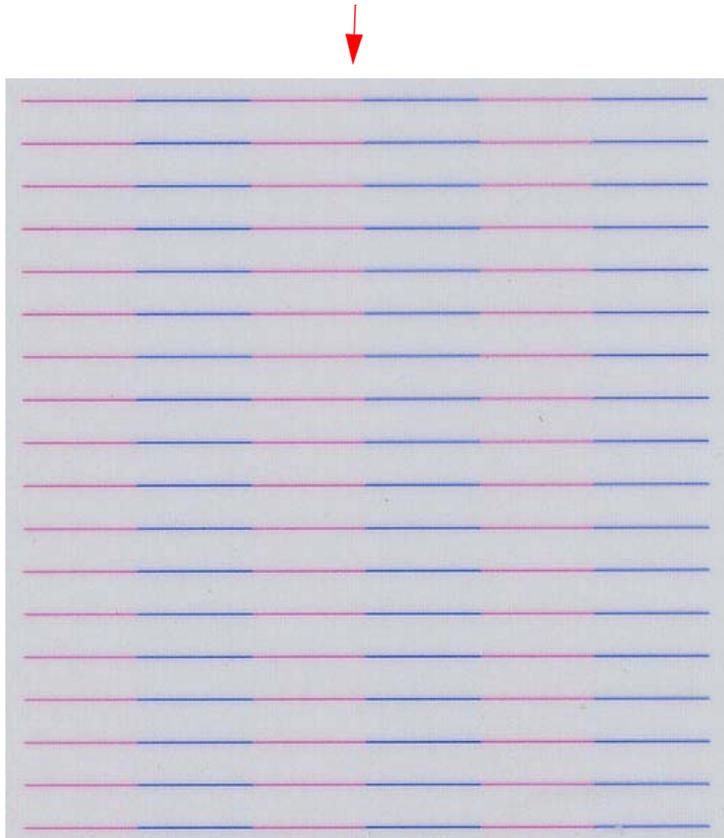
6. The Printer will display **OK**.



7. Press the **Pause** button to complete the adjustment.

3. Inspect the printed pattern.

This is what the correct pattern looks like.

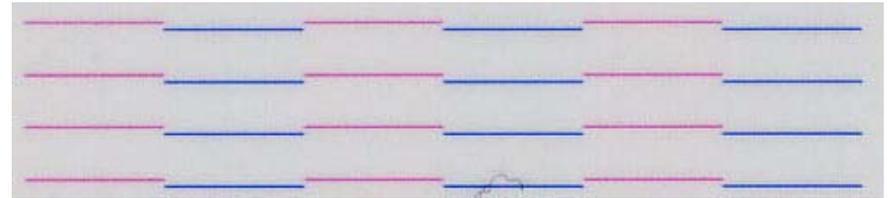


Paper feed
direction



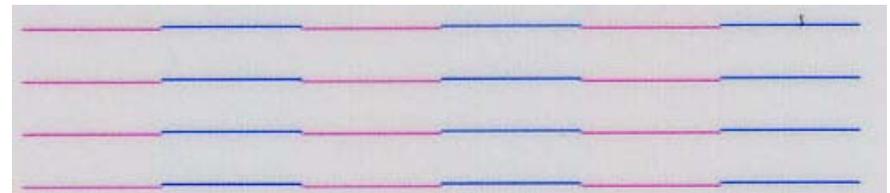
Leading Edge

If the pattern looks like this, move the **CR Slant Dial**
Clock Wise.



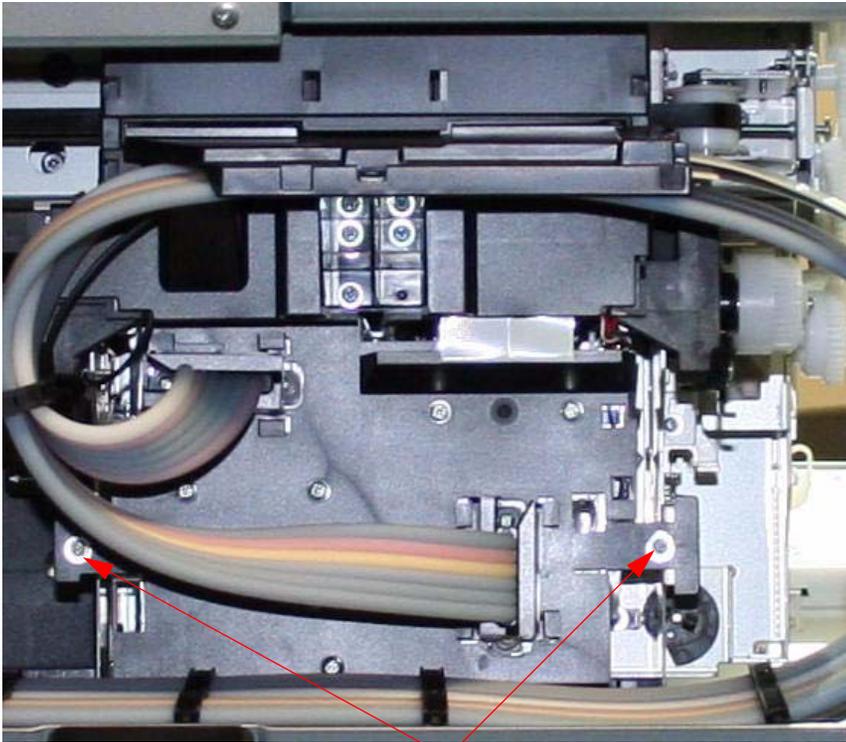
Leading Edge

If the pattern looks like this, move the **CR Slant Dial**
Counter Clock Wise.

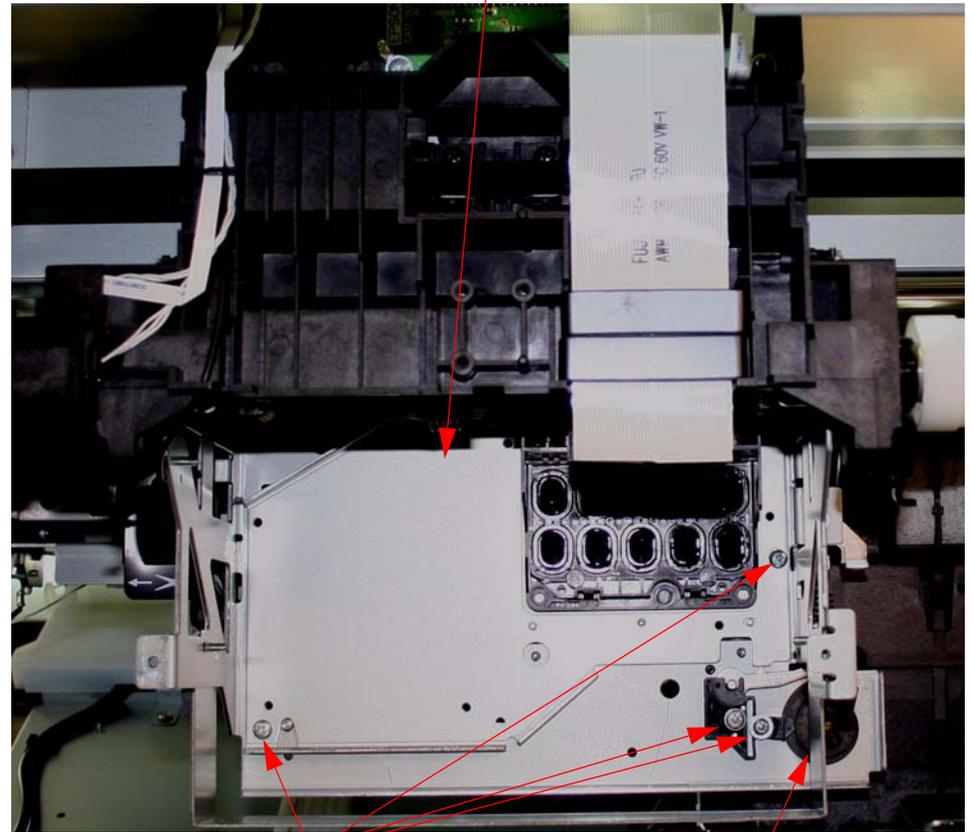


Leading Edge

4. Adjust until correct.

1. Loosen these **2 Screws**.

Note: This view is shown without the Damper Assembly to make it easier to see the screws that must be loosened.

2. Loosen these **4 Screws**.3. Adjust with this **Dial**.

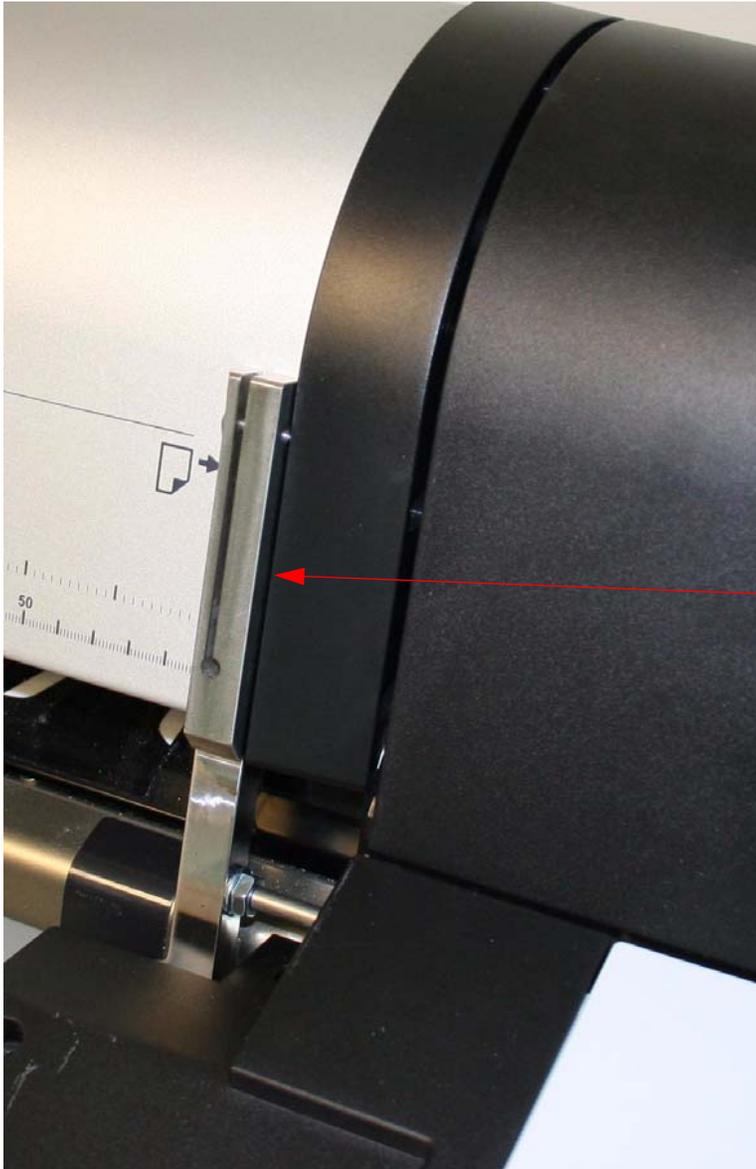
4. Re-print and adjust, until the pattern is linear.

5. Tighten the **6 Screws**.

6. Re-print to verify that the **Print Head** did not shift when the **6 Screws** were tightened.

CTP Plate Guide Alignment

1. Verify that the **Plate Guide** is attached correctly.

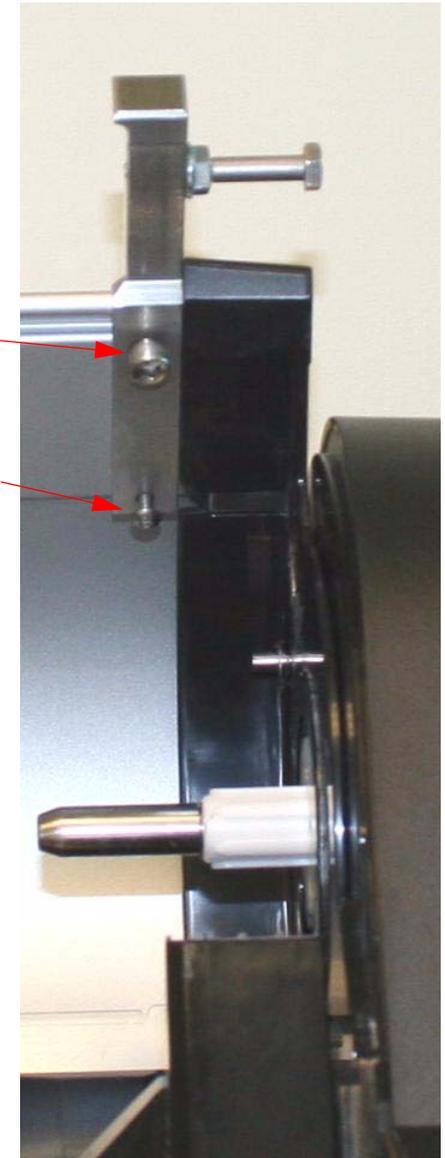


5mm Hex (Allen)

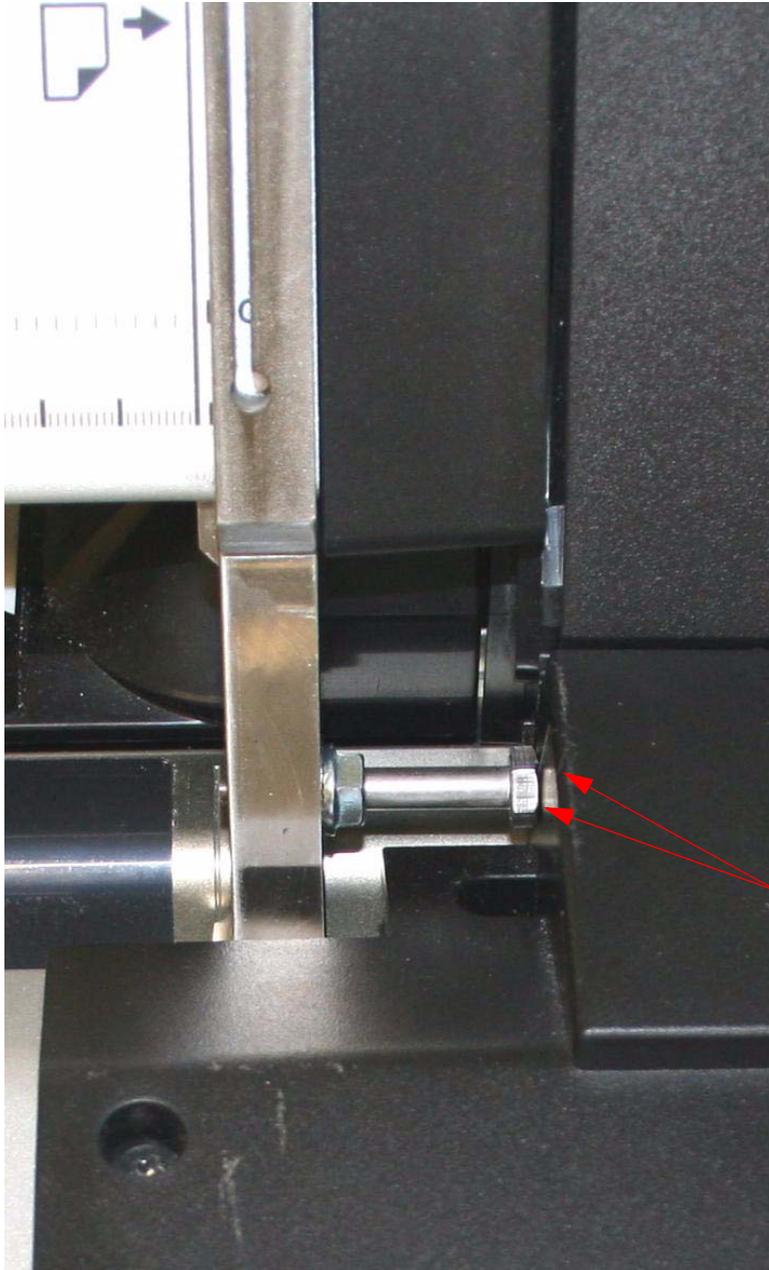
2.5mm Hex (Allen)

Ensure that the **Plate Guide** is flush with the **Black Plastic Edge** of the **Roll Cover**.

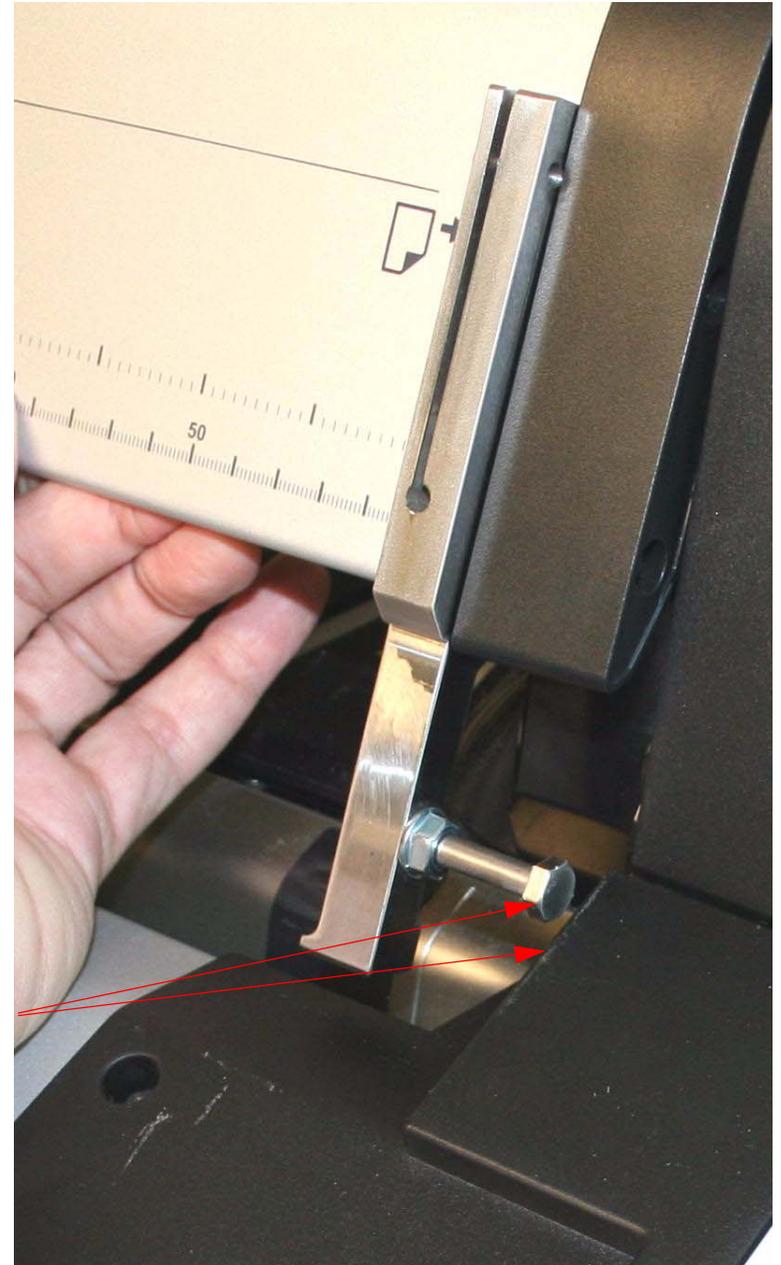
Note: The Plate Guide installed flush with the Black Plastic Edge of the Roll Cover is the default position. It is possible that the Plate Guide's position might have to be shifted to complete the alignment procedure.



2. Verify that the **Plate Guide** is supported correctly.



The **Plate Guide Support "Nut"** should make light, but repeatable contact between the **Black Plastic Cover Component**. Raise and lower the **Roll Cover** to verify this.



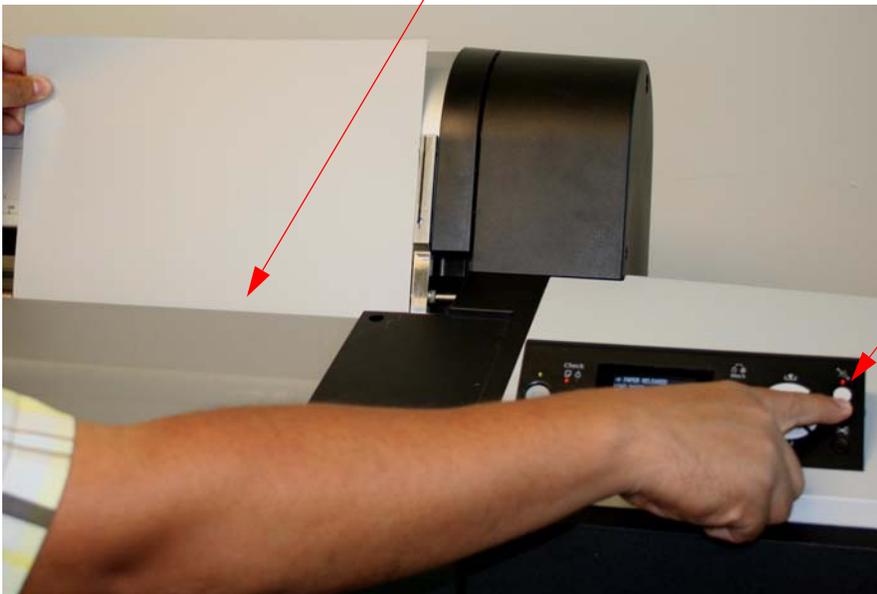
3. Load a **Plate** into the **Printer**.



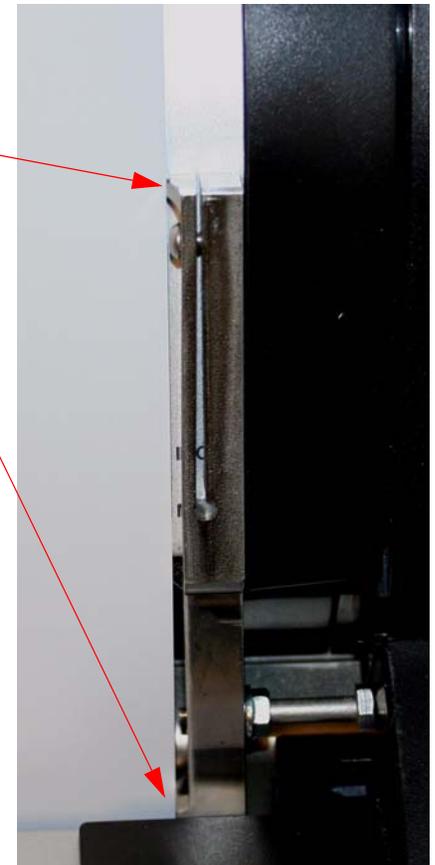
1. Press the **Pinch Roller Release** button to open the **Pinch Rollers**.

2. Press the **Up** button to set the suction to maximum.

3. Place the Plate in the **Media Path**.

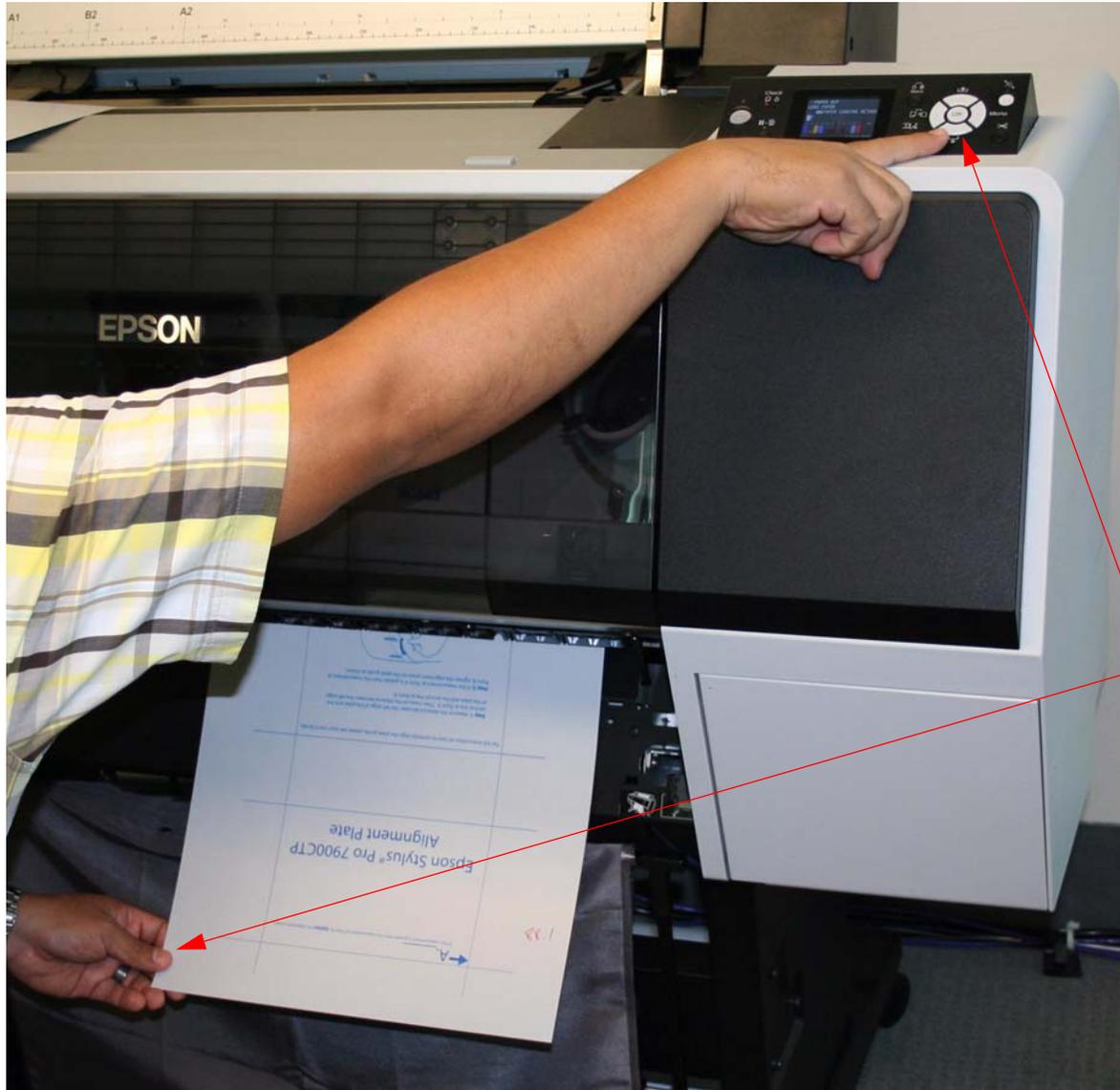


4. Ensure that the **Plate** is held against **2 Points** on the **Plate Guide**.



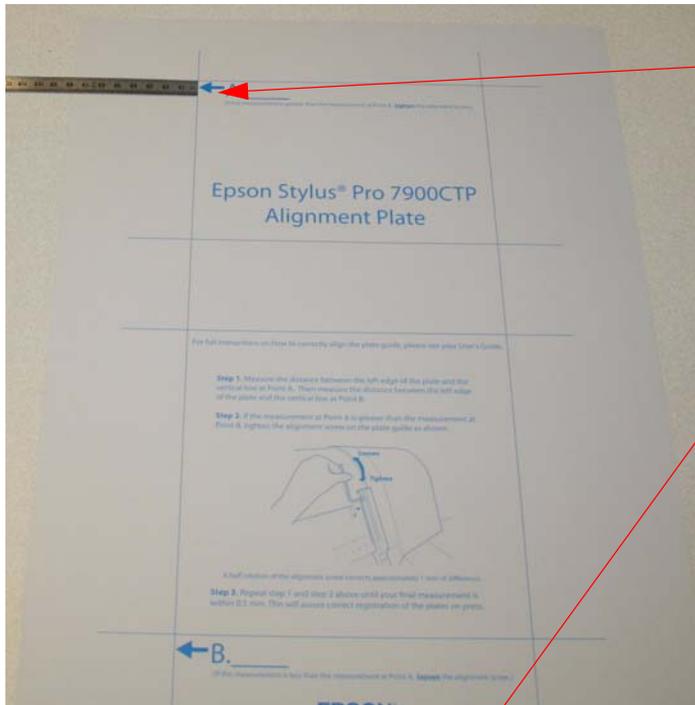
5. Press the **Pinch Roller Release** button to close the **Pinch Rollers** to load the **Plate**.

4. Wait for the **Printer** to finish loading the **Plate**.
5. Use the **FWUpdate.exe** utility to send **AlignmentSheet.prn** to the printer.
6. After the **AlignmentSheet.prn** is printed remove the **Plate**.



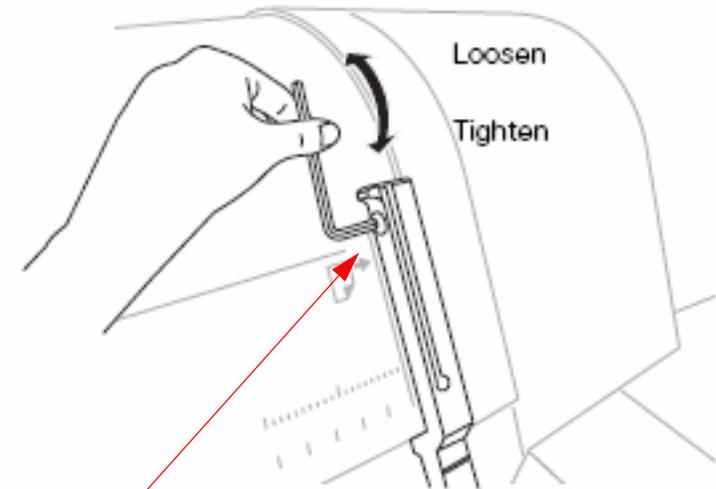
Hold the **Plate** and press the **Down** button to release the **Plate**.

7. Measure the alignment pattern on the **Plate**.



1. Accurately measure the distance between the line at **Point A** and the side of the **Plate**. **Write down the value.**

2. Accurately measure the distance between the line at **Point B** and the side of the **Plate**. **Write down the value.**

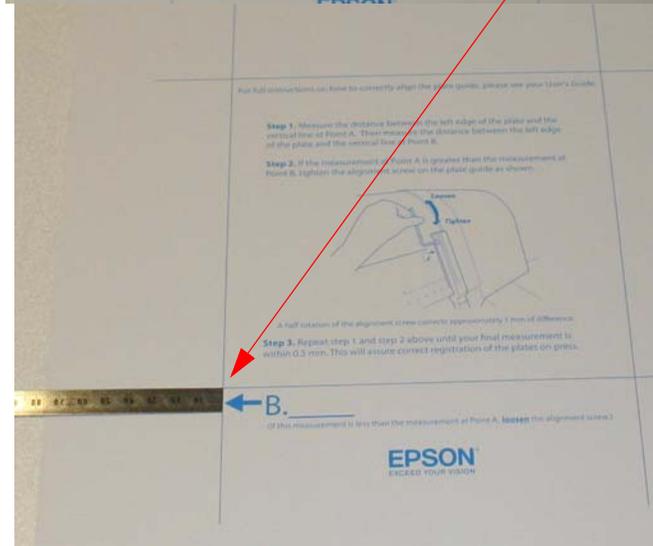


3. Adjust the **Plate Guide**.

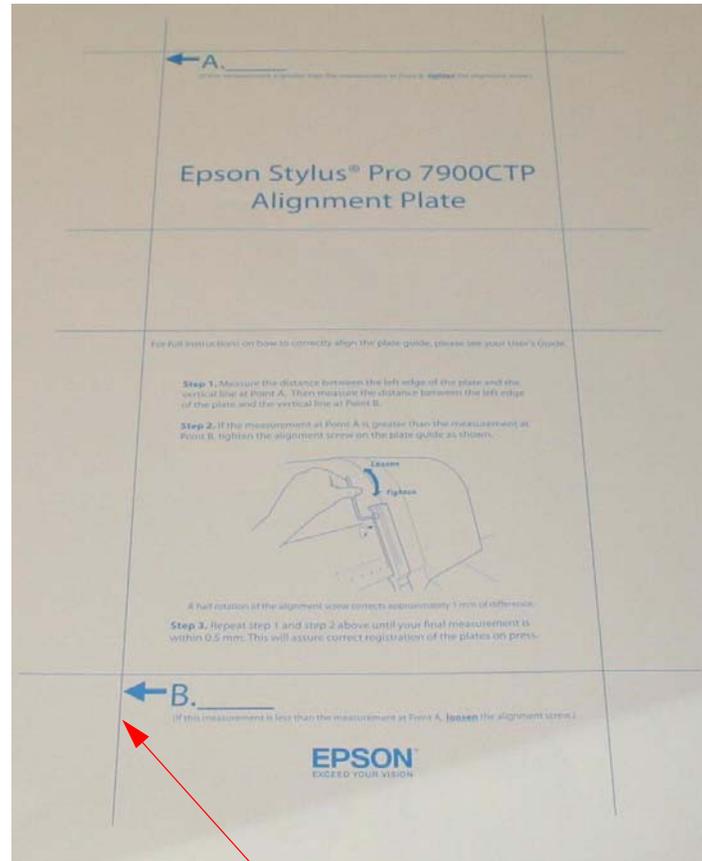
If **A** is greater than **B**, tighten the **Alignment Screw** on the **Plate Guide**.

If **B** is greater than **A**, loosen the **Alignment Screw** on the **Plate Guide**.

Note: 1/2 of a rotation of the Alignment Screw will shift the difference between A and B approximately 1mm.



8. Repeat steps 3 through 7 until **Point A = Point B**.
9. Verify the **Plate Guides** alignment.
 - 9.1 Load a blank **Plate** and print **AlignmentSheet.prn**.
 - 9.2 Reload the same Plate and print **AlignmentSheet.prn** again over the first print.
 - 9.3 Inspect the “double print” image and look for horizontal registration issues.

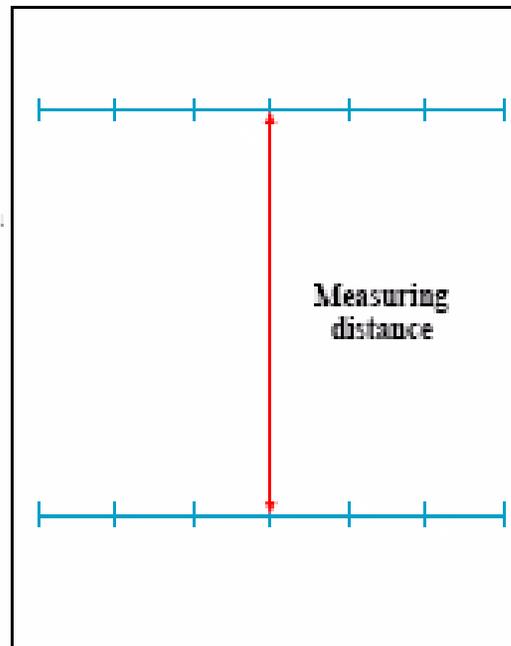


Look for a horizontal registration issue on this line.
If the registration is **good**, the **Plate Guide** is **aligned properly**.
If the registration is **no good**, **re-align** the **Plate Guide**.

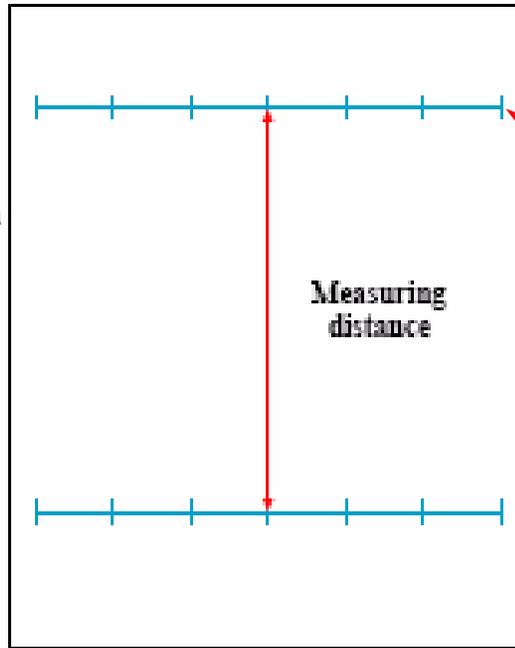
Feed Adj(ustment)

Note: The Feed Adj(ustment) calibrates the Paper Feed Mechanism. This Adjustment requires Epson Doubleweight Matte paper.

1. Enter Self Testing Mode.
 - 1.1 **Self Testing Mode: Down, Right, and OK** buttons, and turn on the **Printer**.
2. Load Epson Doubleweight Matte paper.
3. Print the Feed Adj pattern.
 - 3.2 Navigate to **SELF TESTING\Mecha Adjustment\Feed Adj\Printing**[Enter] **Print**
 - 3.3 Press the **Enter** button to print.
 - 3.4 The Printer will print the alignment pattern.



4. Measure the pattern.



Measure the distance between the 2 horizontal lines.

Note: The Feed Adjustment for the 7900 and 9900 is based on **990.6mm (not 980.0 mm like other Printers).**

5. Input the measurements.

5.5 Navigate to **SELF TESTING\Mecha Adjustment\Feed Adj\Input**: Press the **Right Arrow**.

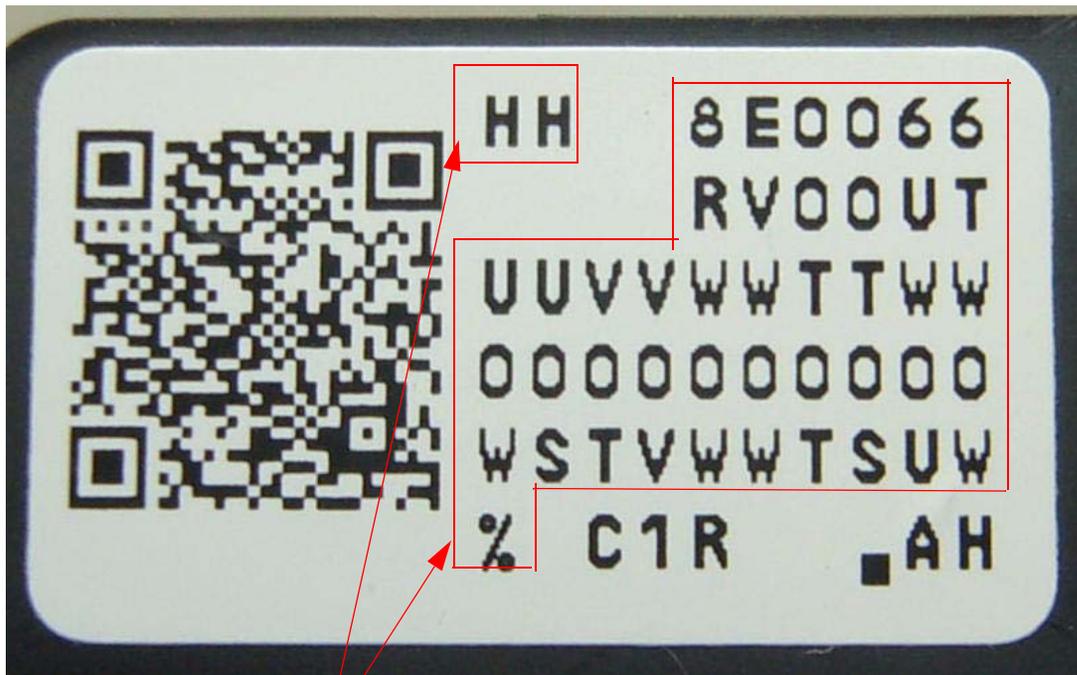
5.6 **Input the value that was measured** in the preceding step. (nn.n)mm: Press the **OK** button.

Head Rank Input Adjustment

Note: *Head Rank Input* writes the Print Head Calibration Value (Head ID / Head Rank) to the Main Board.

Note: Enter the Head Rank before installing a new Print Head. This way it is possible to enter the data directly off the Print Head. Otherwise, it is necessary to write down the data before installing the Print Head.

1. Identify the Head Rank.

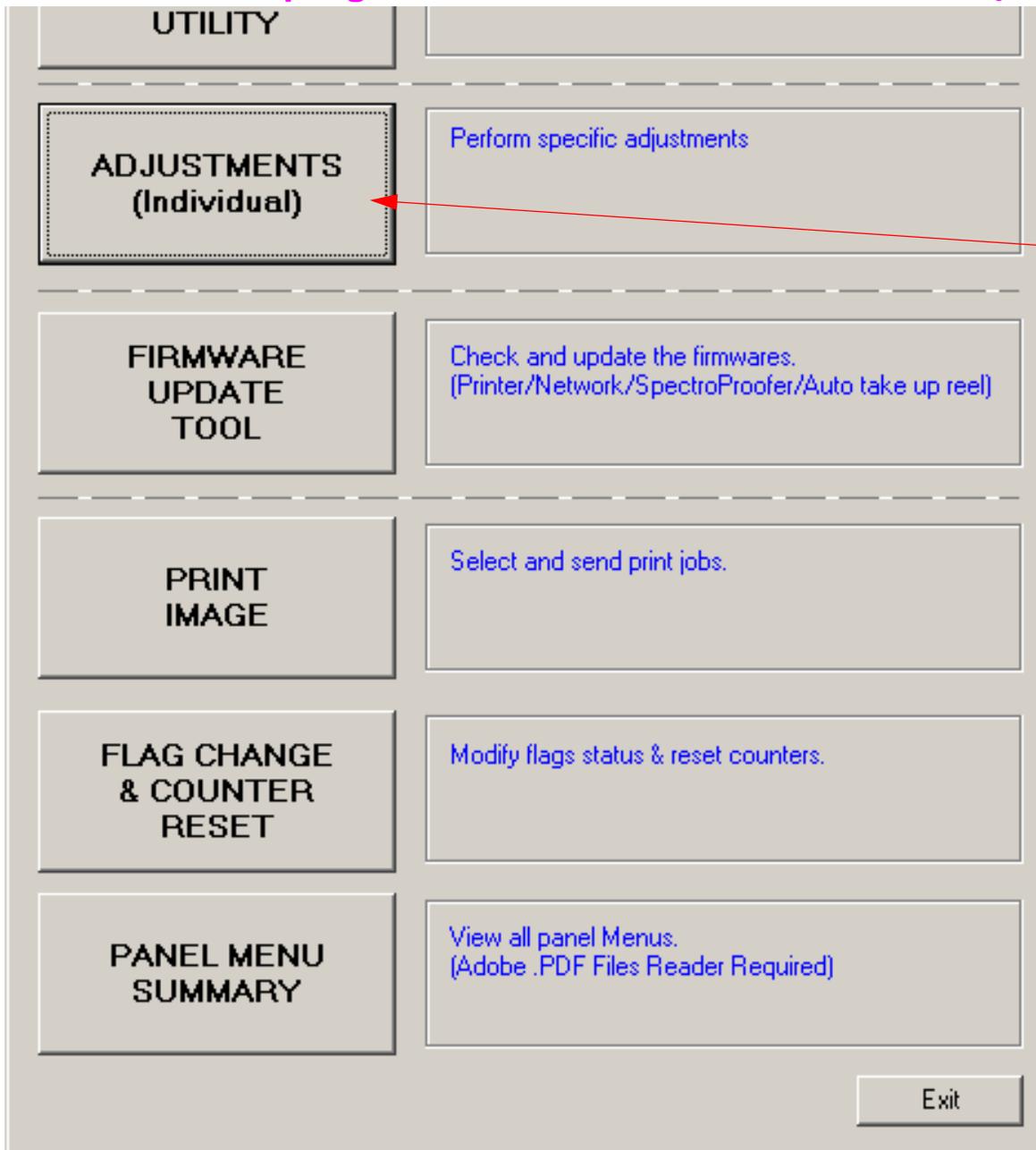


1	2			3	4	5	6	7	8
				9	10	11	12	13	14
15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43	44
45		NANA						NANA	

Use only the 45 digits within the red lines.

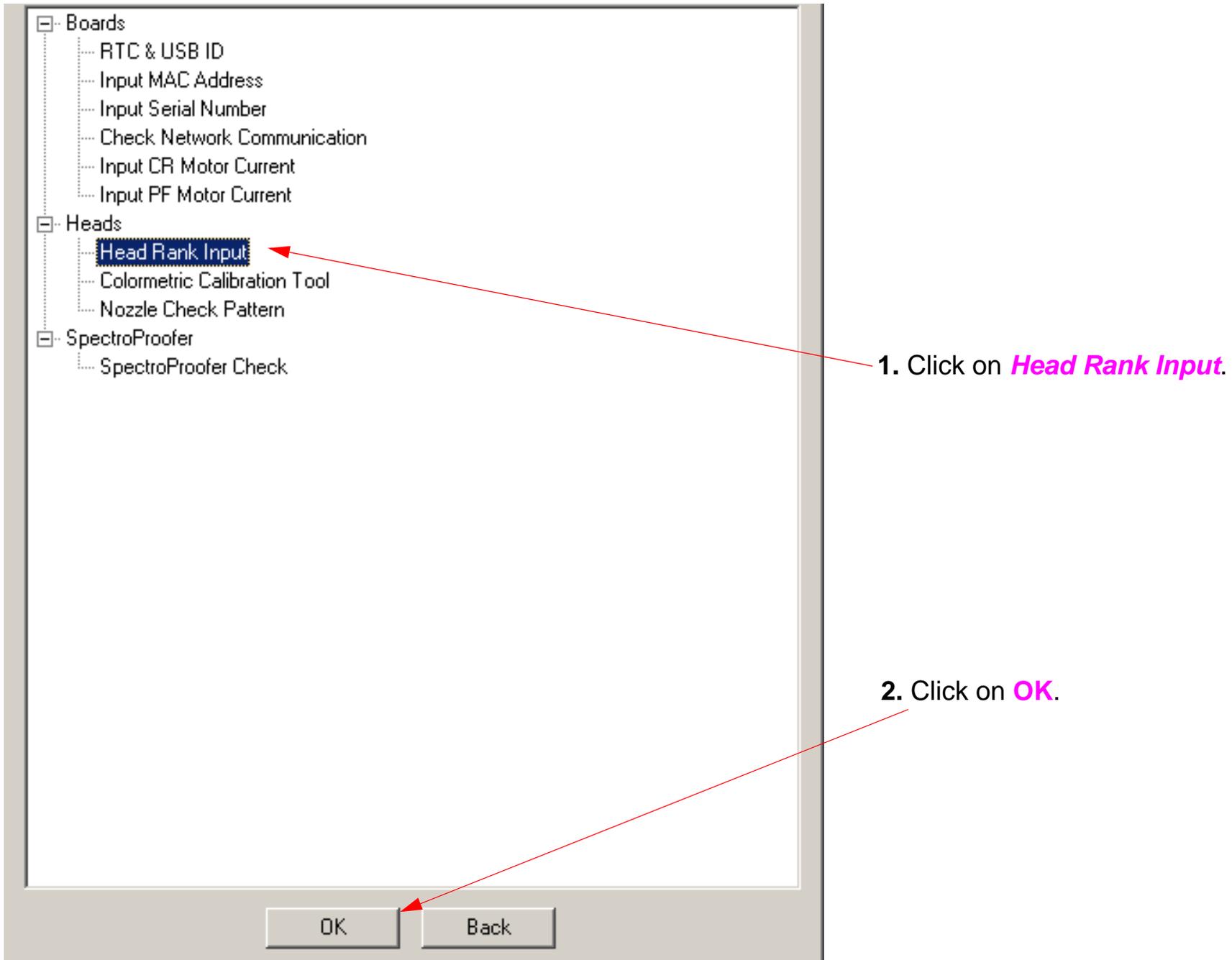
Enter the 45 digits within the red lines in this order.

1. From the **Servprog.exe** for the 7900 and 9900, select **Adjustments (Individual)**.



Click on **Adjustments (Individual)**

2. From the *Adjustments (Individual)* menu, select *Head Rank Input*.



3. Write the Head Rank to the **Main Board**.

Head Rank Input

Whenever the PrintHead is replaced, input the head rank that consist of head particular information for the best driving voltage setting.

1. Write down the Head Rank ID indicated on the ID label affixed to the new Printhead. (See fig.)
2. Enter 45-digit ID into the edit boxes in the same way as indicated on the label.
3. After printhead is replaced, click the [Write] button to write it to printer.

Click [Finish] when you are done.

1. Enter the Head Rank data located on the **Print Head**.

2. Click on the **Write** button.

Note: If the utility displays:

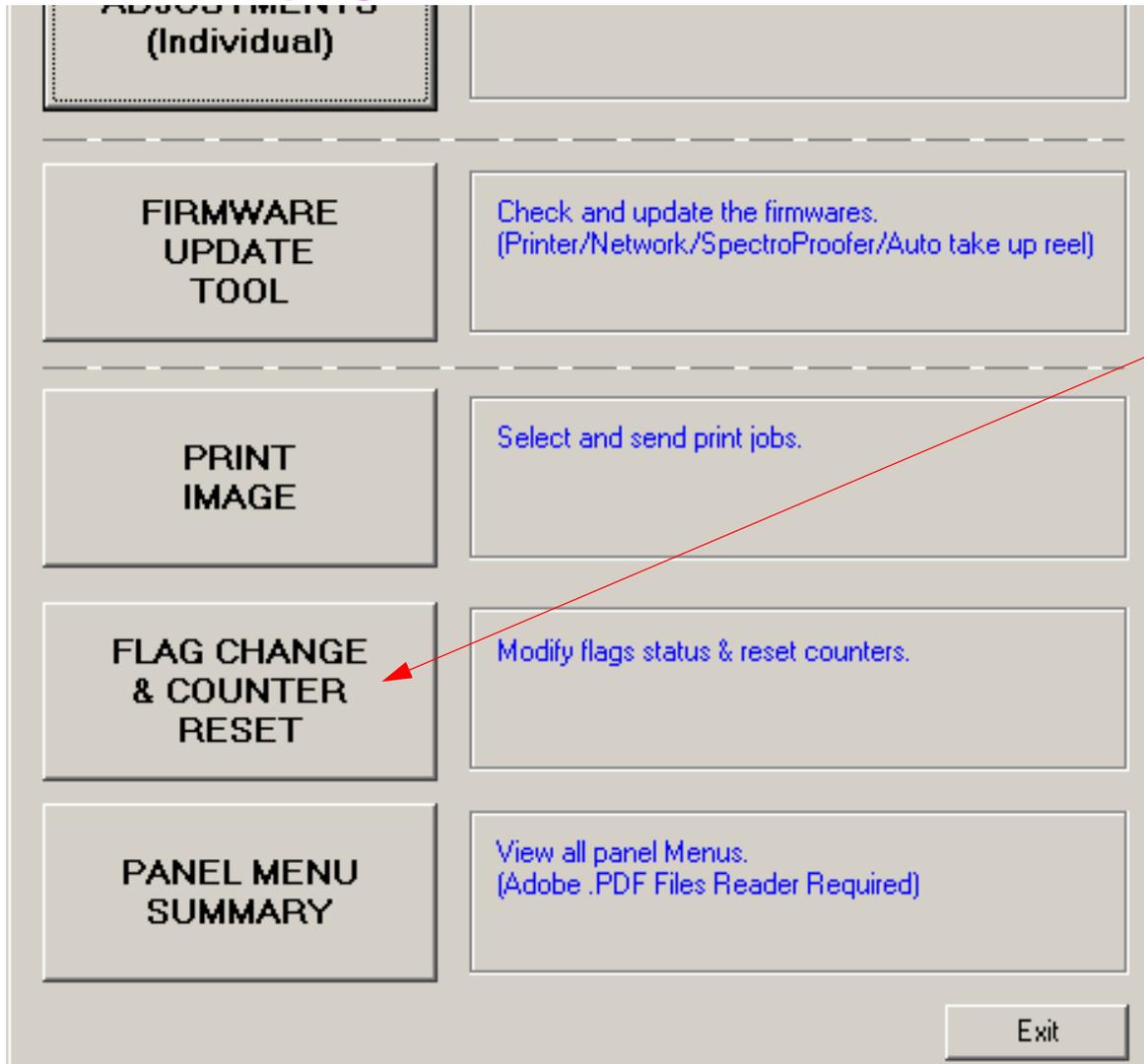
Head Rank ID Input contains wrong characters)..., one or more of the digits entered is incorrect. Check that an Zero was not entered as a O, etc.

3. Click on the **Finish** button.

Initial Ink Charge Flag

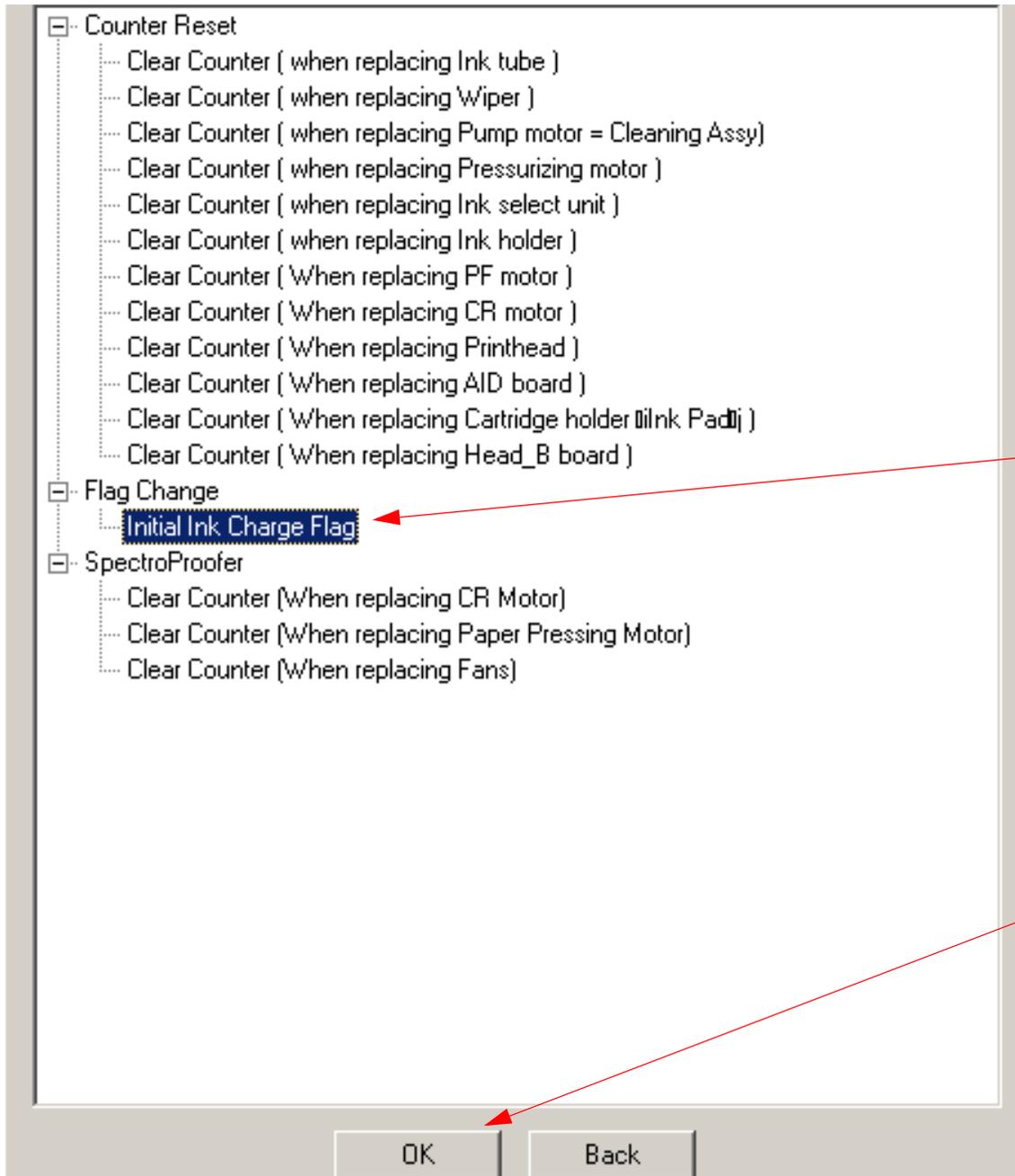
Note: The **Initial Ink Charge Flag** menu item allows the setting or canceling an initial charge (prime).

1. From the **Servprog.exe** for the 7900 and 9900, select **FLAG CHANGE & COUNTER RESET**.



Click on **FLAG CHANGE & COUNTER RESET**.

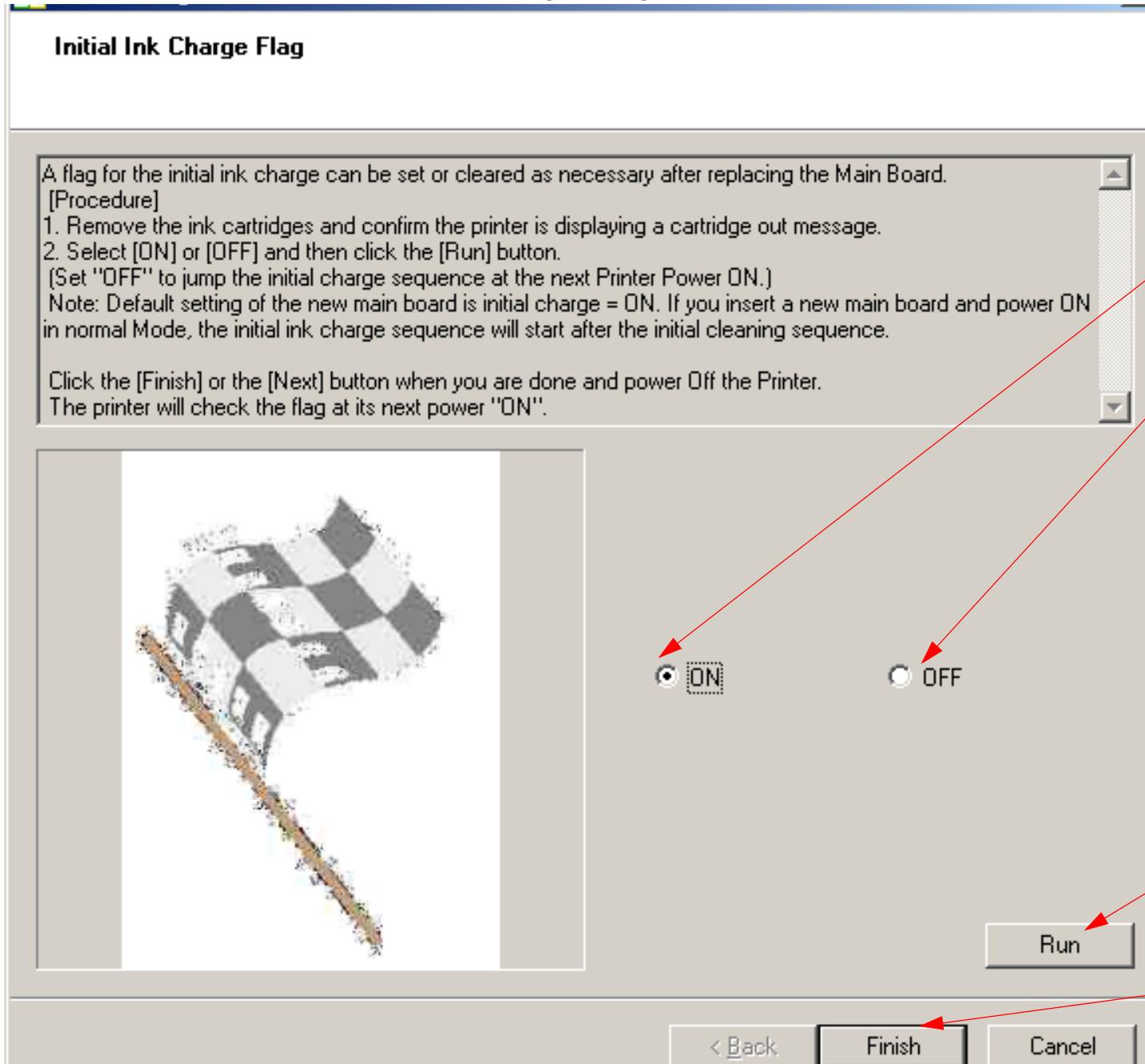
2. From the **FLAG CHANGE & COUNTER RESET** menu, select **Initial Ink Charge Flag**.



1. Click on **Initial Ink Charge Flag**.

2. Click on **OK**.

3. Turn on or off the Initial Ink Charge Flag.



1. Select **On** to **turn on** a prime at power on.

Select **Off** to **cancel** a prime at power on.

2. Click on **Run**.

3. Click on **Finish**.

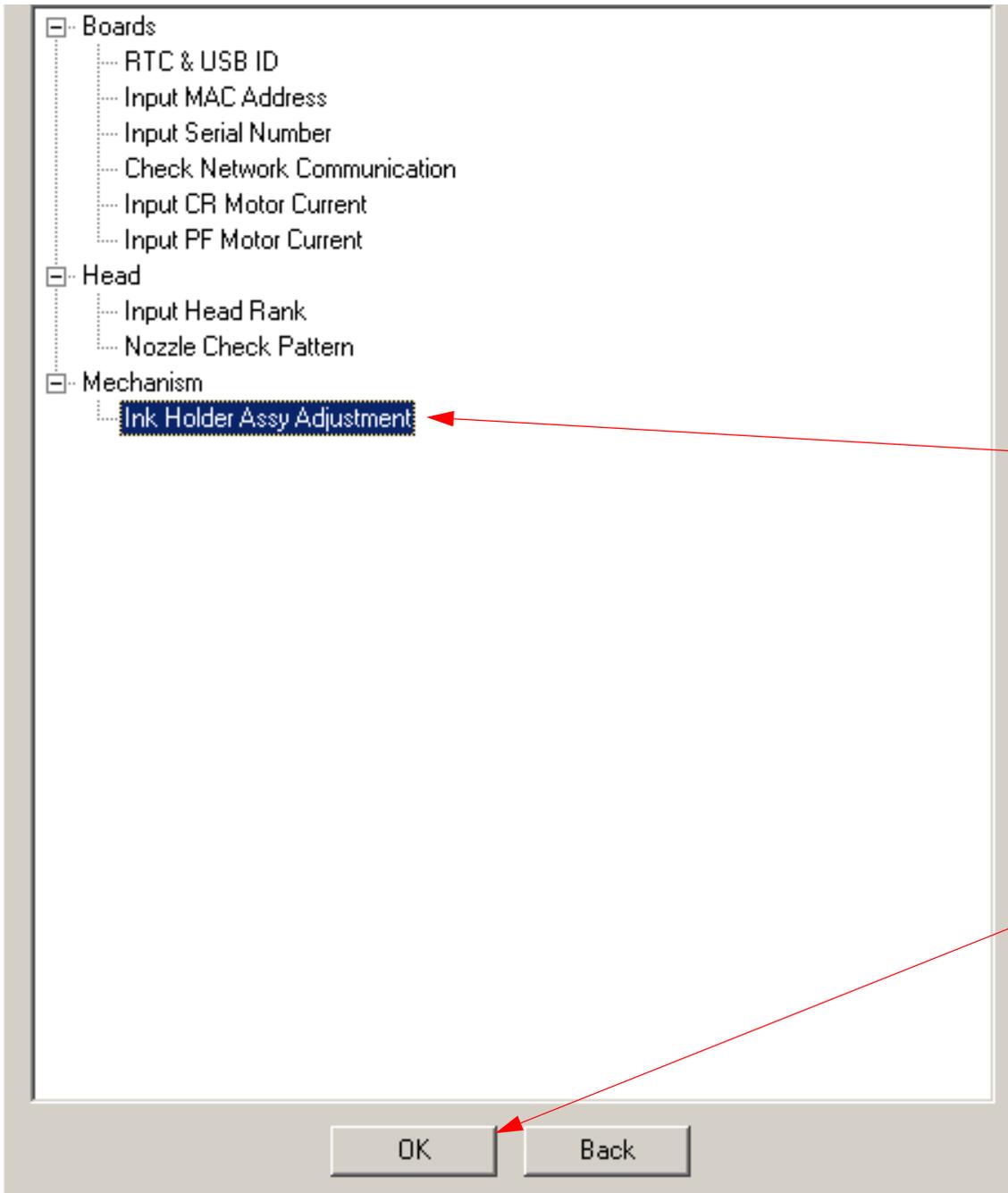
Ink Holder Assy Adjustment

Note: The *Ink Holder Assy Adjustment* coordinates the Ink Bay CSIC Board with U.S. Market Ink Cartridges.

1. From the *Servprog.exe* for the 7900 and 9900, select *Adjustments (Individual)*.



2. From the *Adjustments (Individual)* menu, select *Ink Holder Assy Adjustment*.



1. Click on *Ink Holder Assy Adjustment*.

2. Click on **OK**.

3. Initialize the ***Ink Bay CSIC*** board to match the U.S. market ***Ink Cartridges***.. **Ink Holder Assy Adjustment**

This adjustment is necessary after replacing an Ink Holder.

Procedure:

1. Turn the printer on in Serviceman Mode
2. Click [Run]



Run

< Back Finish Cancel

1. Click on ***Run***.

2. Click on ***Finish***.

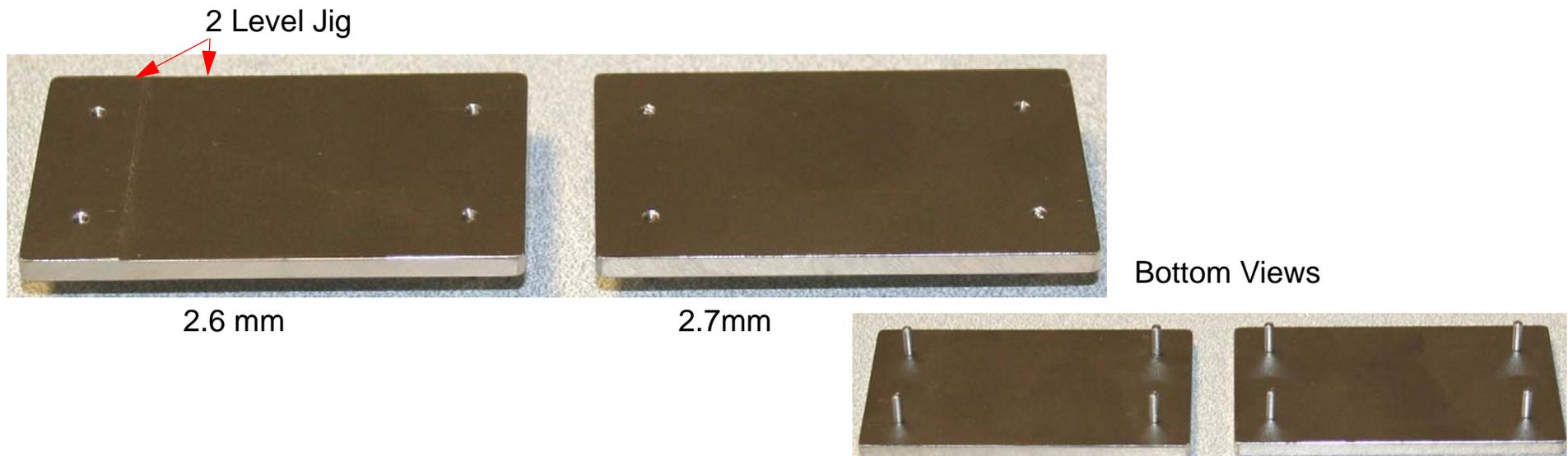
Ink Mark Sensor Position Adjustment

Note: The Ink Mark Sensor Position Adjustment sets the gap between the Ink Mark Sensor and the Platen (media).

Note: If the Ink Mark Sensor Position Jig is not available, move the Ink Mark Sensor as close as possible to the Platen. Ensure that the Ink Mark Sensor is not closer than the Print Head Nozzle Plate.

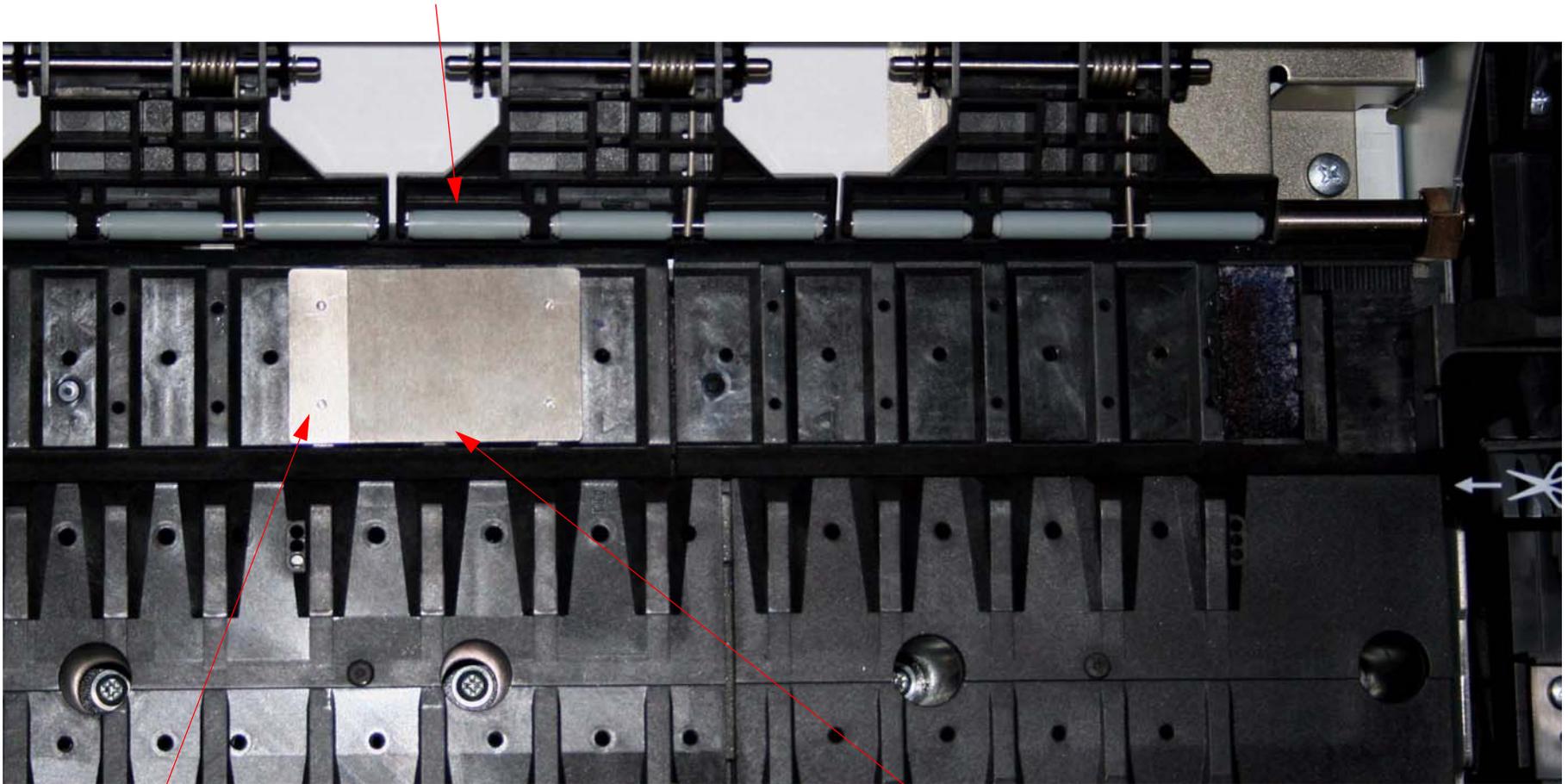
Special Tools: Ink Mark Sensor Position Jig (2.6mm and 2.7mm) Epson Part # **1424365**

1. Release the **Carriage Mechanism**.
 - 1.1 Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
 - 1.2 Navigate to **SELF TESTING\Mecha Adjustment\IM Sensor Gap**
 - 1.3 Press the **Right Arrow** to display the **[Enter] Start**.
 - 1.4 Press the **OK** button to release the **Carriage**.
2. Identify the 2 Jigs.



3. Place the 2.6mm Jig in place.

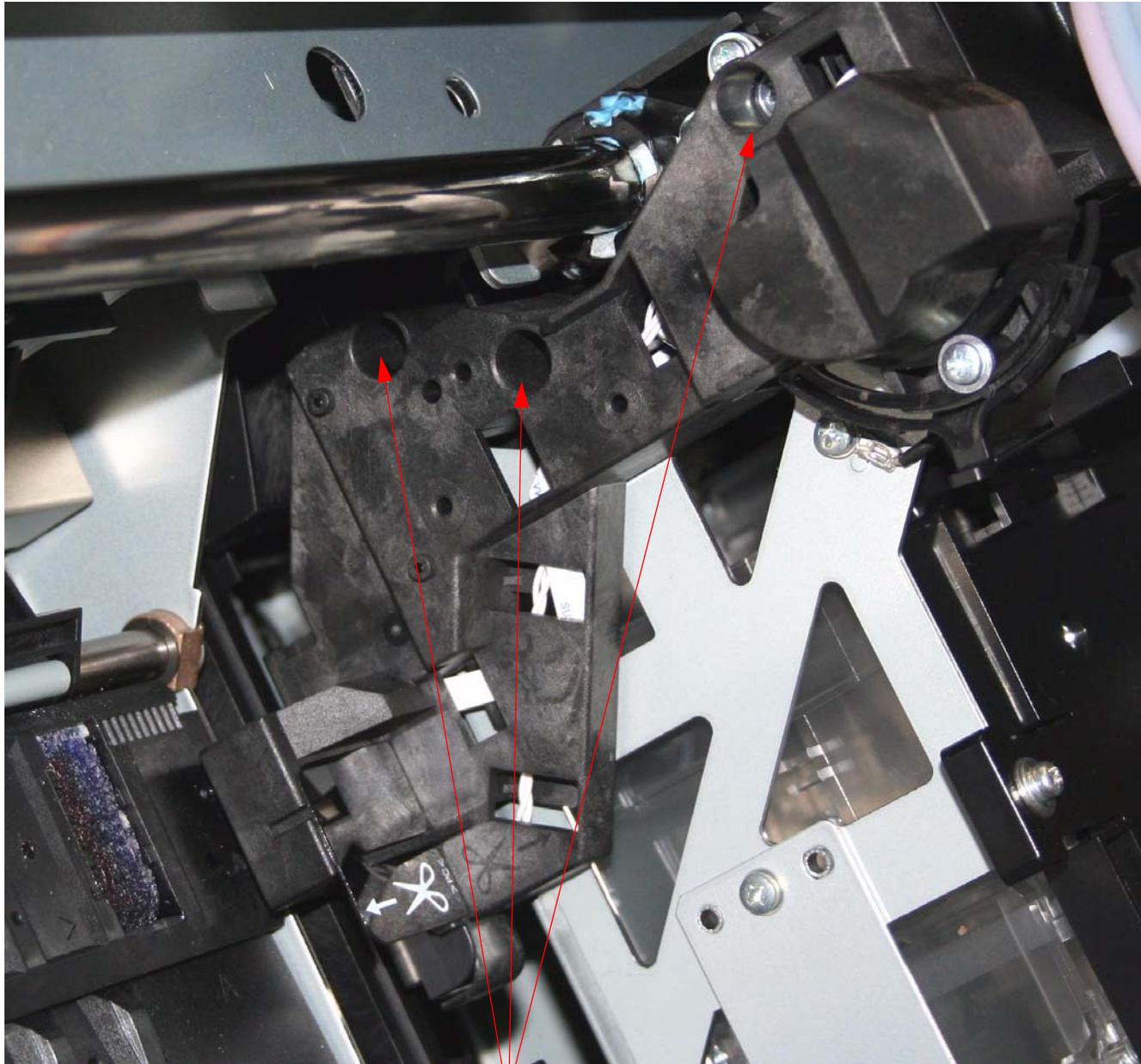
6th Pinch Roller from the right side of the **Printer**.



Thick side of the Jig.

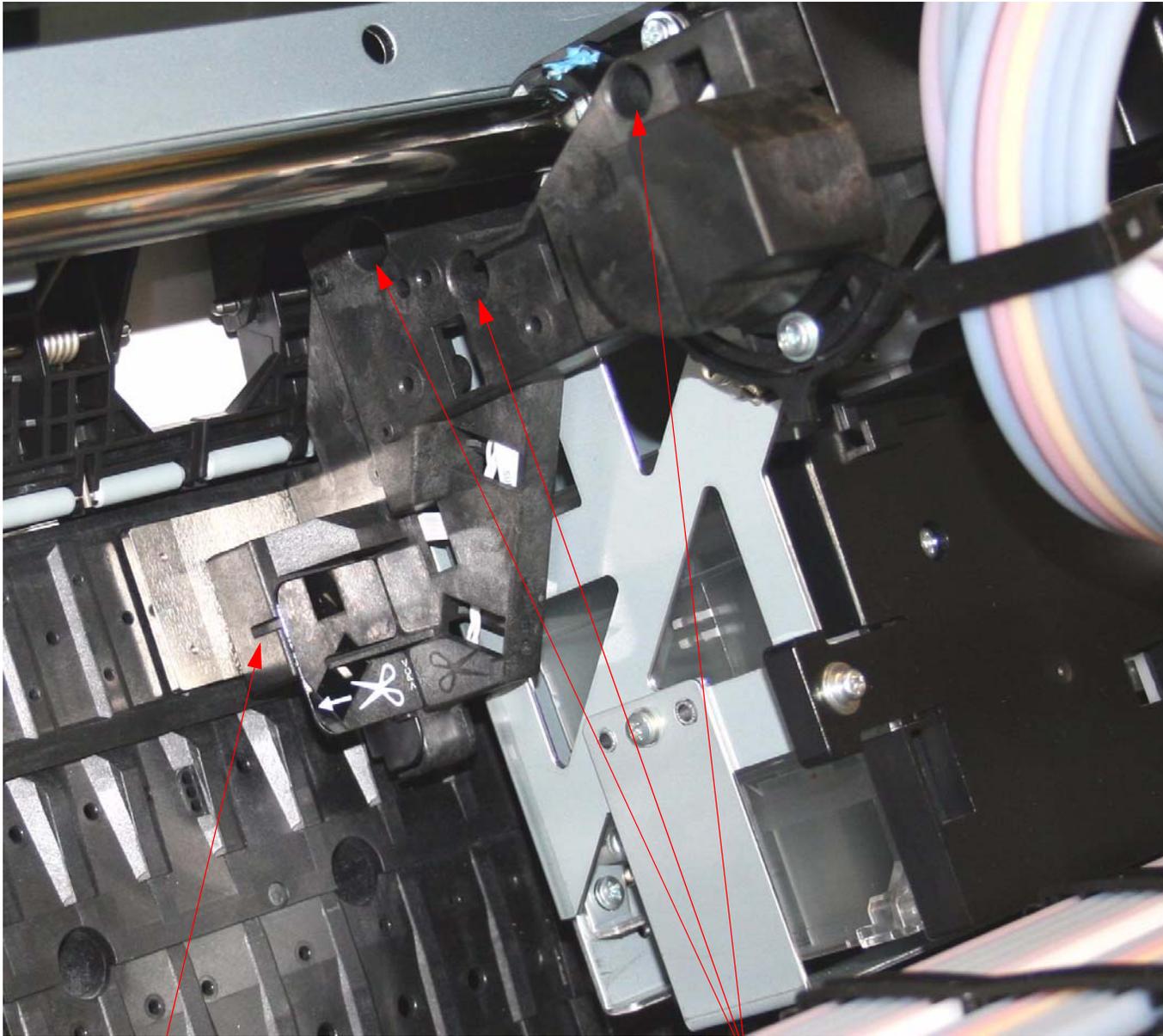
Place the 2.6mm Jig in place under the **6th Pinch Roller** from the right.

4. Loosen **3 Screws** that fasten the ***Ink Mark Sensor Bracket*** in place.



Loosen **3 Screws**.

5. Rest the ***Ink Mark Sensor*** on the Jig, and tighten **3 Screws**.



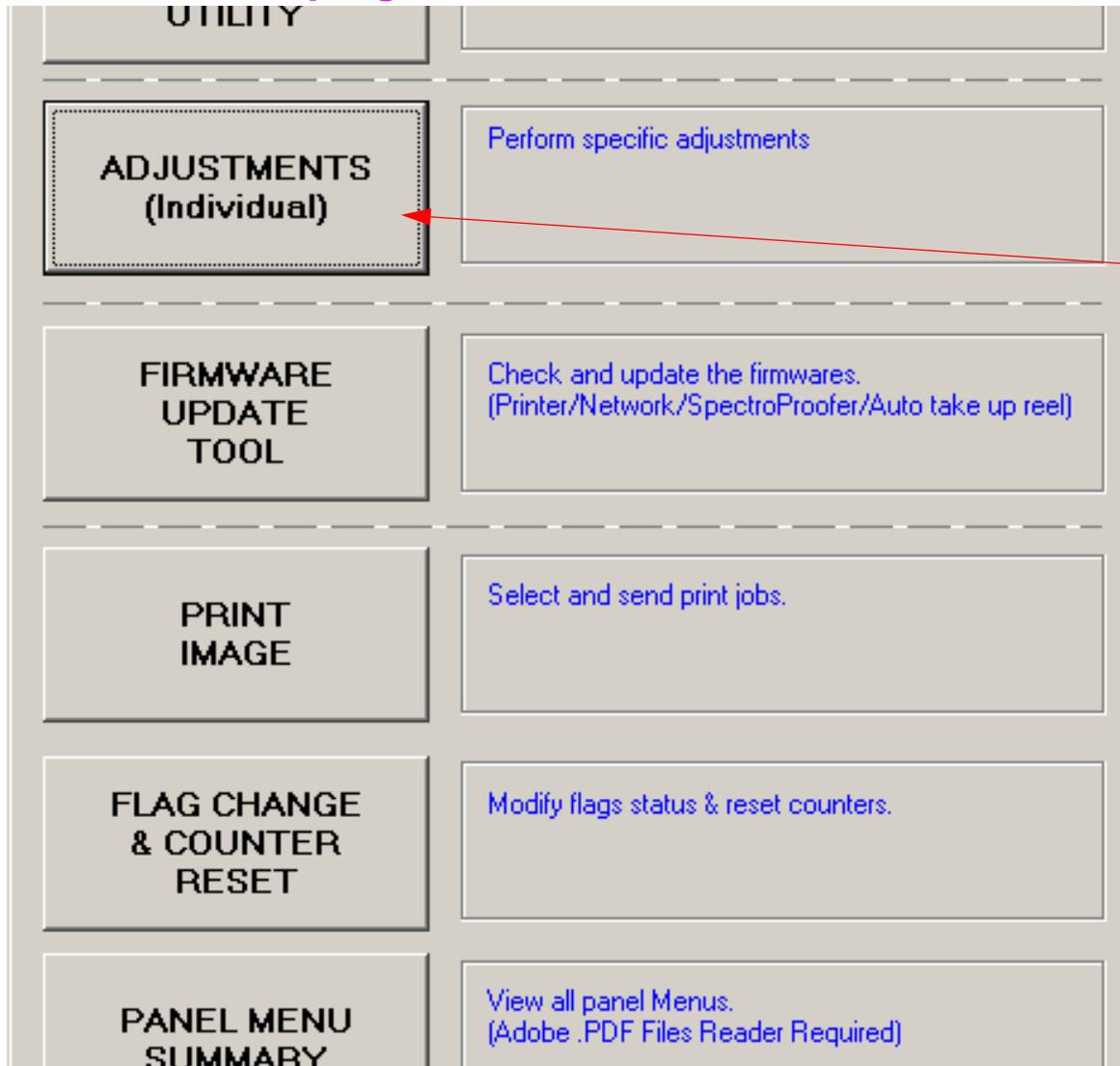
1. Rest the ***Ink Mark Sensor*** on the Jig.

2. Tighten **3 Screws**.

Input CR Motor Current Adjustment

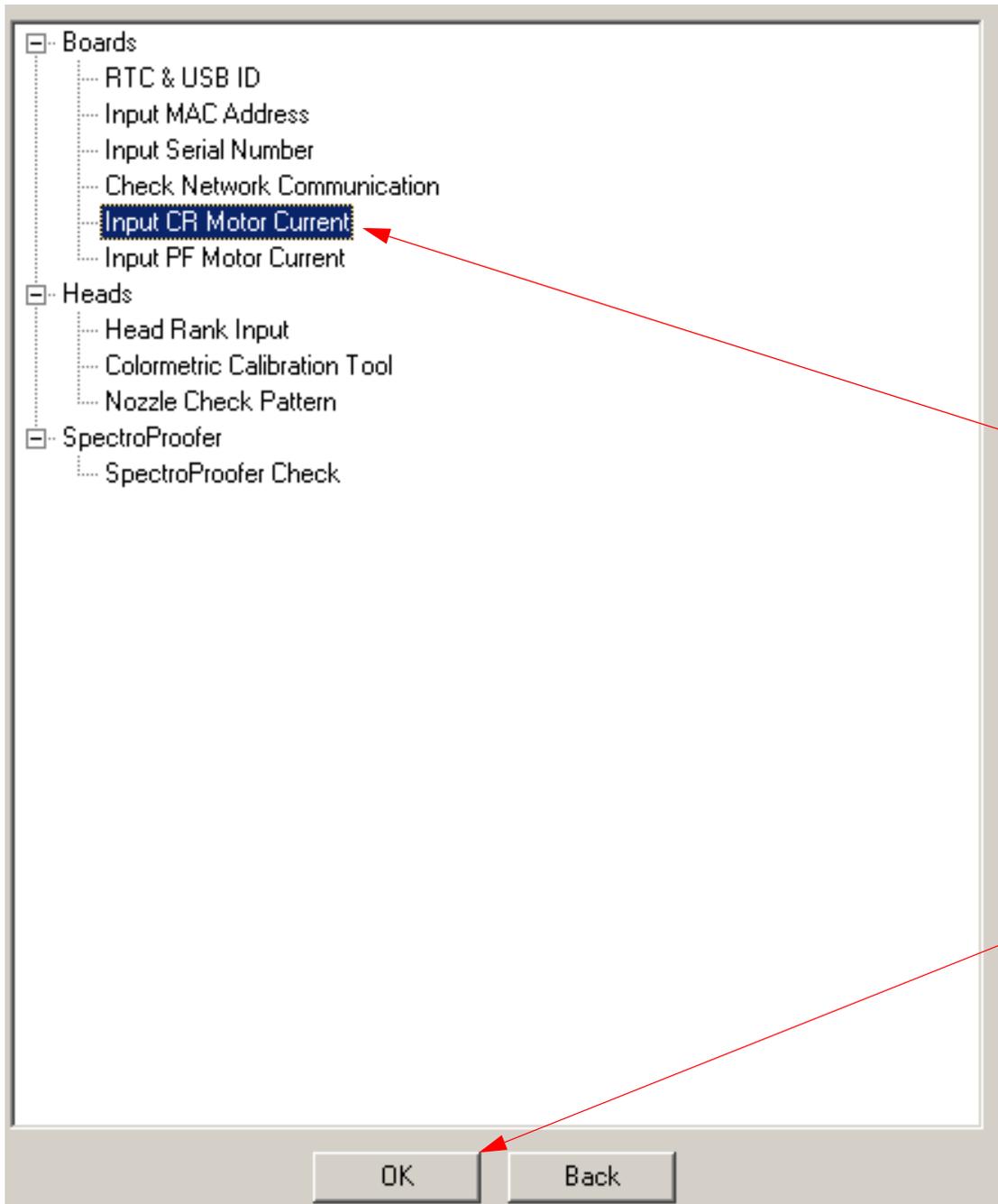
Note: The **Input CR Motor Current** adjustment writes the CR Motor's Calibration Values to the Main Board.

1. From the **Servprog.exe** for the 7900 and 9900, select **Adjustments (Individual)**.



Click on **Adjustments (Individual)**

2. From the *Adjustments (Individual)* menu, select *Input CR Motor Current*



1. Click on *Input CR Motor Current*.

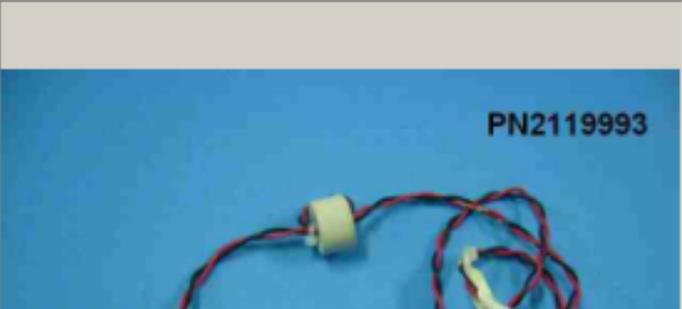
2. Click on **OK**.

3. Write the **Carriage Motor** calibration values to the **Printer**.

Input CR Motor Current

Use this function to write the characteristics of the CR motor to the Main Board.
The appropriate current value is set to the motor for the constantly generated mechanical load.

[PROCEDURE]
1. Write the values then replace the CR motor, assemble the printer and turn it on.
2. Enter the values that is written on Induced voltage and Motor resistance.
3. Click [Write] button.
4. Click [Finish] button.
5. Turn the printer OFF.



Induced Voltage

Motor Resistance



Note: New Motors will have the 2 calibration values on a sticker.

1. Enter the voltage value (**Fuka_kc**).

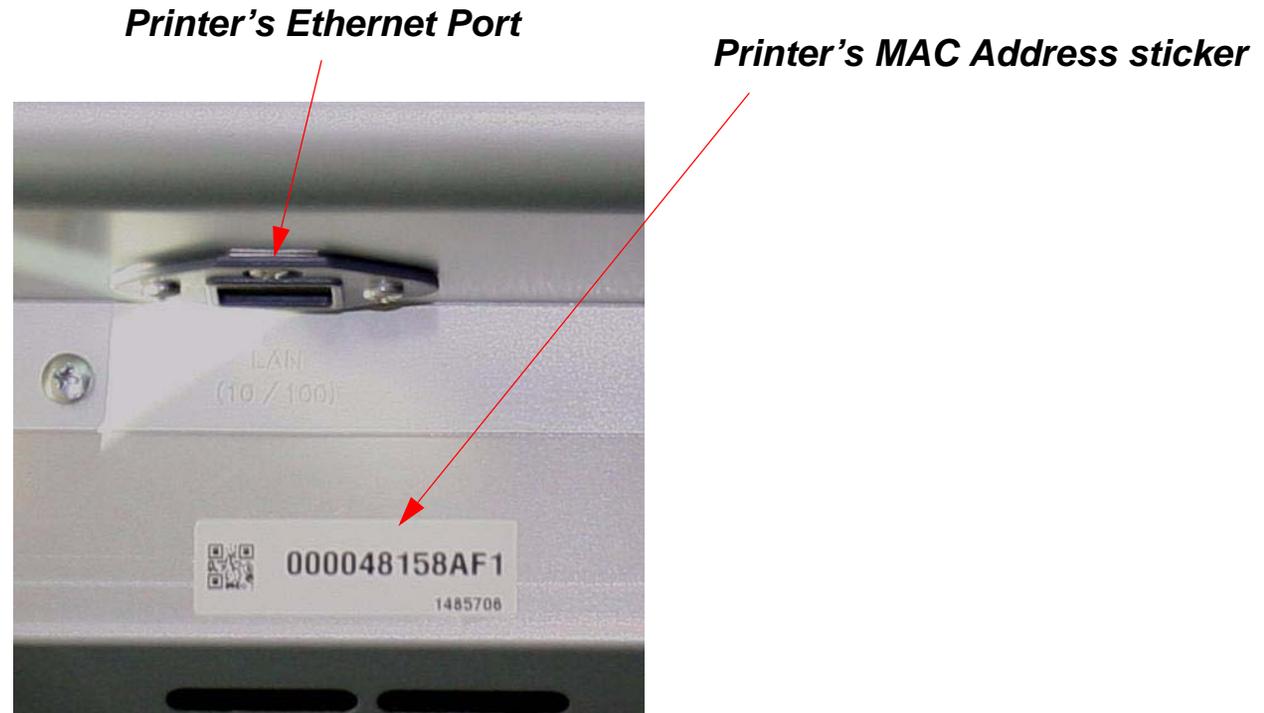
2. Input the resistance value (**Fuka_kd**)

3. Click on **Write**.

Input MAC Address Adjustment

Note: The **Input MAC Address** adjustment writes the Printer's MAC Address to the Main Board.

1. Locate the Printer's MAC Address.



Note: Epson Recommends that you follow the following steps 3 - 8 exactly.

2. Disable all firewall protection on the computer being used.
3. Connect the printer by USB and verify the connection.
4. Connect the Printer directly (standard ethernet cable, no hub or router). Do not disconnect the USB connection.

5. Load paper and turn on the Printer and verify that it is “**Ready**”.

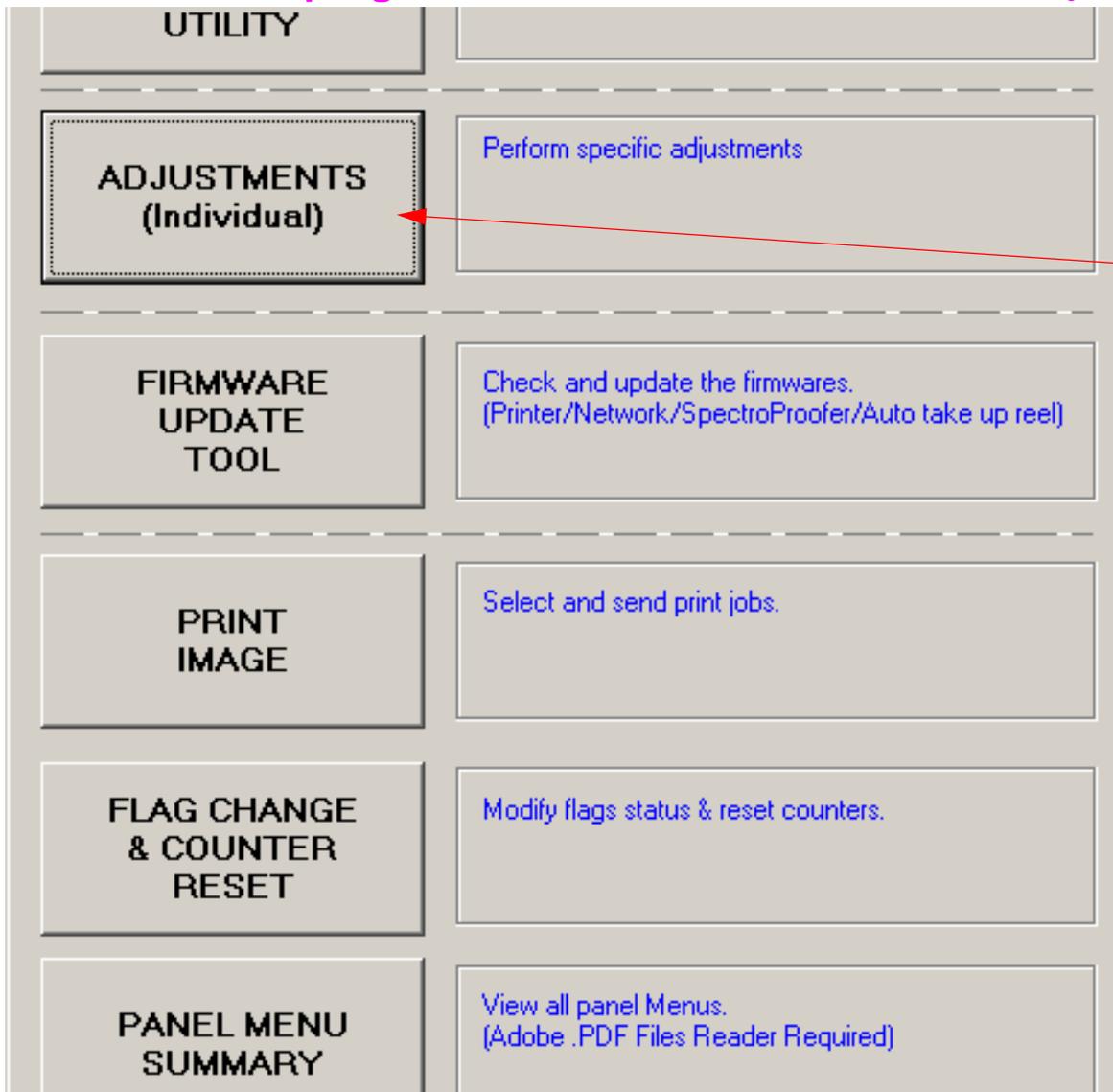
6. Run *Epson Net Config*, and set the following manual IP address.

The screenshot shows the Epson Net Config utility interface. On the left, a tree view shows the following menu items: Basic, Network, Basic(Wired), TCP/IP, Basic (highlighted), DNS, and Bonjour. The main window displays the following settings:

- Under the **Network** section, the **Manual** radio button is selected. A red arrow points to it with the label "1. Set *Manual*".
- Below this, there are two unchecked checkboxes: "Set using Automatic Private IP Addressing (APIPA)" and "Set using PING".
- Under the **IP Address Setting** section, there are three input fields:
 - IP Address:** 169 . 254 . 1 . 2. A red arrow points to this field with the label "2. IP: *169.254.1.2*".
 - Subnet Mask:** 255 . 255 . 0 . 0. A red arrow points to this field with the label "3. SM: *255.255.0.0*".
 - Default Gateway:** 255 . 255 . 255 . 255. A red arrow points to this field with the label "4. DG: *255.255.255.255*".
- At the bottom of the window, there are three buttons: "Default Settings", "Send", and "Cancel". A red arrow points to the "Send" button with the label "5. *Send*".

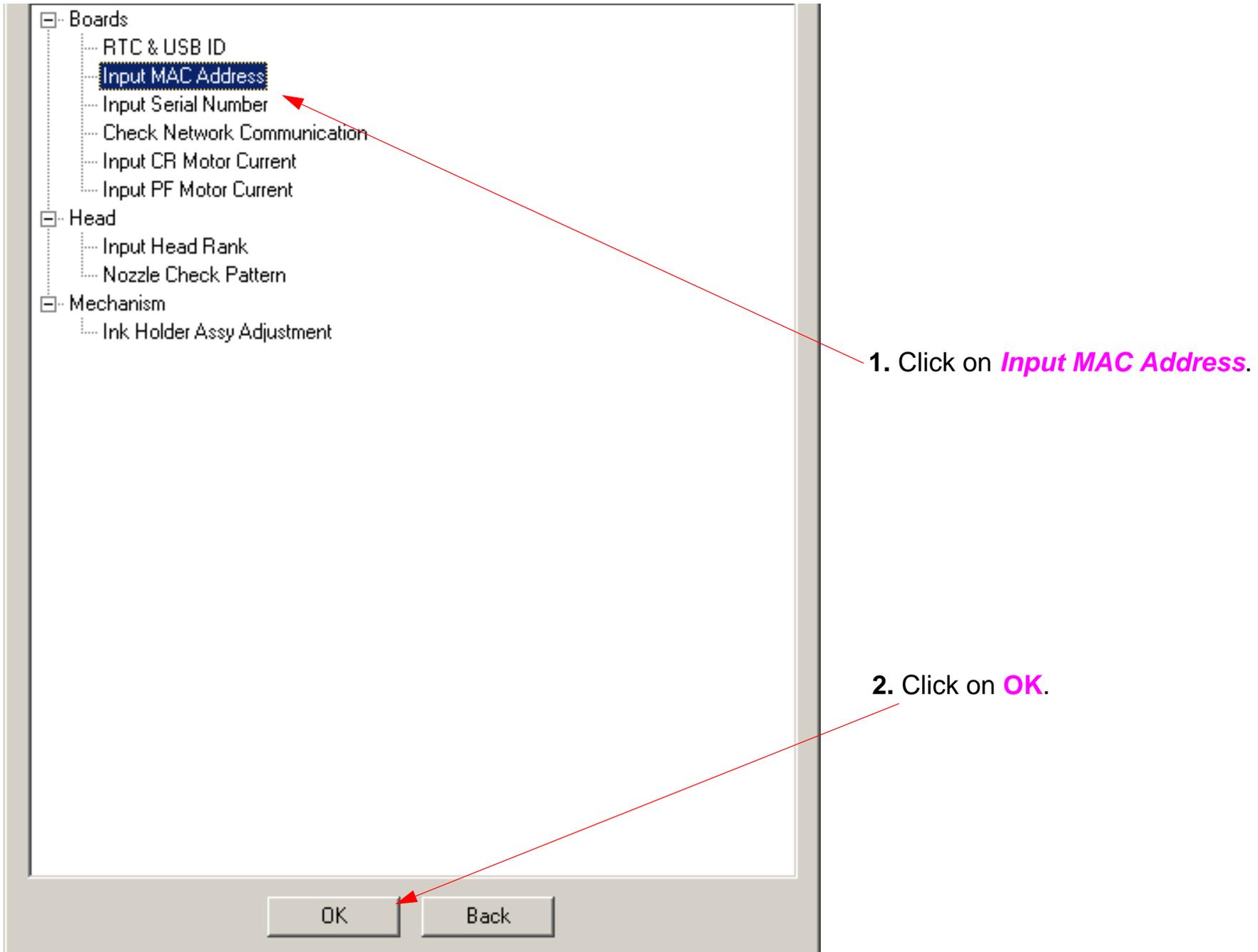
7. Reboot the Printer, and verify that it is “**Ready**”.

8. From the **Servprog.exe** for the 7900 and 9900, select **Adjustments (Individual)**.



Click on **Adjustments (Individual)**

9. From the *Adjustments (Individual)* menu, select *Input MAC Address*.



10. Adjust the displayed data.

Input MAC Address

After replacing a main board, make sure to write the MAC address on it.

1. Connect the PC and the printer with the network cable.
2. Key in the MAC address
3. Press [Enter]
4. Press [Next] to display a confirmation [Confirm] screen

NOTE: Release the Firewall settings because it is not possible to communicate when the Firewall is set.



MAC Address

00004

Run

< Back Next > Cancel

1. Place cursor to the right of the 4.

2. Hit the Left Arrow key on your keyboard to display the 8.

MAC Address

00048

11. Send the MAC Address to the **Printer**.

After replacing a main board, make sure to write the MAC address on it.

1. Connect the PC and the printer with the network cable.
2. Key in the MAC address
3. Press [Enter]
4. Press [Next] to display a confirmation [Confirm] screen

NOTE: Release the Firewall settings because it is not possible to communicate when the Firewall is set.

1. Enter the last 6 digits of the Printer's MAC Address here.

2. Click on **Run**. It will take a few minutes to complete. If it fails, try again.

4. Click on **OK** to complete.

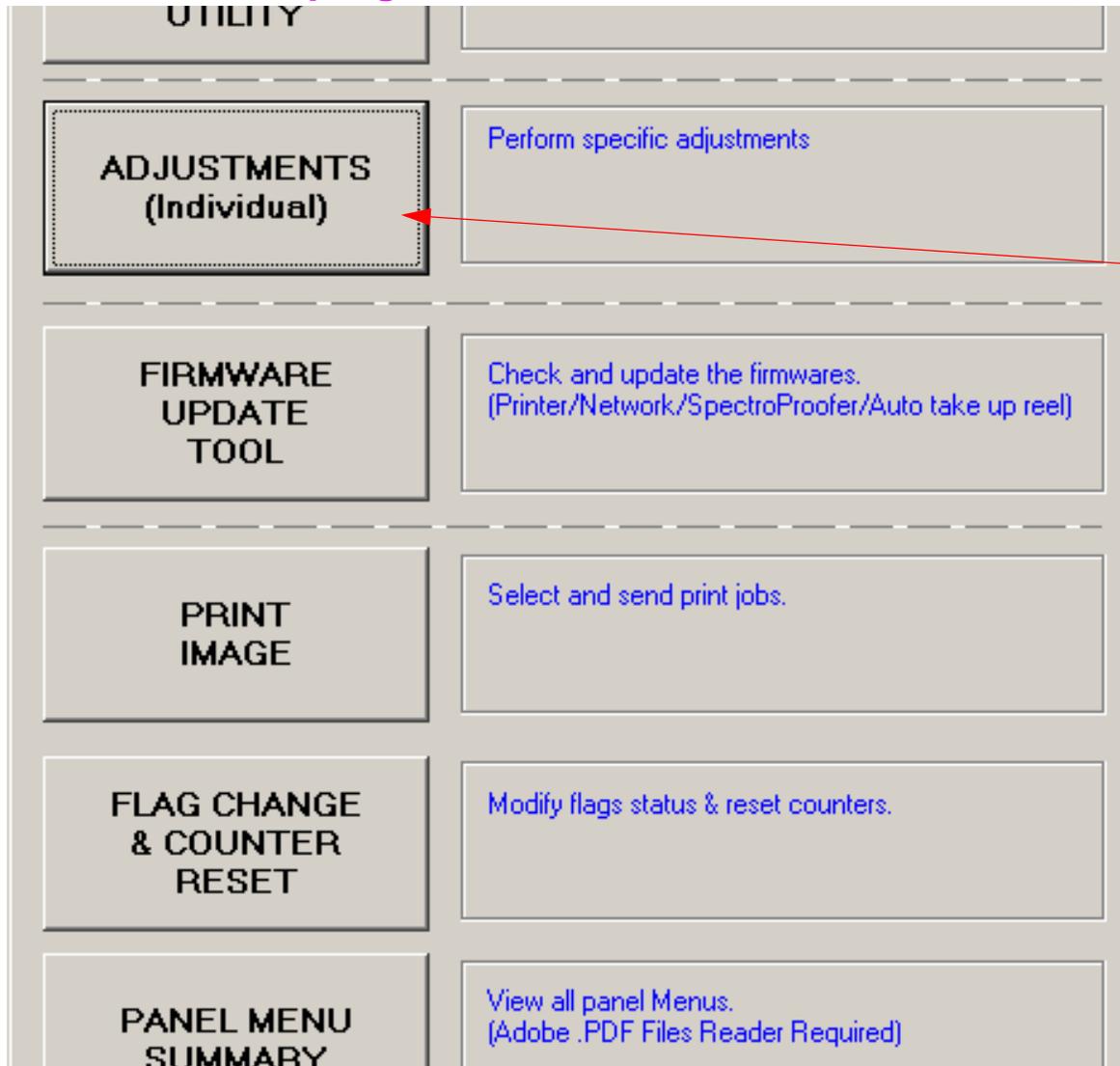
5. Run **Epson Net Config** and reset the Printer's IP settings to the users preference.

Note: if the procedure fails, reboot the Printer, verify that it is "**Ready**", and retry.

Input PF Motor Current Adjustment

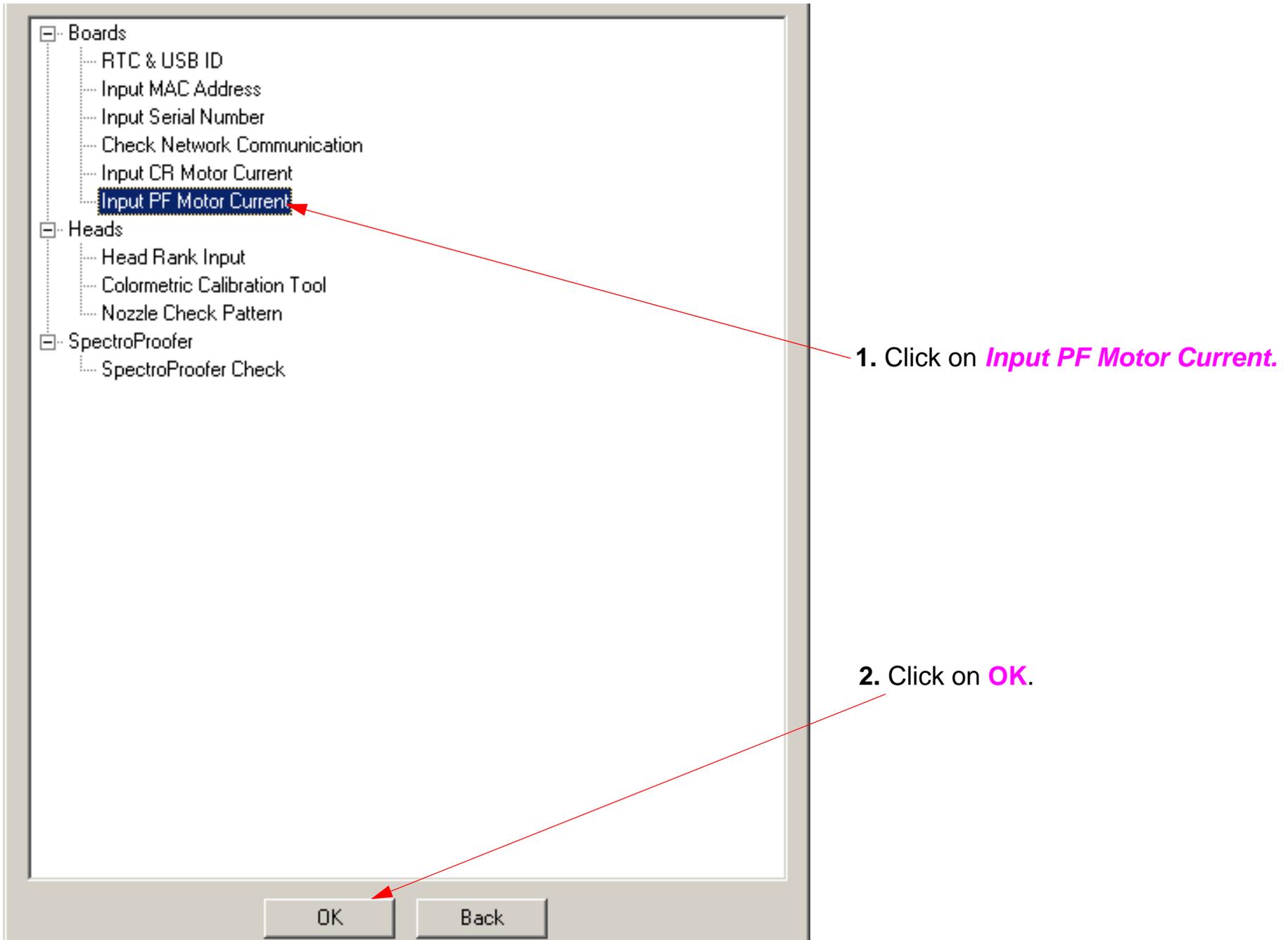
Note: The **Input PF Motor Current** adjustment writes the Paper Feed Motor's Calibration Values to the Main Board.

1. From the **Servprog.exe** for the 7900 and 9900, select **Adjustments (Individual)**.



Click on **Adjustments (Individual)**

2. From the *Adjustments (Individual)* menu, select *Input PF Motor Current*



3. Write the **Paper Feed Motor** calibration values to the **Printer**. Input PF Motor Current

Use this function to write the characteristics of the PF motor to the Main Board.
The appropriate current value is set to the motor for the constantly generated mechanical load.

[PROCEDURE]
1. Write the values then replace the PF motor, assemble the printer and turn it on.
2. Enter the values that is written on Induced voltage and Motor resistance.
3. Click [Write] button.
4. Click [Finish] button.
5. Turn the printer OFF.



Induced Voltage

Motor Resistance

Write

< Back Finish Cancel

Note: New Motors will have the 2 calibration values on a sticker.

1. Enter the voltage value.

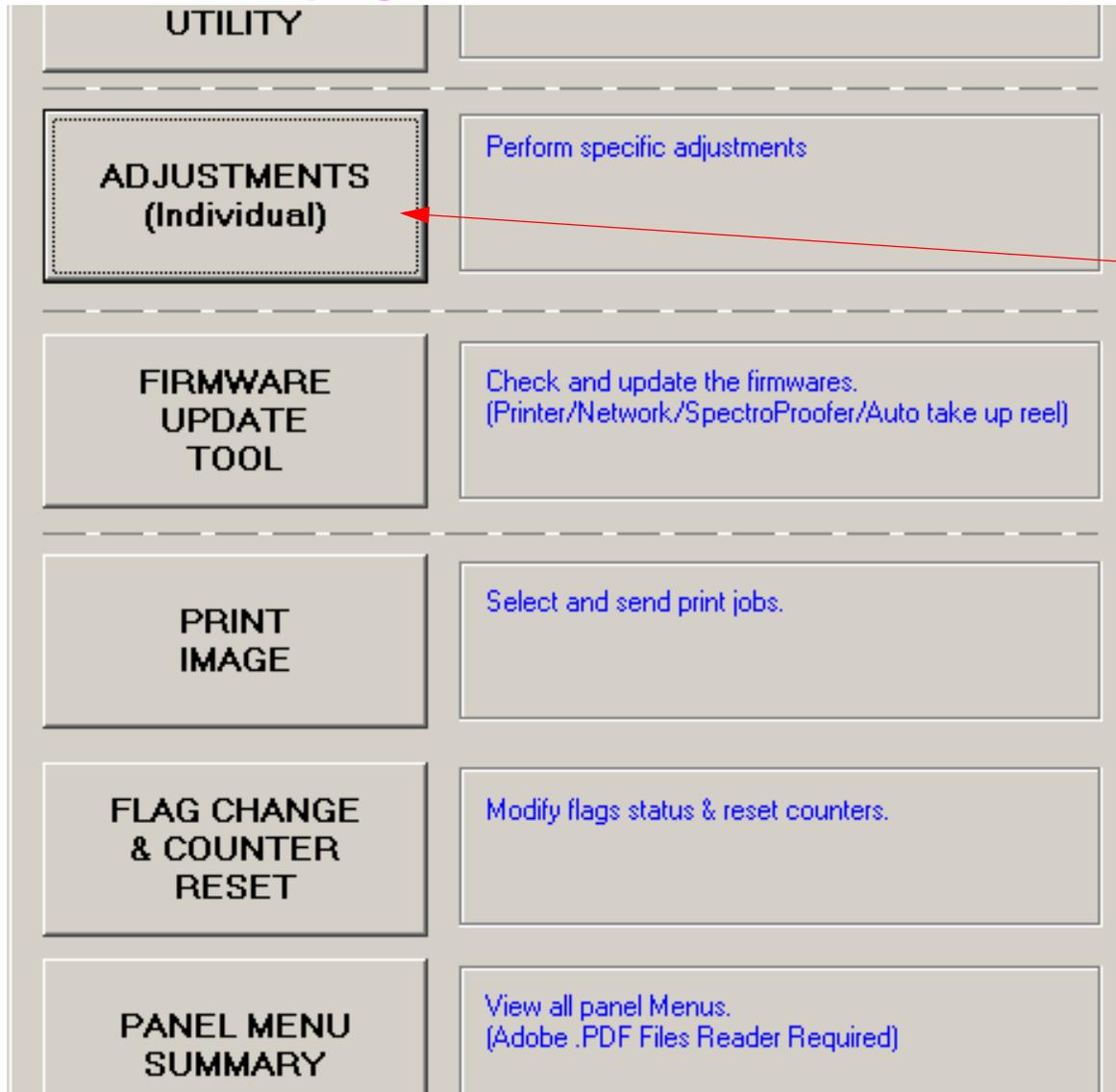
2. Input the resistance value

3. Click on **Write**.

Input Serial Number Adjustment

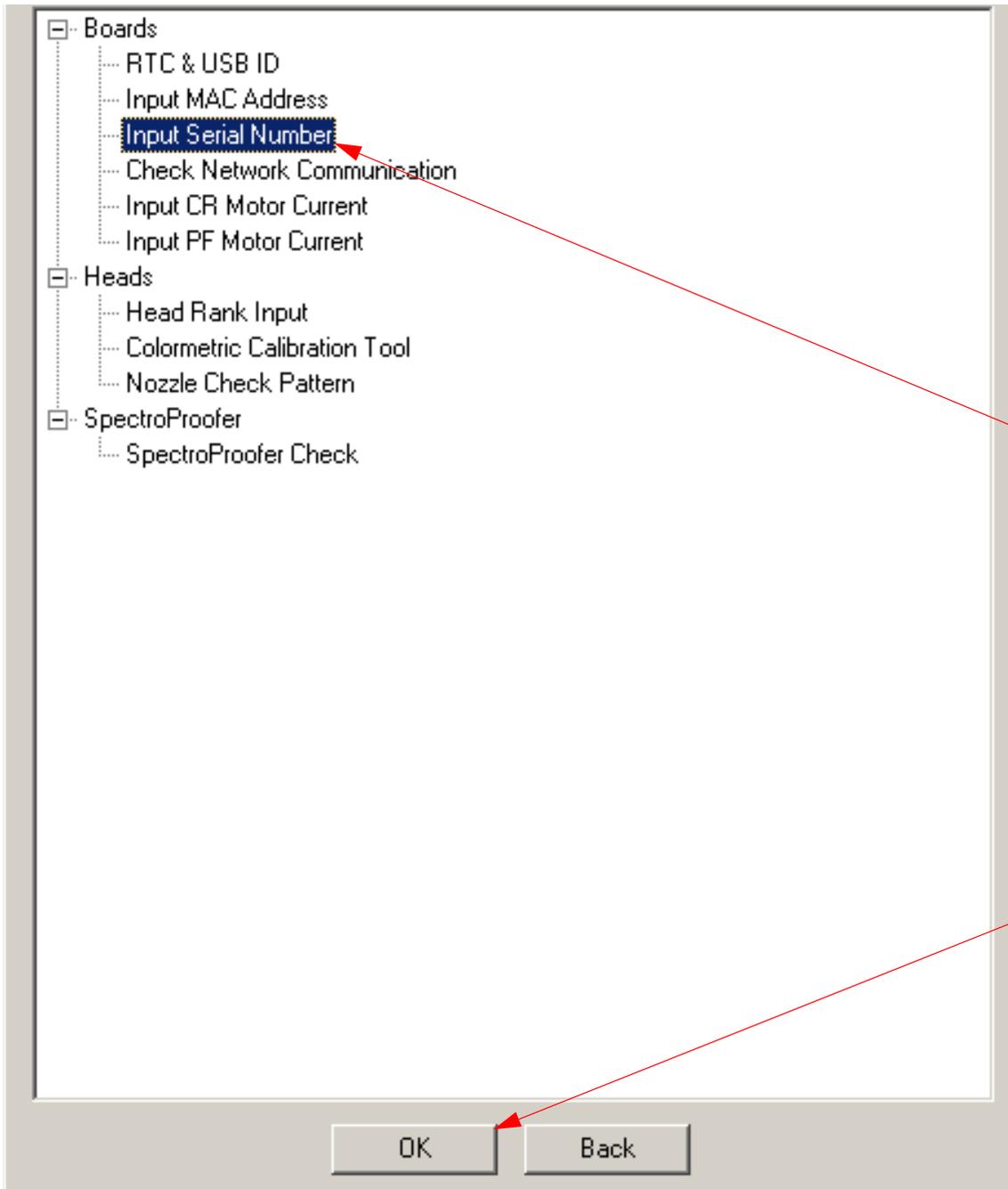
Note: The **Input Serial Number** adjustment writes the Printer's Serial Number to the Main Board.

1. From the **Servprog.exe** for the 7900 and 9900, select **Adjustments (Individual)**.



Click on **Adjustments (Individual)**

2. From the *Adjustments (Individual)* menu, select *Input Serial Number*.



1. Click on *Input Serial Number*.

2. Click on **OK**.

3. Write the Serial Number to the Printer.

Input Serial Number

This allows you to write the serial number of the printer onto the NVRAM. The stored serial number can be read and displayed for verification.

1. Enter the 10-digit serial number of the printer and click the [Write] button.
2. Click the [Read] button to display the stored serial number on the NVRAM of the Main Board.

Click the [Finish] or the [Next] button when you are done.



Serial number

KJHE000425

Read

Write

< Back

Finish

Cancel

The **Read** button will display the **Printer's** current serial number.

1. Enter the **Printer's** Serial Number.

2. Click on **Write**.

NV-RAM BACKUP UTILITY

Note: The **NV-RAM BACKUP UTILITY** “backs up” and restores the unique data that is on each Printer’s Main Board, and should be transferred to a new Main Board.

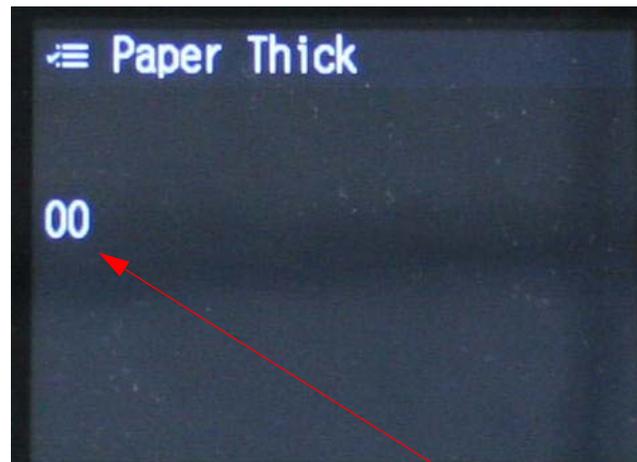
Note: For a detailed description of the **NV-RAM Backup Utility** see the **NVRAM Utility** chapter in the **Utility** section.

Paper Thickness Sensor Adjustment

Purpose: The Paper Thickness Sensor Adjustment calibrates the *Paper Thickness Sensor* so that it correctly recognizes 3 different thickness ranges of media. The *Paper Thickness Sensor* does not measure the thickness of inserted media, it determines the “thickness range” of the media.

Special Tools: The Paper Thickness Sensor Adjustment requires 4 thickness gauges.
.4mm .5mm .8mm .9mm

1. Remove the **Top Cover**.
2. Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
3. Navigate to **SELF TESTING\Mecha Adjustment\Paper**
4. Press the **Right Arrow** to display the Sensor data.
 - 4.1 Navigate to **ServiceMan Mode: SELF TESTING\Adjustment\Paper\Paper Thick 00**.

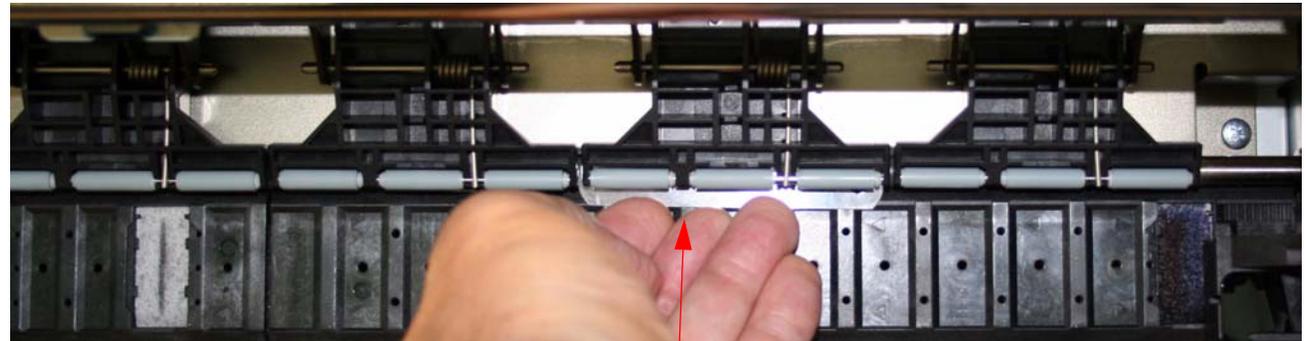


Currently the Sensor data = **00**

5. Using the **Pinch Roller Release** button, place the 0.4mm thickness gauge in position.



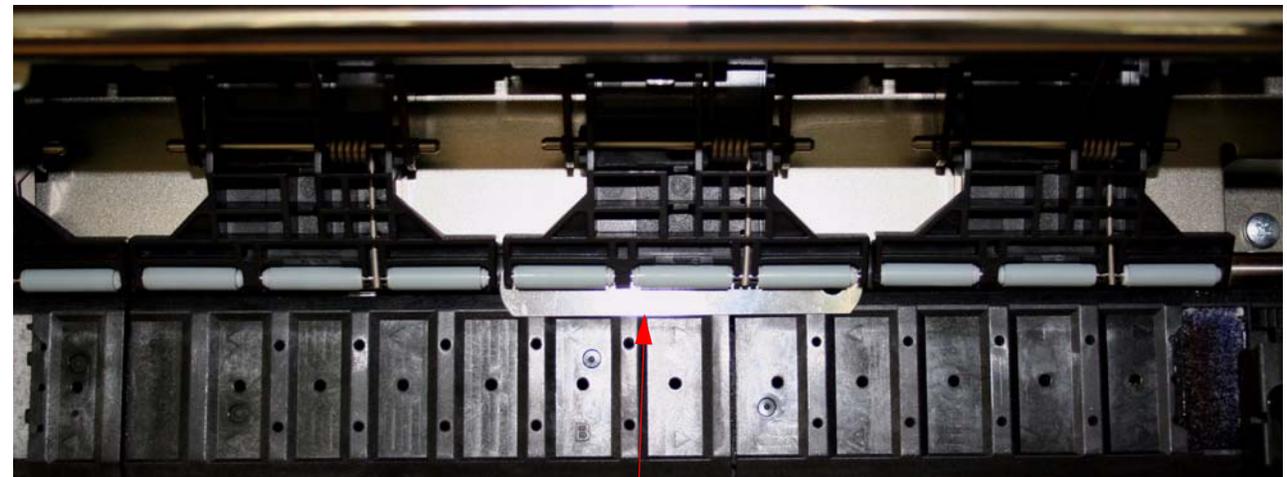
1. Press the **Pinch Roller Release** button to open the **Pinch Rollers**.



2. Place the **.4mm** thickness gauge between the **2nd** from the right **Pinch Rollers** and the **Paper Feed Roller**.

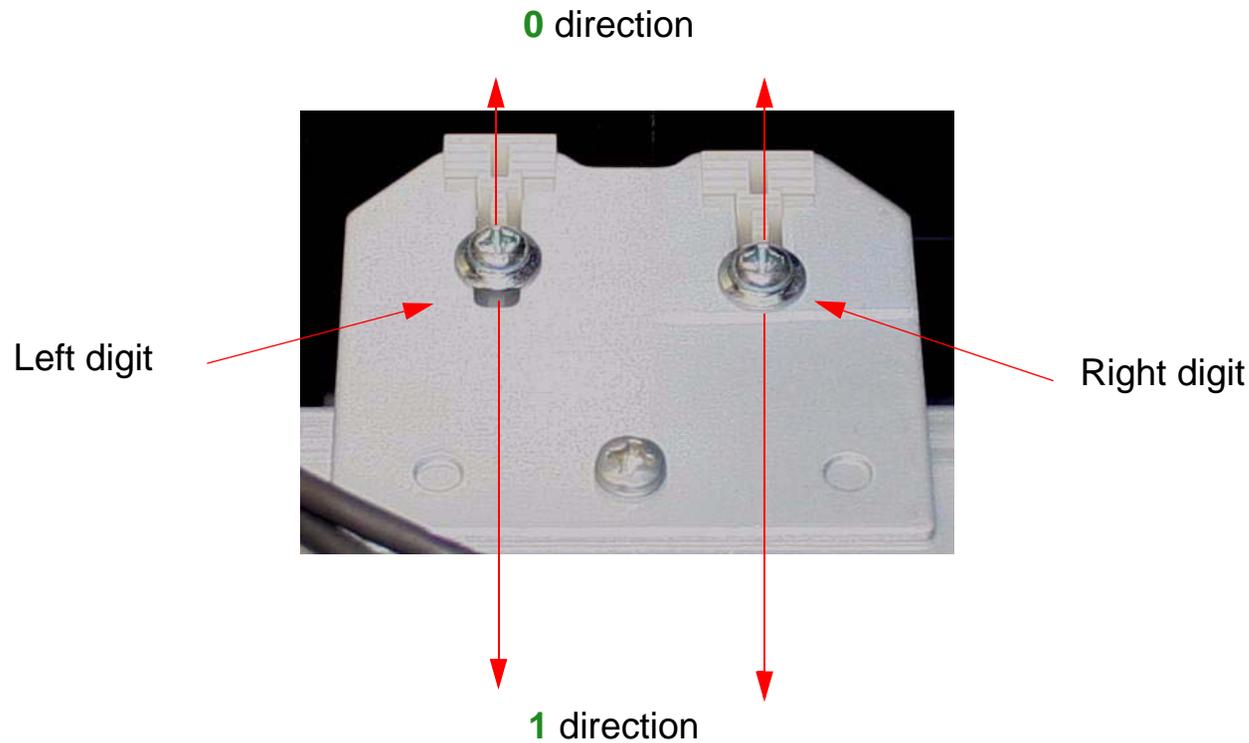


3. Press the **Pinch Roller Release** button to close the **Pinch Rollers**.



4. The Printer will close the **Pinch Rollers** on the gauge.

6. Adjust until the conditions are true for each of the 4 gauges.



00 = When the **0.4mm** thickness gauge is inserted.

10 = When the **0.5mm** thickness gauge is inserted.

10 = When the **0.8mm** thickness gauge is inserted.

11 = When the **0.9mm** thickness gauge is inserted.

01 = When the ***Pinch Roller Release Mechanism*** is open.

1. Insert the 4 gauges and check that the 4 conditions listed above are true.
2. If the conditions listed are not true, loosen the fastening screws, and move the sensor positions until they are true.

PF Slant Adjustment

Note: The *Print Head Slant Adjustment (PF)* adjusts the *Print Head's "heel / toe" parallelism (for each color, Nozzle 1 and Nozzle 360 are equal distance from the media).*

About the 7900 and 9900 PF Slant Adjustment

Historically the PF Slant adjustment has been primarily a **Print Head** adjustment. The PF Slant adjustment for the 7900 and 9900 is a **Carriage** related adjustment. In other words, the PF Slant adjustment **is not impacted** by **Print Head** exchange. It **is impacted** by **Carriage** exchange.

Required Files



PF Slant.prn



PrnPrint.exe

1. Load 24" Doubleweight Matte roll paper.
2. Launch **PrnPrint.exe**.



PF Slant.prn

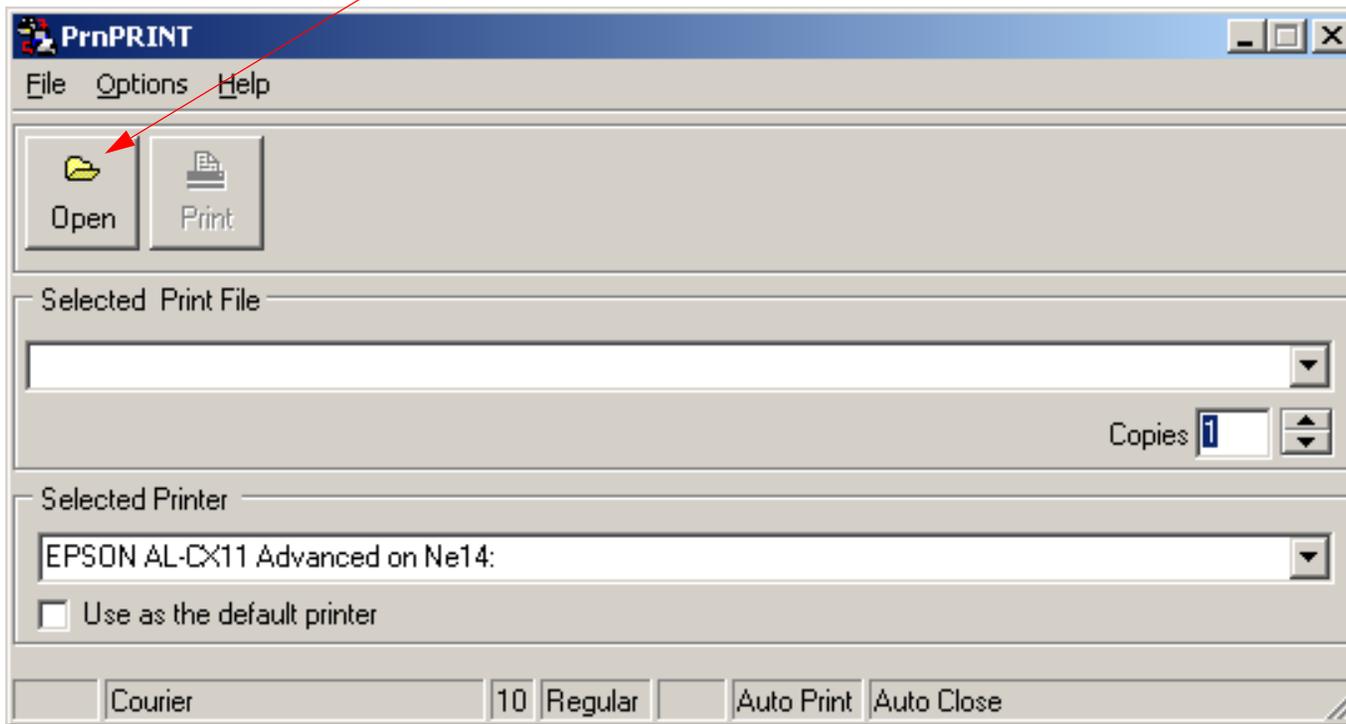


PrnPrint.exe

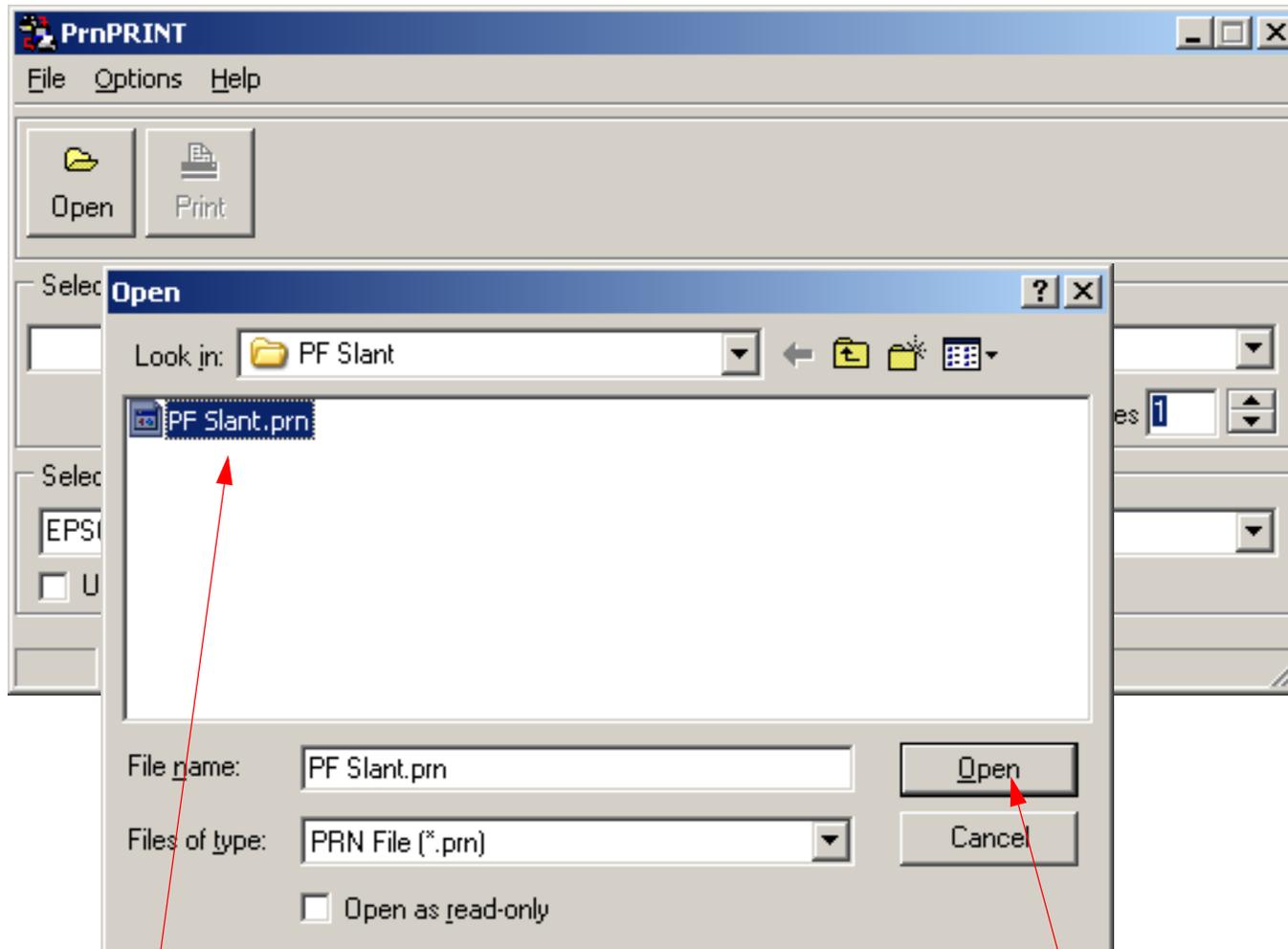
Double Click on this icon to launch **PrnPrint.exe**.

3. Click on **Open**.

Click on **Open**.



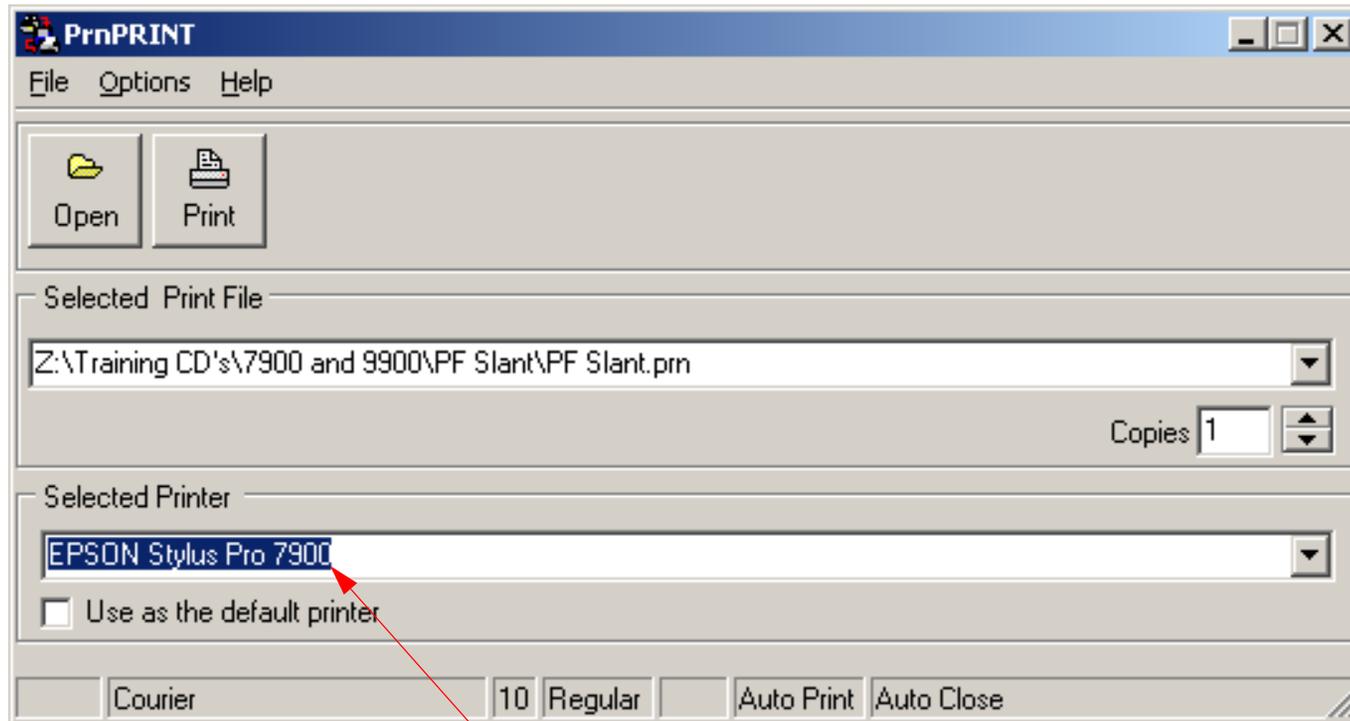
4. Load *PF Slant.prn*.



1. Navigate to, and select *PF Slant.prn*.

2. Click on *Open*.

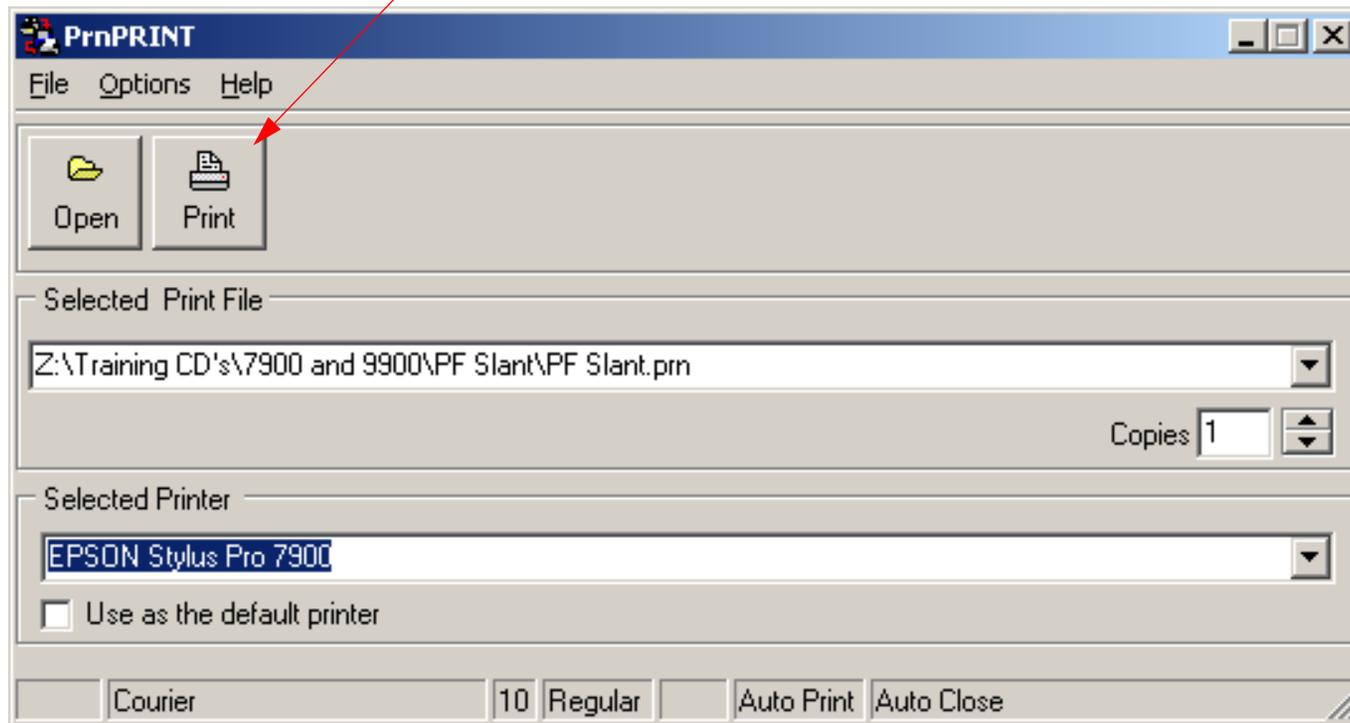
5. Select the correct **Printer**.



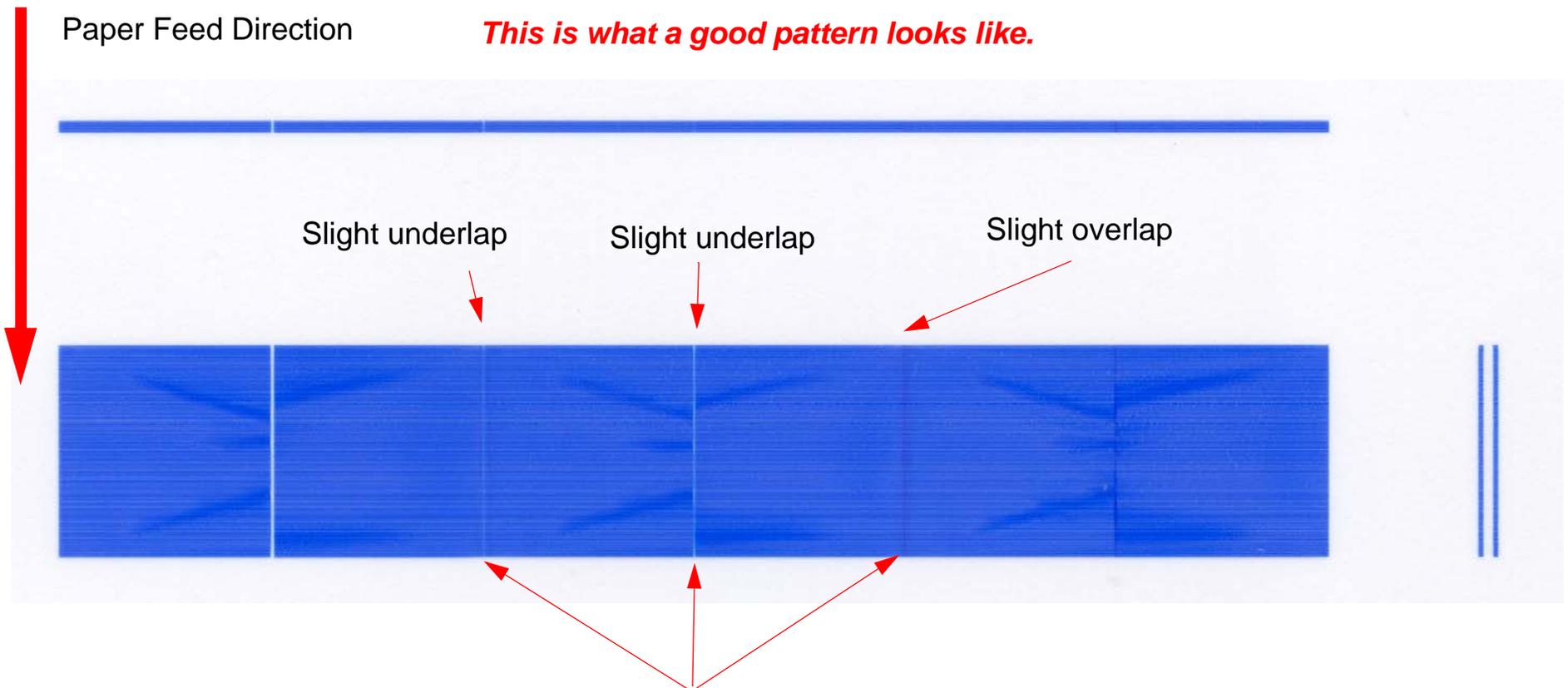
Select the correct **Printer**.

6. Print the adjustment pattern.

Click on **Print** to print the adjustment pattern.



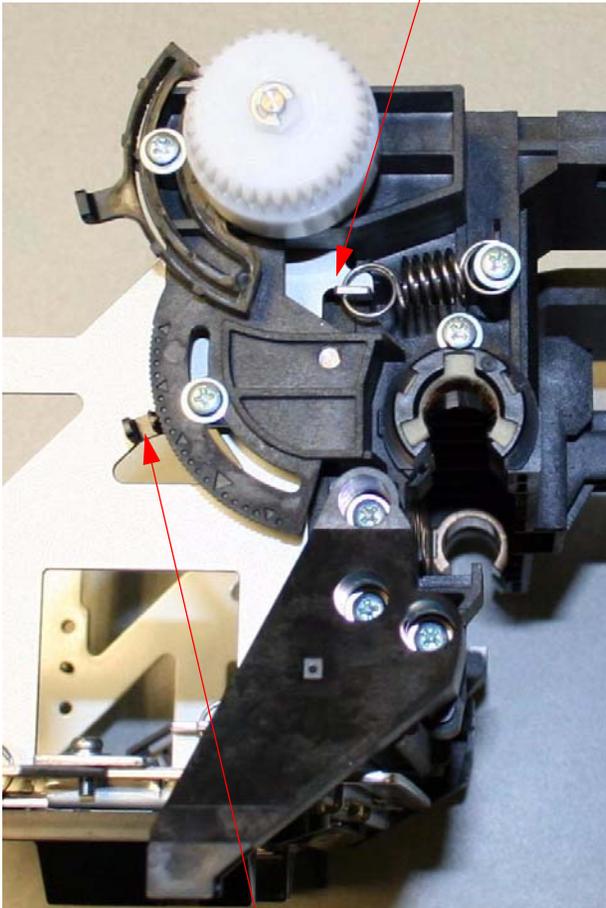
7. This adjustment pattern will be printed.



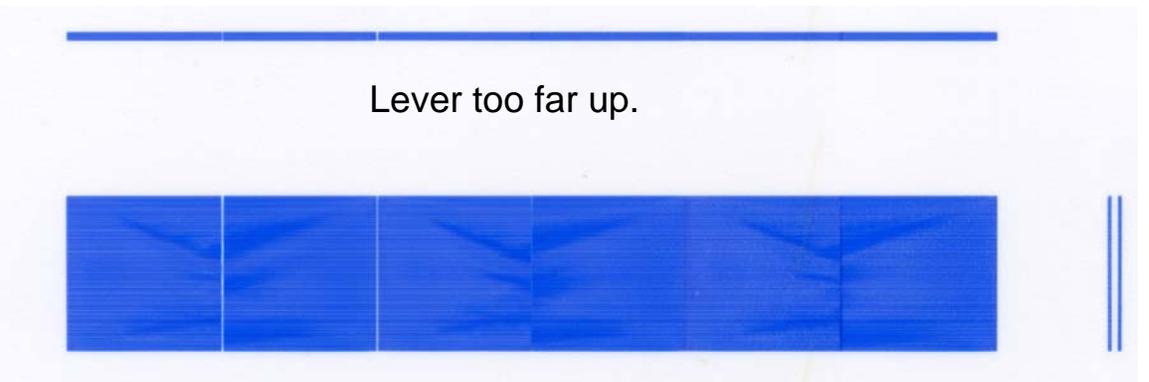
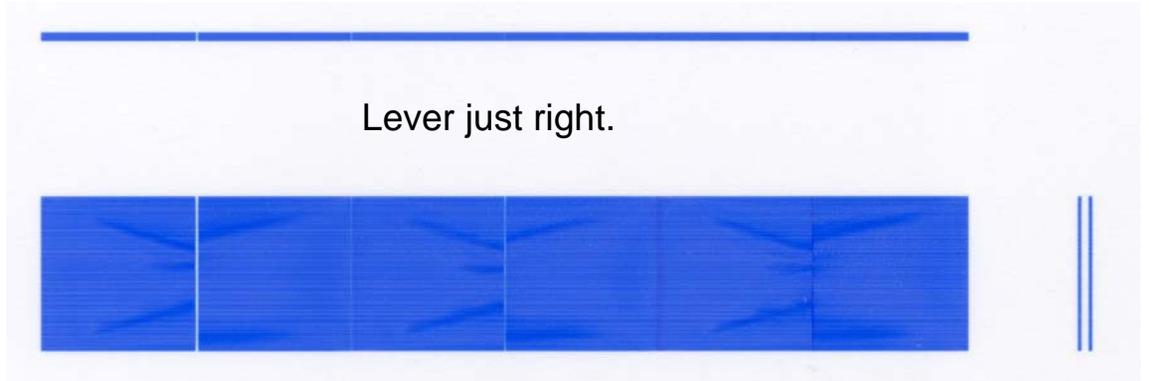
Each of these 3 lines are equal distant from the top to the bottom. Compare each line to itself, not to each other.

8.

Right side of **Carriage Mechanism.**



PF Slant Lever



9. Unlock the **Carriage Mechanism**.

9.1 **ServiceMan Mode: Down, Right, and OK** buttons, and turn on the **Printer**.

9.2 Navigate to **SELF TESTING\Mecha Adjustment\Temporay PG: [Enter] Uncap**.

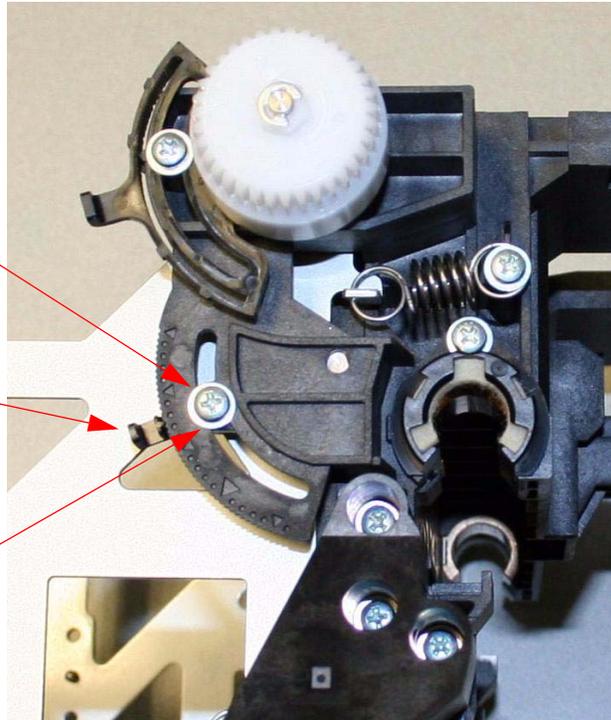
9.2.1 Press the **OK** button to uncap the **Carriage Mechanism**.

10. Adjust the PF Slant.

1. Loosen **1 Screw**.

2. Move the **Lever**.

3. Tighten **1 Screw**.



11. Lock the **Carriage Mechanism**.

11.1 **ServiceMan Mode: Down, Right, and OK** buttons, and turn on the **Printer**.

11.2 Navigate to **SELF TESTING\Mecha Adjustment\Temporay PG: [Enter] Cap**.

11.2.1 Press the **OK** button to cap the **Carriage Mechanism**.

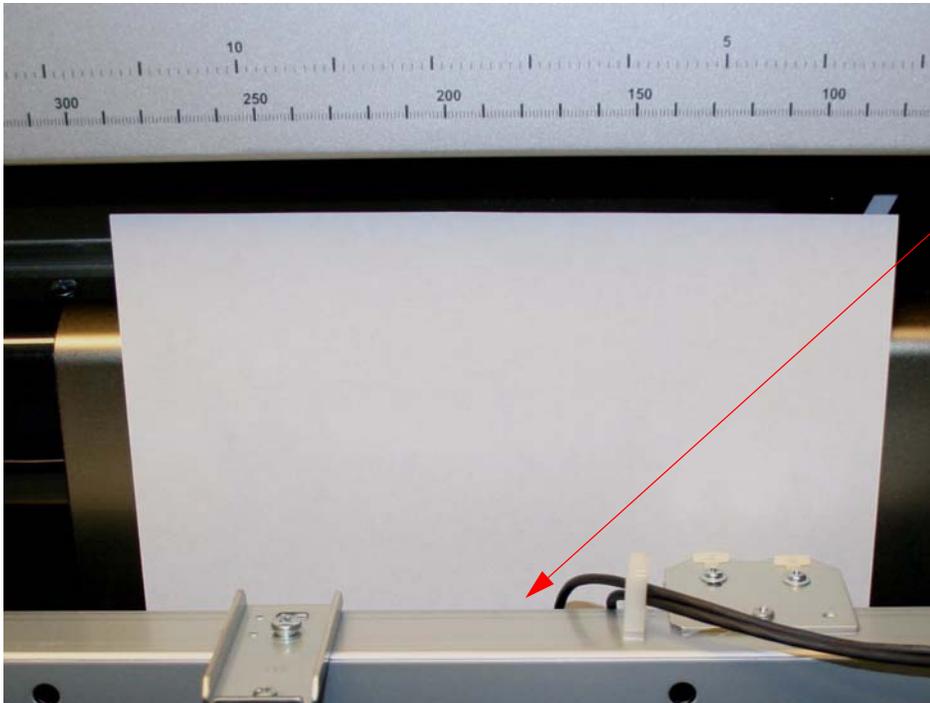
12. Repeat steps 6 through 10 until adjusted.

Rear AD Sensor Adjustment

Purpose: The Rear AD Sensor Adjustment calibrates the **RearAD Sensor** so that it correctly recognizes media. The **RearAD Sensor** detects media in the **Printer**. It also reports the end of the media.

Special Tools: Special media is not required. Doubleweight matte media works well. It is acceptable to use the customers media if they are having trouble with the **Printer** recognizing it. **Do not use glossy (reflective) media.**

1. Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
2. Navigate to **SELF TESTING\Mecha Adjustment\RearAD**
3. Press the **Right Arrow** to display the **[Enter] Start**.
4. Place media in to position and sample it to adjust the **Rear AD Sensor**.



Note: This picture shows the Printer without the Top Cover. It is not necessary to remove the Top Cover.

1. Place the Media in front of the **Rear AD Sensor**.
2. Press the **OK** button to sample the media.

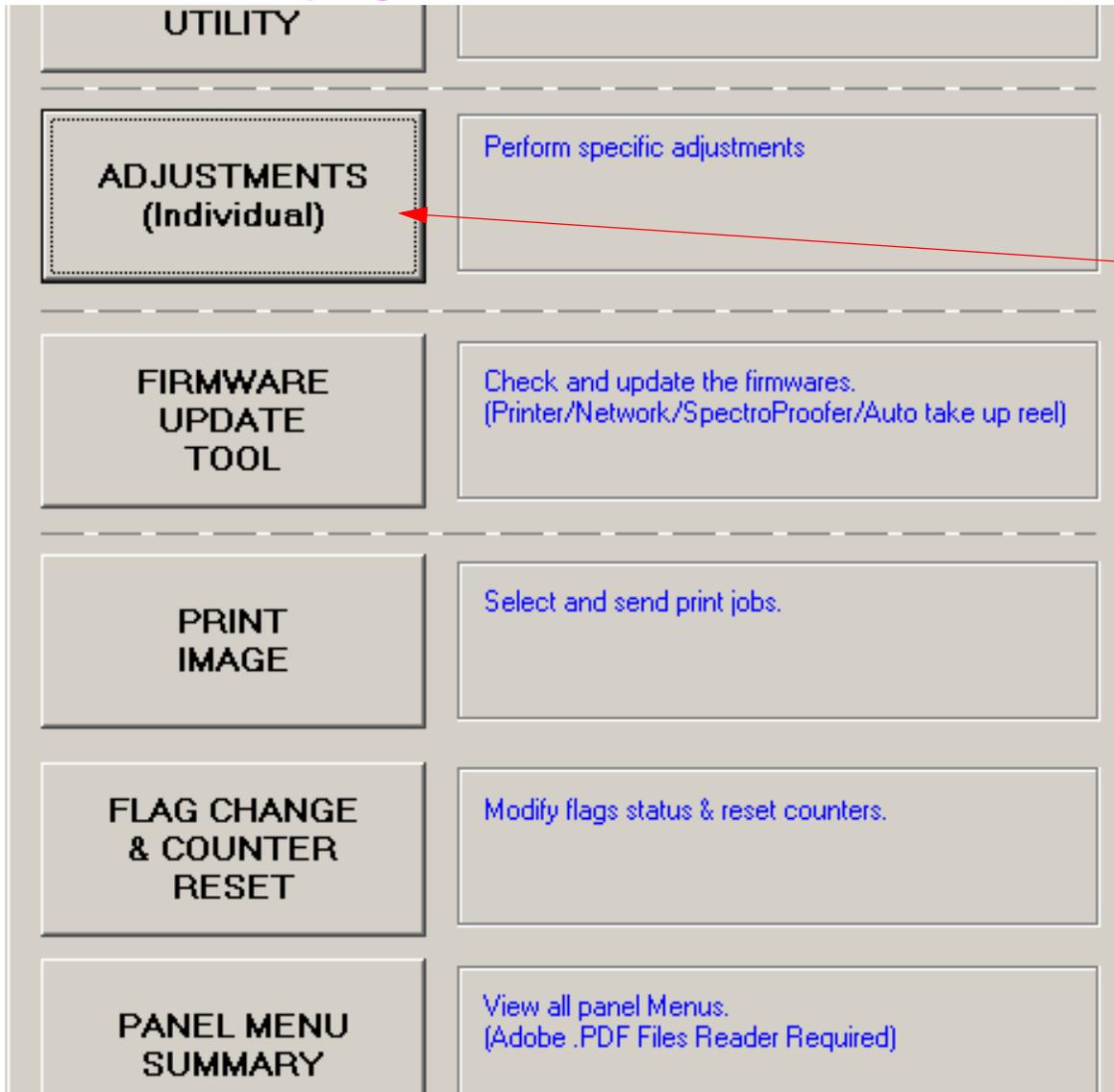


3. The **Printer's LCD** will display a value when finished.

RTC & USB ID Adjustment

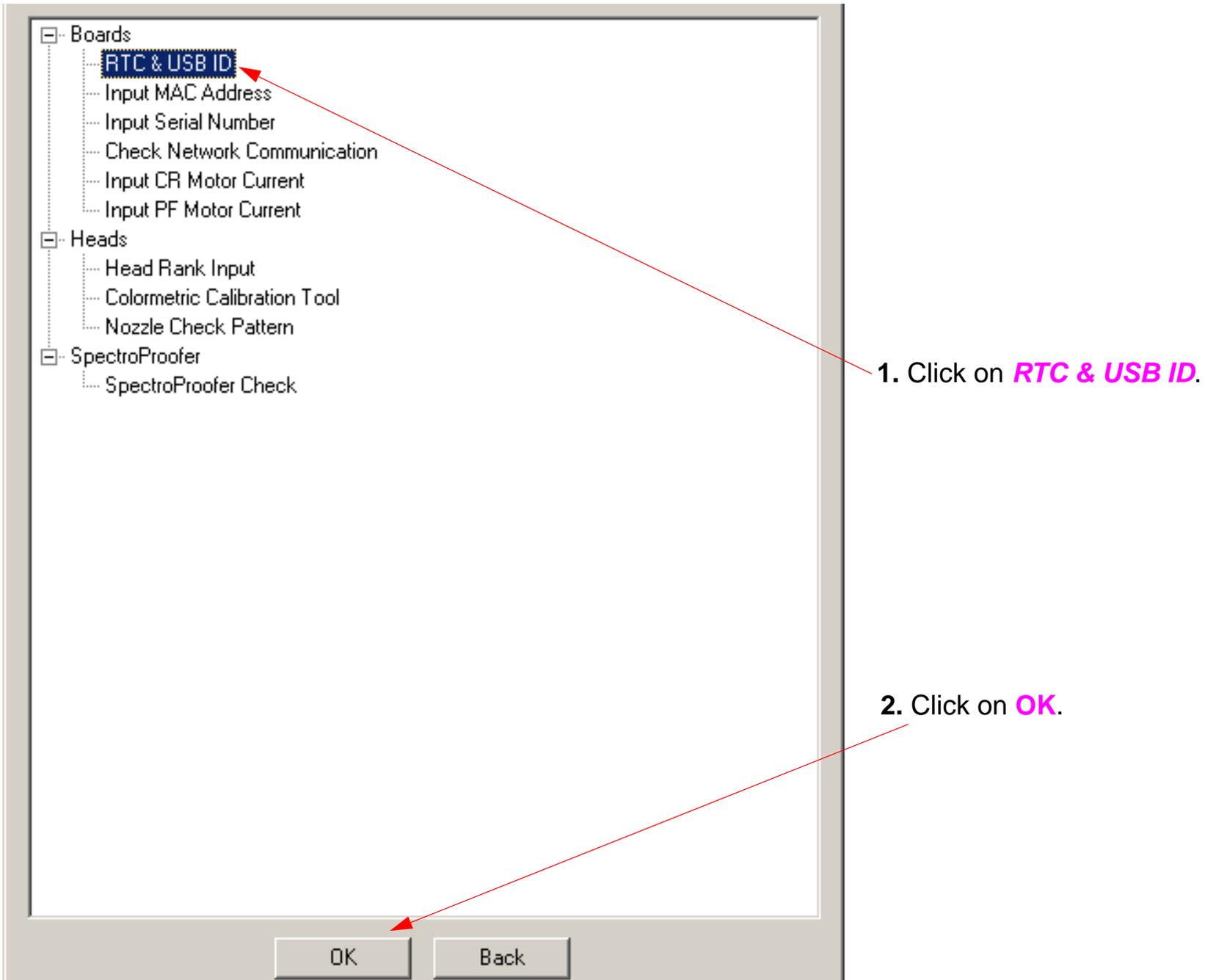
Note: The **RTC & USB ID** sets the Printer's System Clock and/or resets the USB ID.

1. From the **Servprog.exe** for the 7900 and 9900, select **Adjustments (Individual)**.



Click on **Adjustments (Individual)**

2. From the *Adjustments (Individual)* menu, select *RTC & USB ID*.

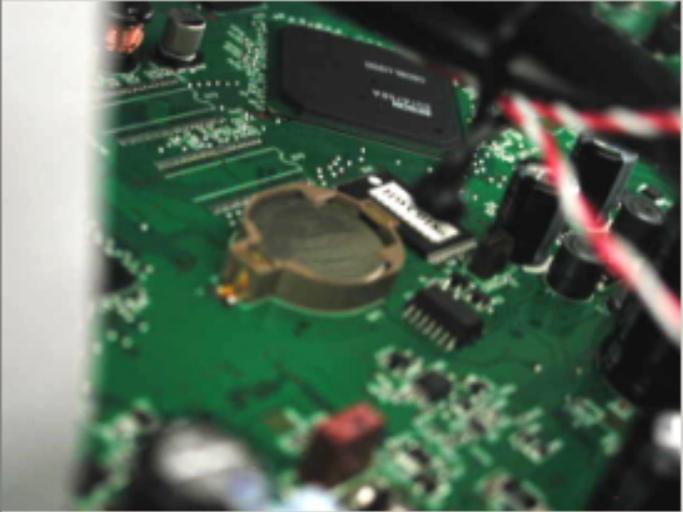


3. Set or reset the Real Time Clock and/or the USB ID.

RTC & USB ID

Initializes the RTC and writes the USB ID after exchanging a main board.

1. Check if the date and time displayed on the screen is correct. Enter the correct date and time if necessary.
2. Click [Write RTC] if you wish to modify the registered date and Time.
3. Enter the 10-digit serial number of the printer. The USB ID is automatically created according to the Serial Number.
4. Click the [Write USB ID] button to write the USB ID on the NVRAM of the new Main Board.
5. Click the [Next] button to display a confirmation screen.



Date:

Time:

Printer S/N:

USB ID:

To Set the Printer's System Clock:

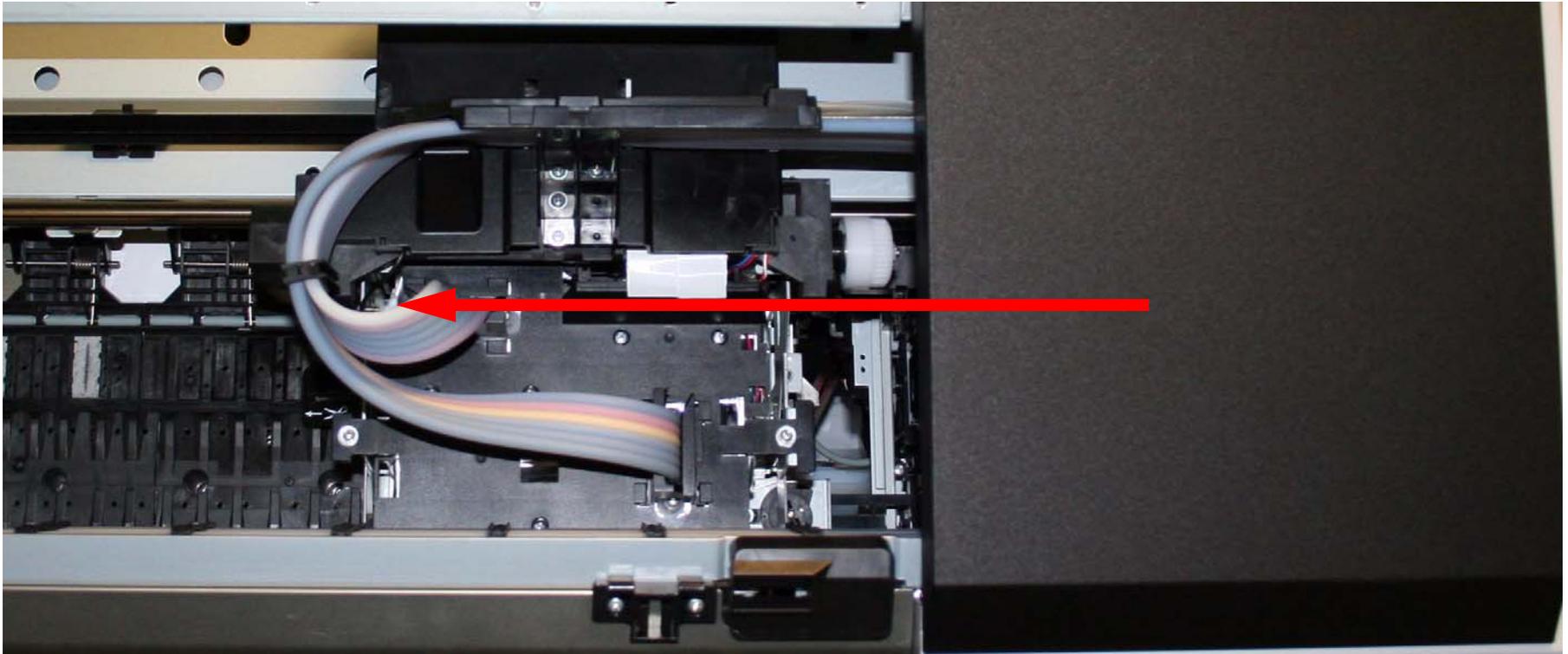
1. Verify the date and time information provided by your computer.
2. Click on **Write RTC**.

To Set the Printer's USB ID:

1. Enter the Printer's Serial Number.
2. Click on **Write USB ID**.

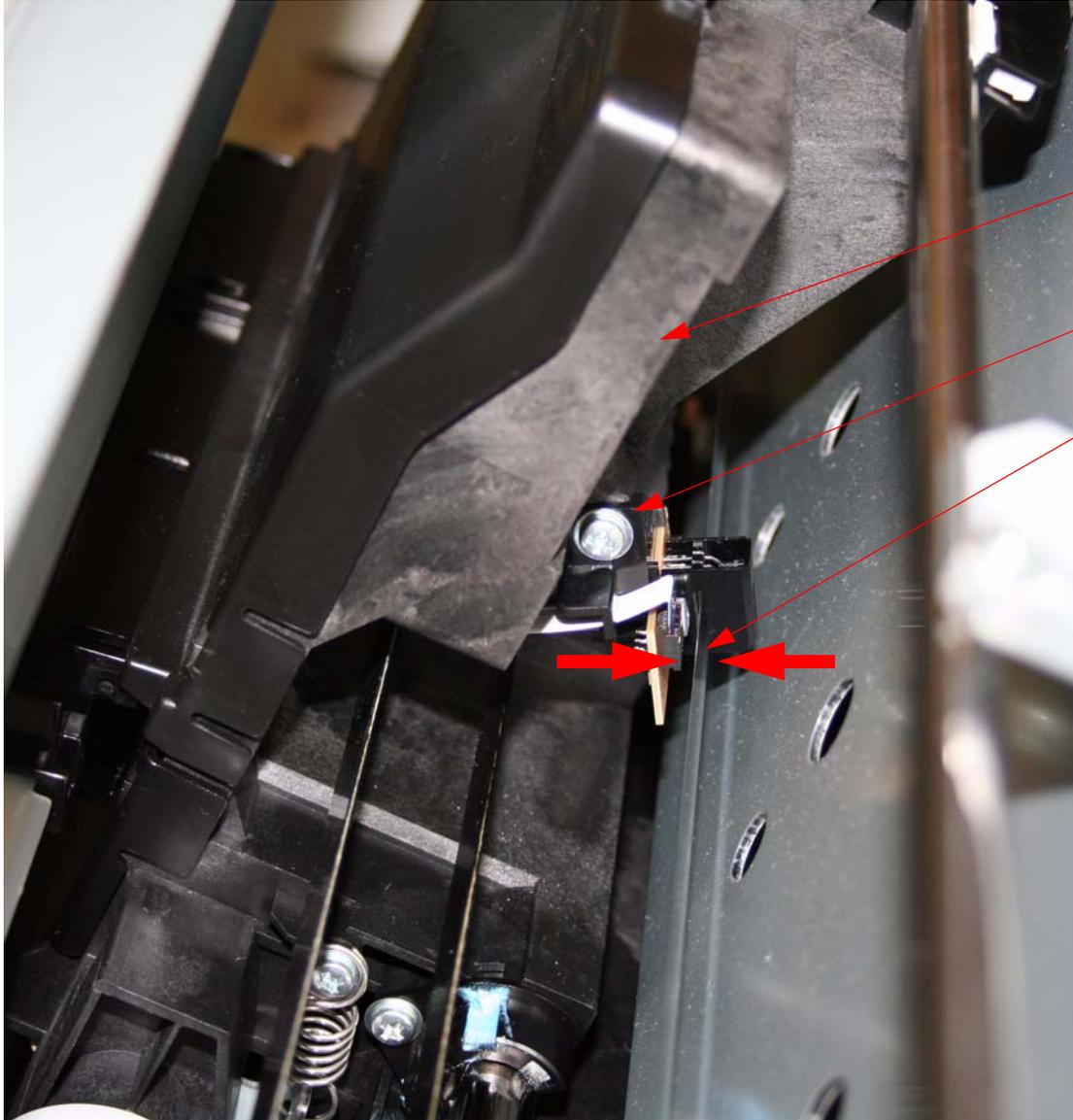
Sensor (Carriage Encoder) Adjustment

1. Release the **Carriage Mechanism**.
 - 1.1 Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
 - 1.2 Navigate to **SELF TESTING\Mecha Adjustment\IM Sensor Gap**
 - 1.3 Press the **Right Arrow** to display the **[Enter] Start**.
 - 1.4 Press the **OK** button to release the **Carriage**.
2. Move the **Carriage Mechanism** off of the “capped position”.



3. **Unplug the Printer.**

4. Remove the **Top Cover**.
5. Adjust the **Carriage Encoder**.



Right side of the **Carriage Mechanism**.

1. Loosen **1 Screw**.

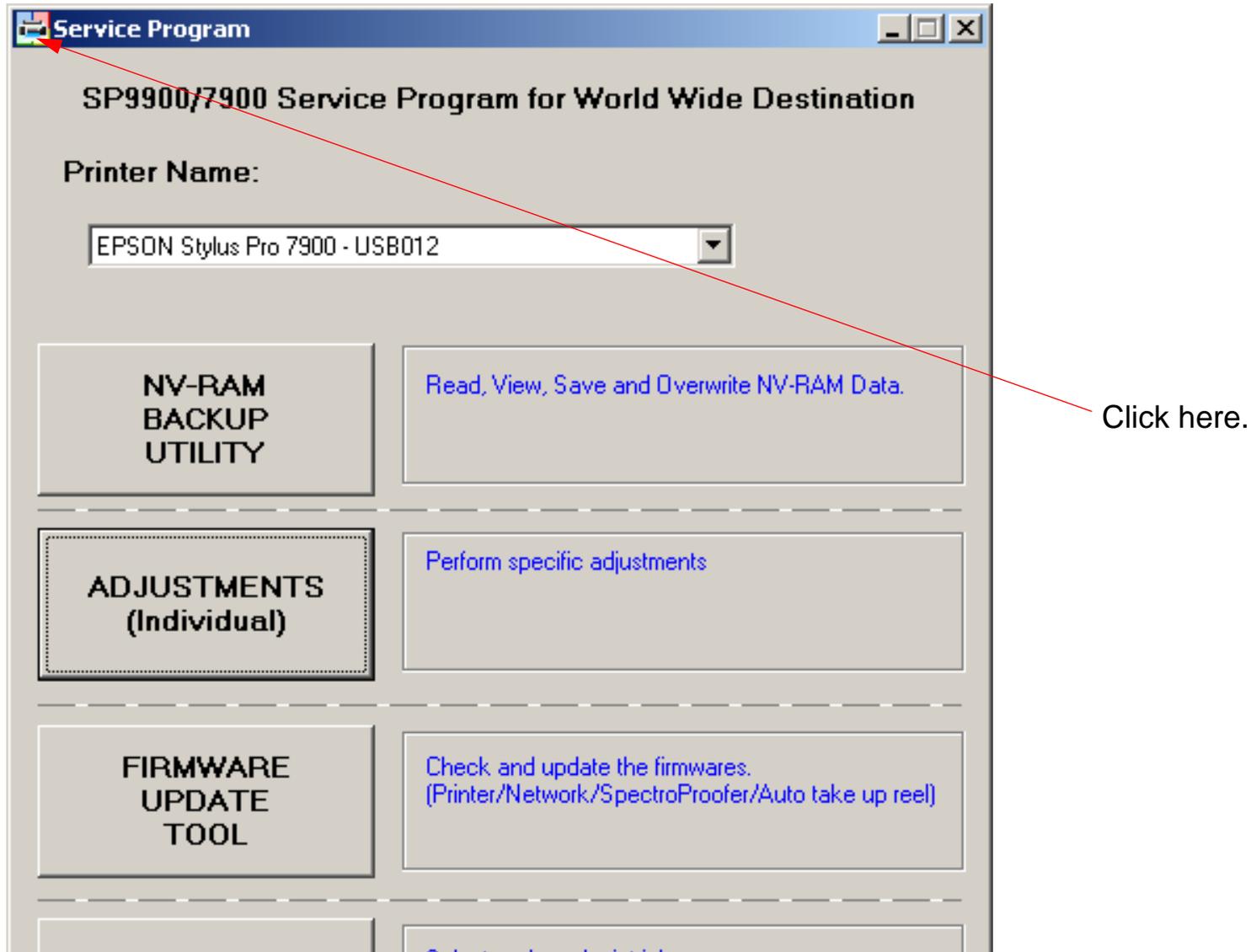
2. Center the **Carriage Encoder** on the **Encoder Strip**. Ensure that the **Carriage Encoder** does not make contact with the **Encoder Strip**.

3. Tighten **1 Screw**.

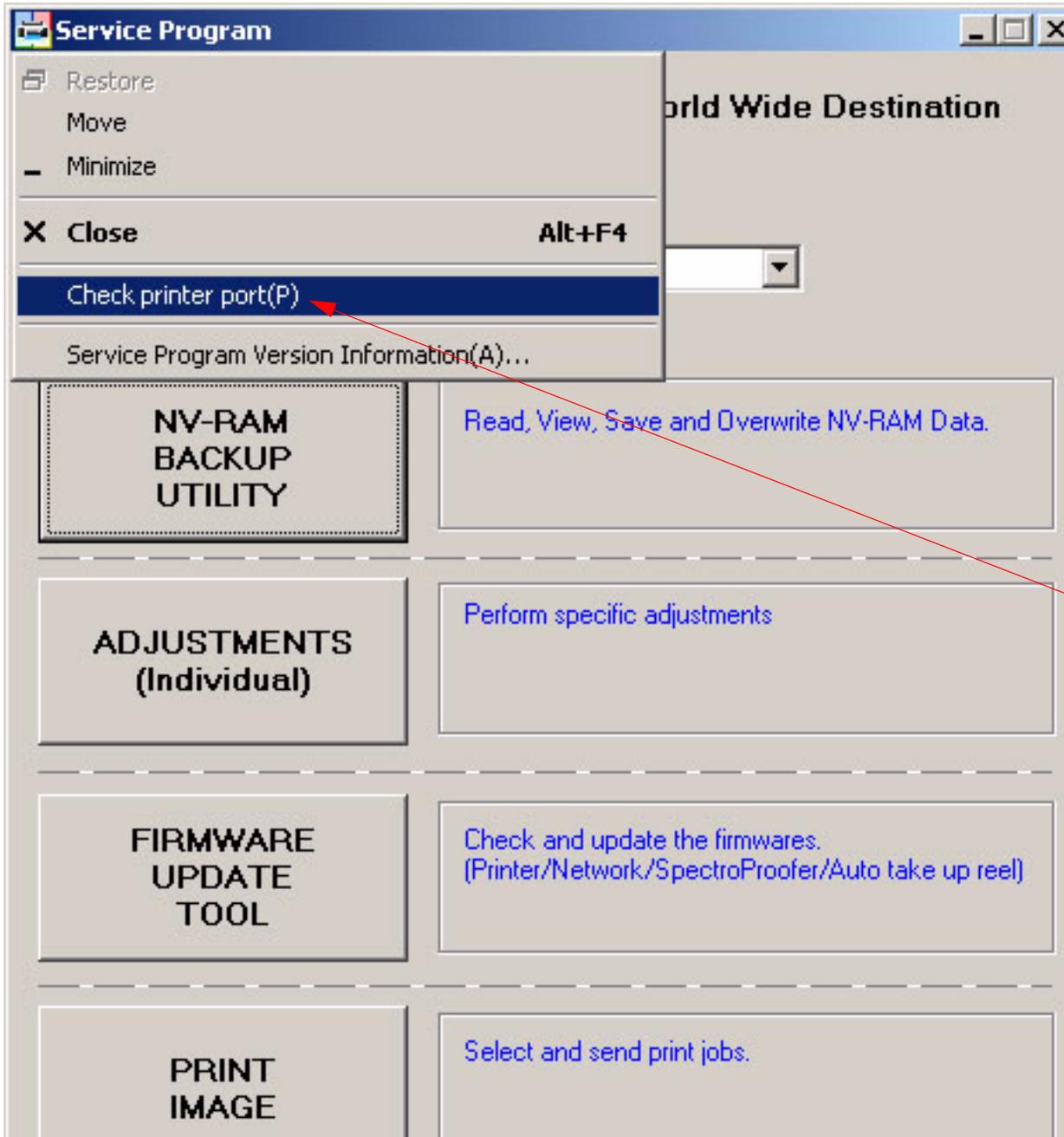
Setting Destination Adjustment

Note: The Setting Destination adjustment configures a new Main Board for the Americas.

1. From the **Servprog.exe** for the 7900 and 9900, click on the top, left corner Icon.

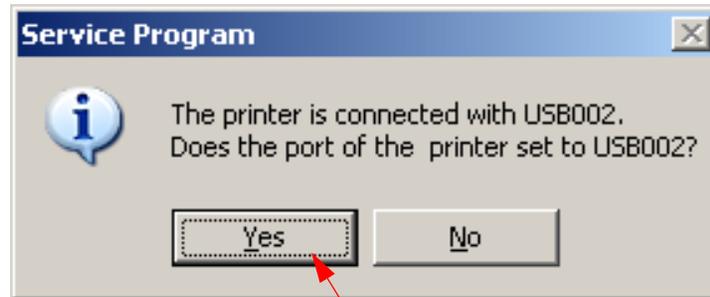


2. Click on **Check printer port(P)**.



Click on **Check printer port(P)**.

3. Click on **Yes**.

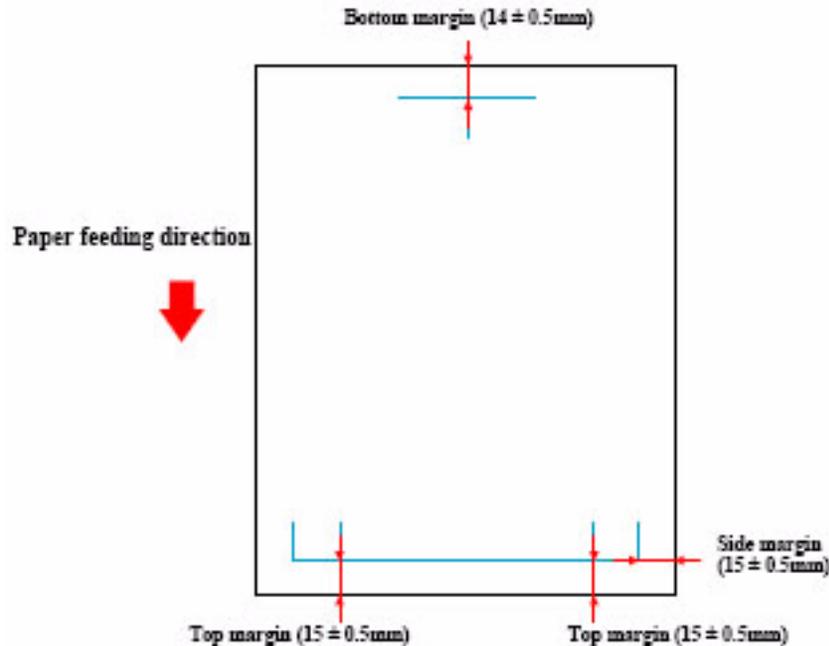


Click on **Yes**.

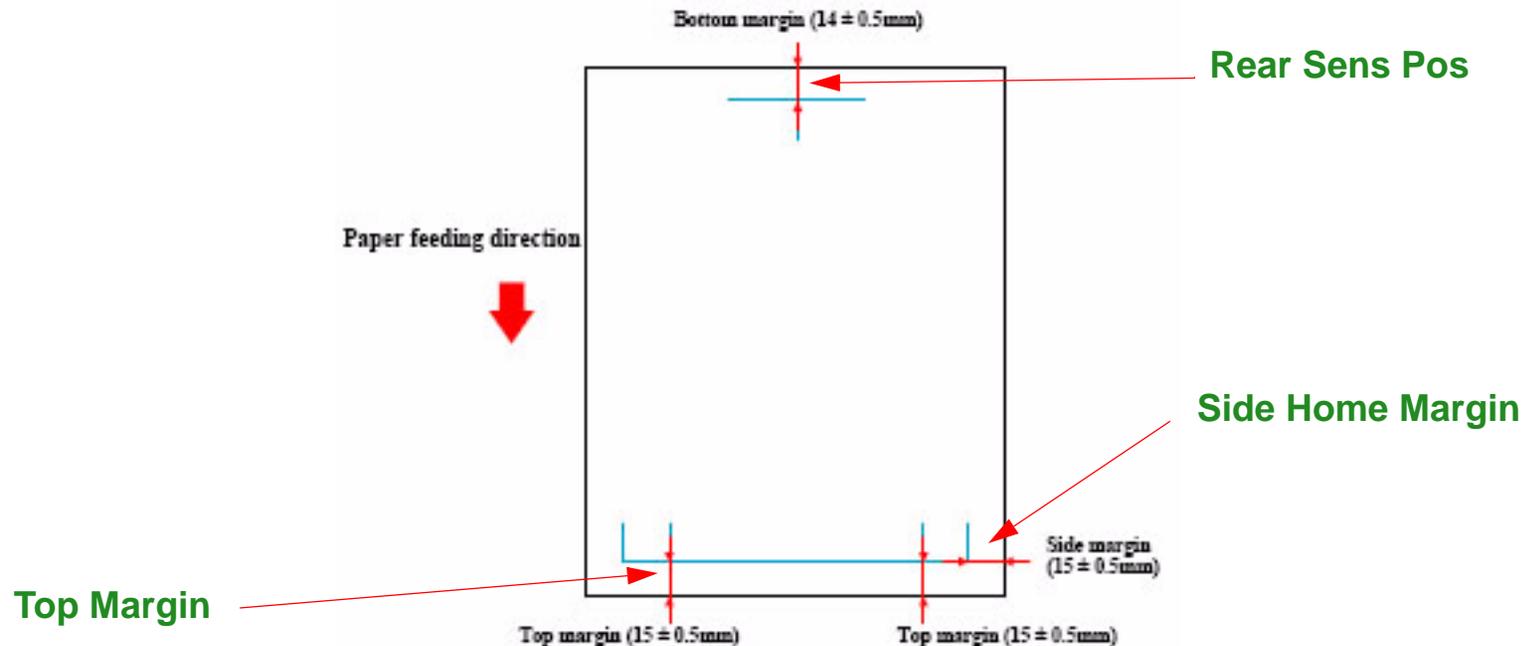
TBS Pos Adjustment

Note: The TBS Pos Adjustment sets the correct margins. This Adjustment requires A3 paper.

1. Enter Self Testing Mode.
 - 1.1 **Self Testing Mode:** **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
2. Load A3 paper (A3= 11.7"x 16.5")(A3= 297mm x 420mm)
3. Print the TBS Pos Adjustment Pattern.
 - 3.2 Navigate to **SELF TESTING\Mecha Adjustment\TBS Pos\Printing**[Enter] **Print**
 - 3.3 Press the **Enter** button to print
 - 3.4 The Printer will print the alignment pattern.



4. Release the paper.
 - 4.1 Navigate to the Main Menu (displays ink levels).
 - 4.2 Release the paper with the **Pinch Roller Release Button**.
5. Measure the Top, Bottom, and Side Margings.

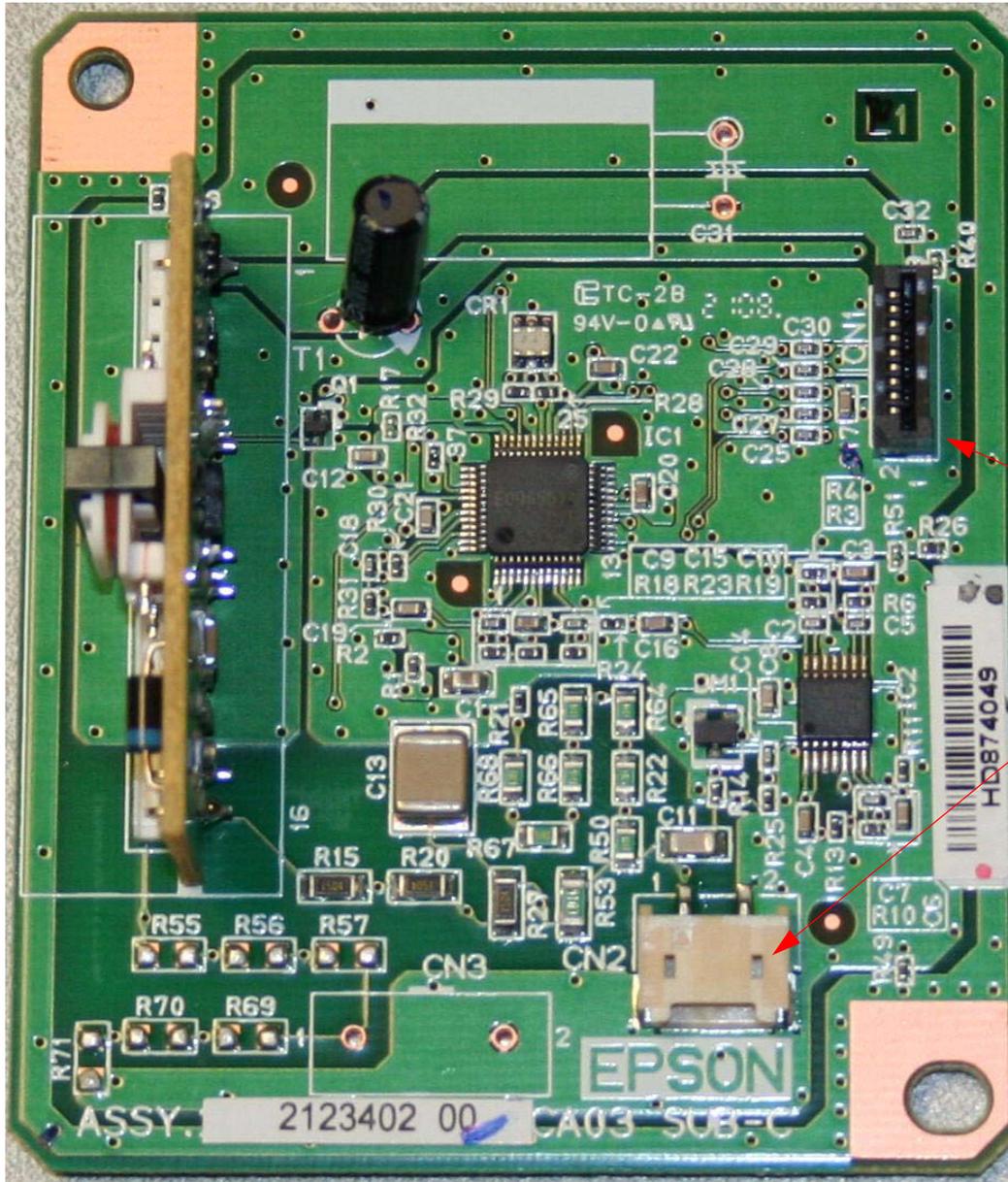


6. Input the measurements.
 - 6.3 Navigate to **SELF TESTING\Mecha Adjustment\TBS Pos\Input**: Press the **Right Arrow**.
 - 6.4 Input the **Top Margin (nn.n)mm**: Press the **Right Arrow** to move on.
 - 6.5 Input the **Rear Sens Pos (BottomMargin) (nn.n)mm**: Press the **Right Arrow** to move on.
 - 6.6 Input the **Side Home Margin (Side Margin) (nn.n)mm**: Press the **Pause** button to finish.

Component Pictures

Board (AID) Picture

Located above the Cap Assembly



CN1 to CN23 on Main Board

CN2 To Flushing Box Grid

Board Carriage (CA11) Picture

Located on the Carriage Mechanism

CN118 to Ink Selector Motor (PK/MK)

CN114 to Carriage Encoder

CN101 to Main Board (**CN101**)

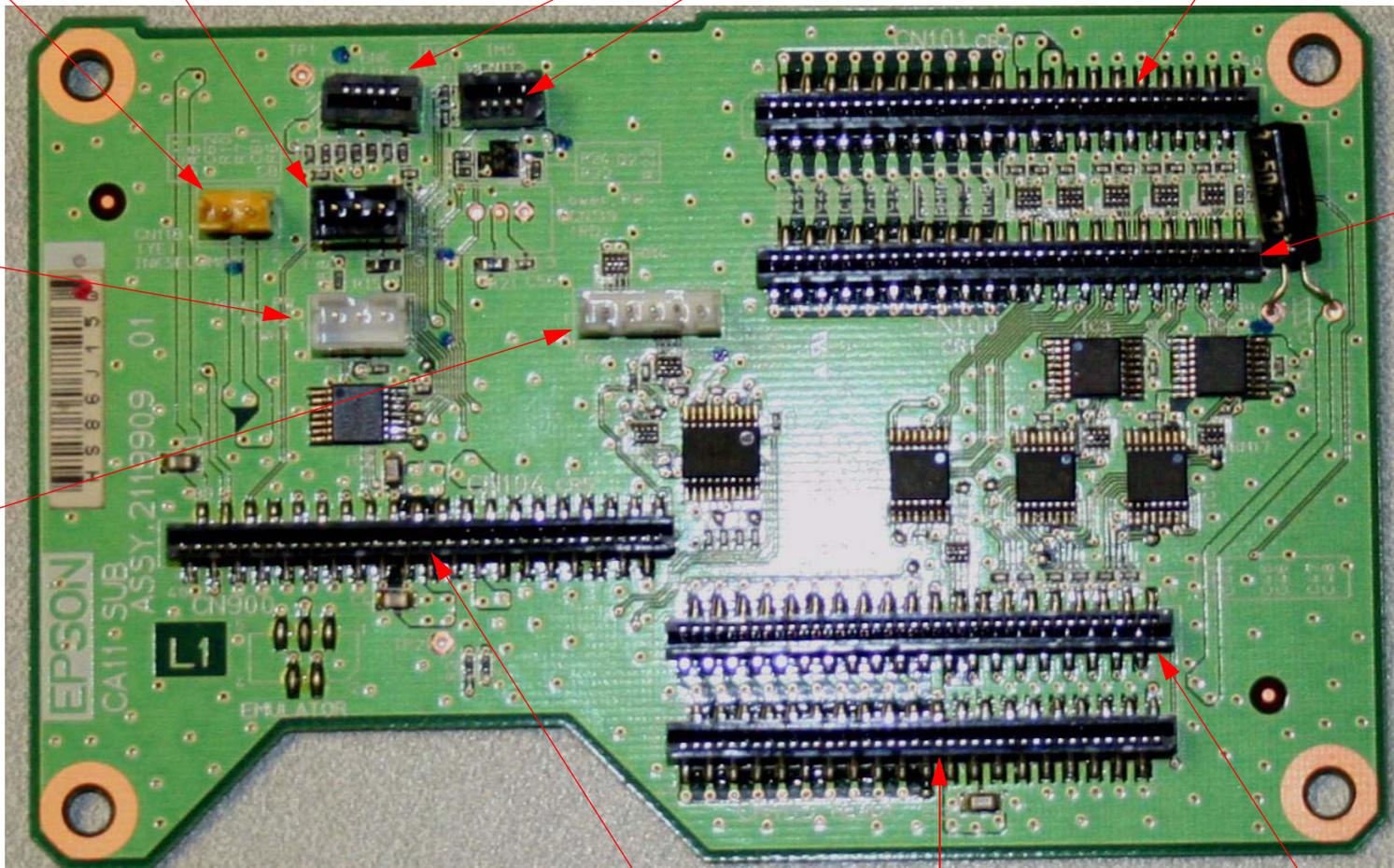
CN111 to Platen Gap HP Sensor

CN113 to Ink Mark Sensor

CN112 to Paper Width Sensor

CN100 to Main Board (**CN100**)

CN116 to Ink Selector Sensor (PK/MK)



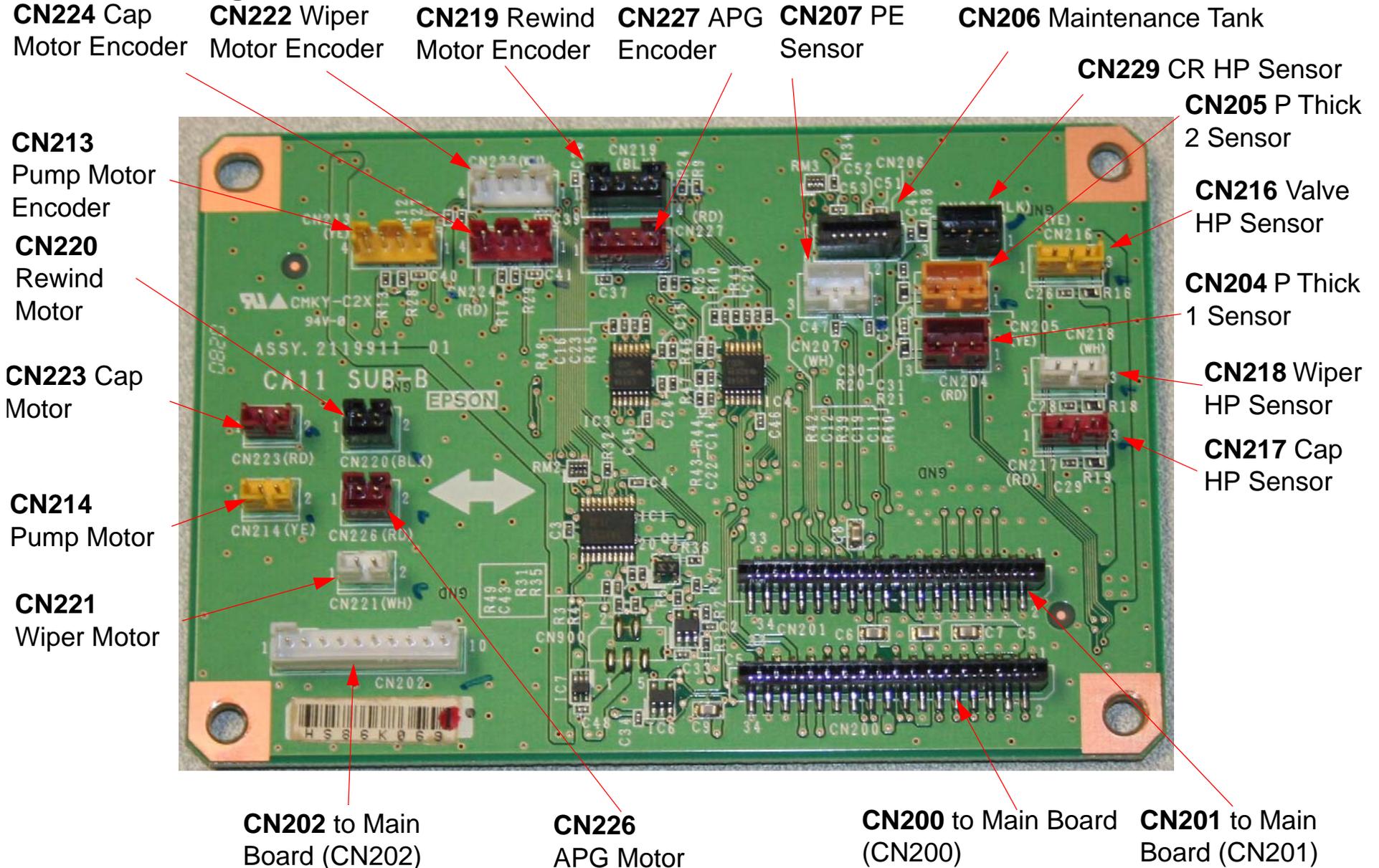
CN104 to Main Board **CN104**

CN105 to Print Head

CN106 to Print Head

Board (Sub-B) Picture

Located on the Right Side Frame



Board (Sub-C) Picture

Located on the Left Side Frame

CN300 to Main Board
(CN300)

CN308 (not used)

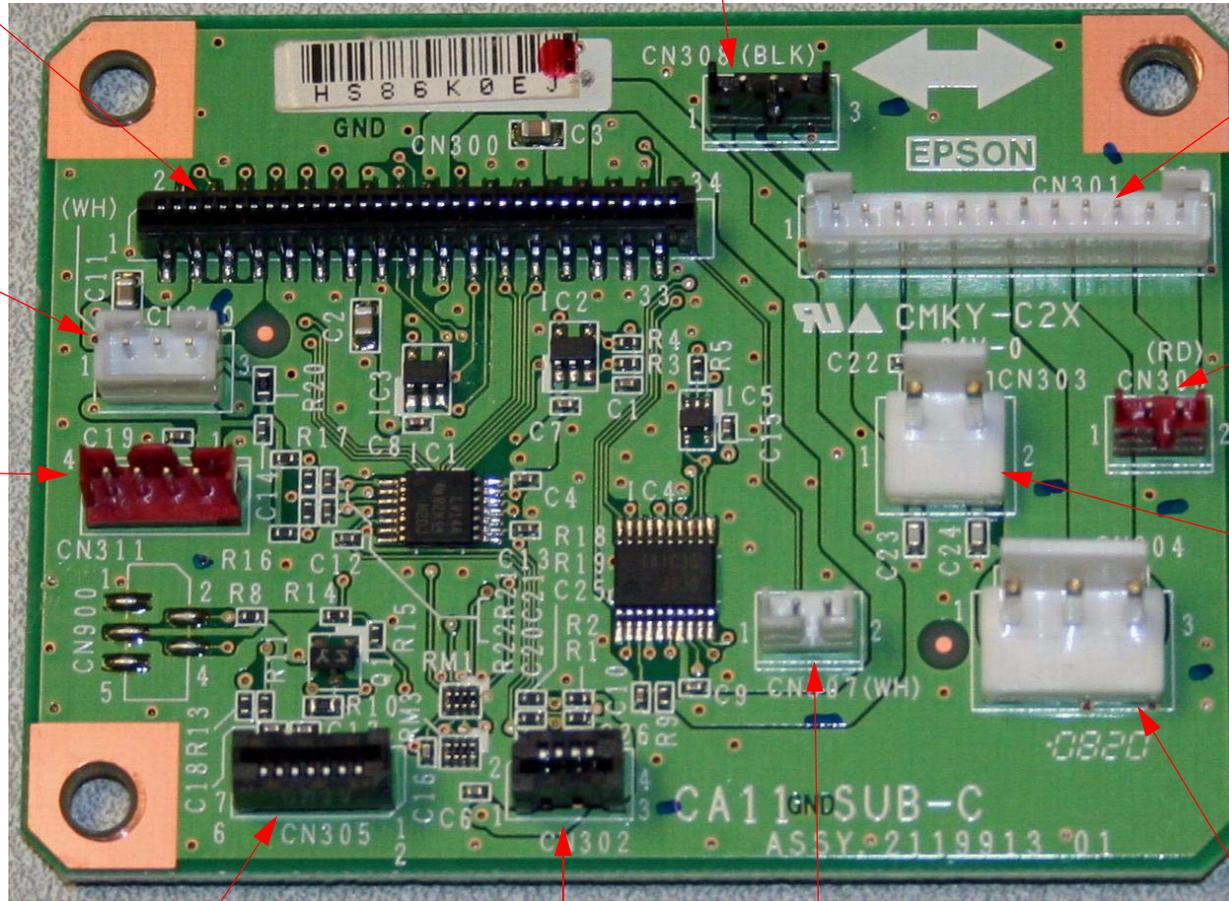
CN301 to Main Board
(CN301)

CN310 Pinch Roller
HP Sensor.

CN309 Cutter
Motor

CN311 Cutter
Motor Encoder

CN303 Paper
Feed Motor



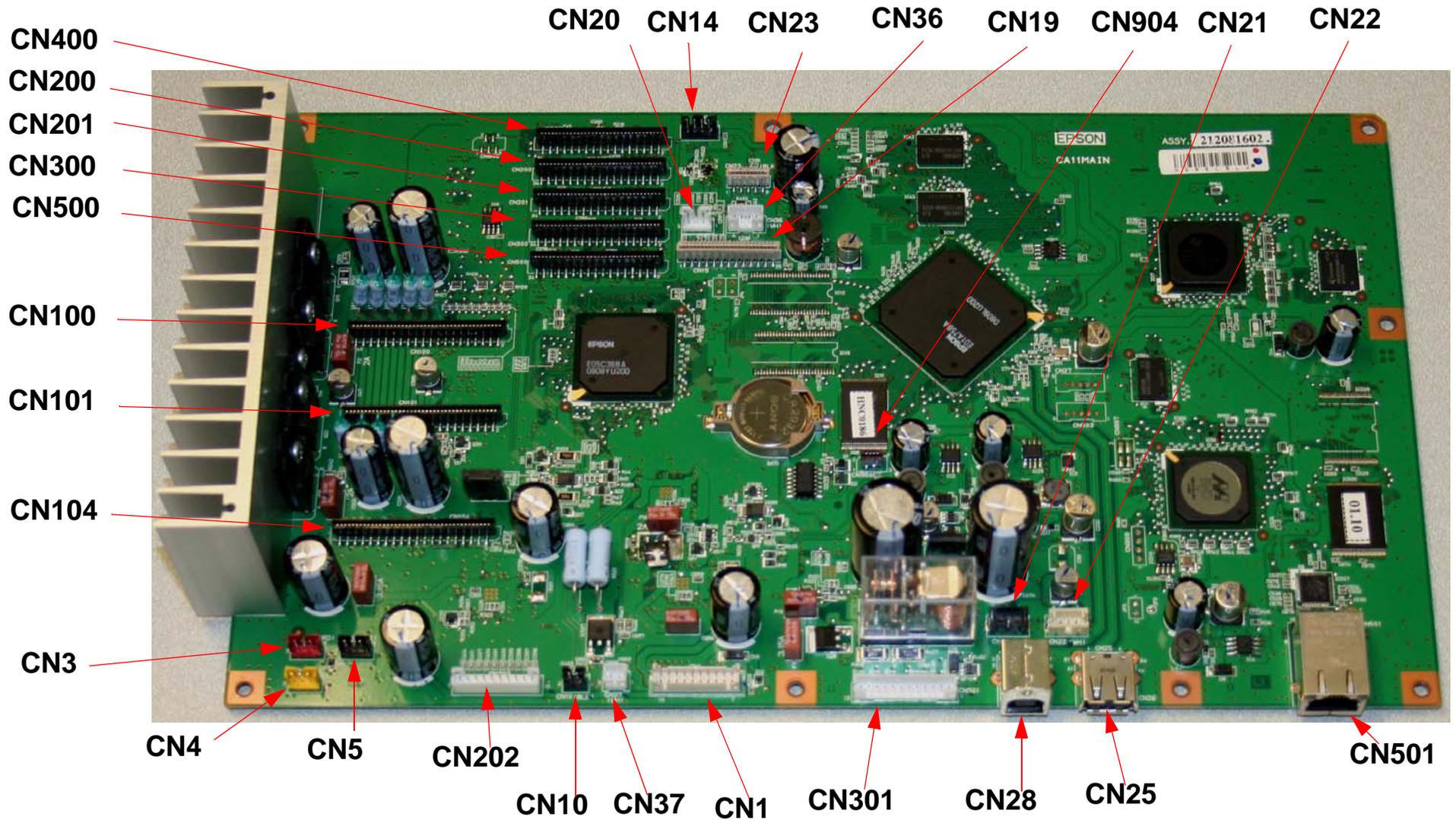
CN305 Maintenance
Tank (9900 only)

CN302
Paper Feed
Encoder

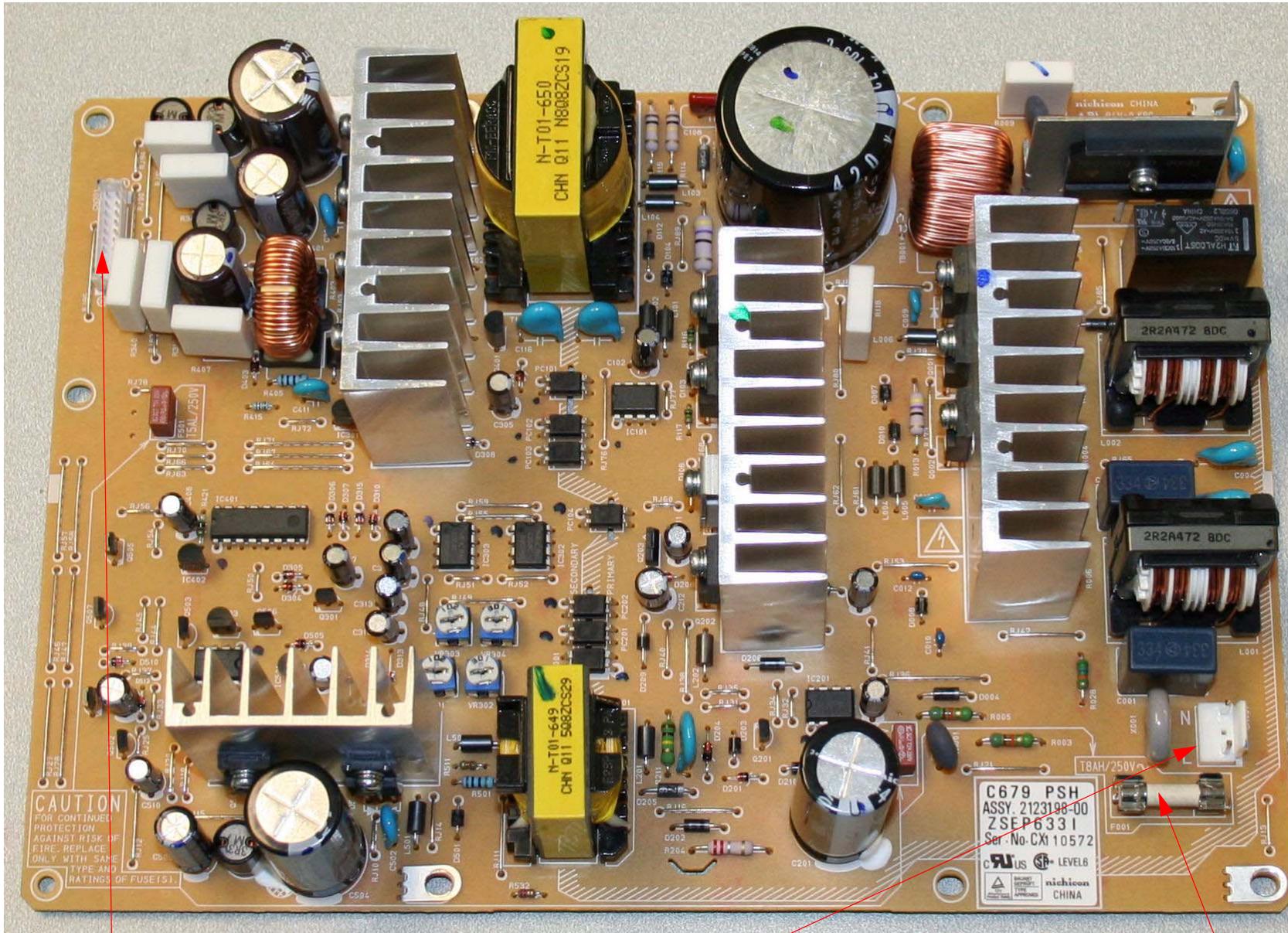
CN307 Cutter
HP Sensor

CN304 Paper
Feed Motor

Board (Main) Picture



Board (Power Supply) Picture



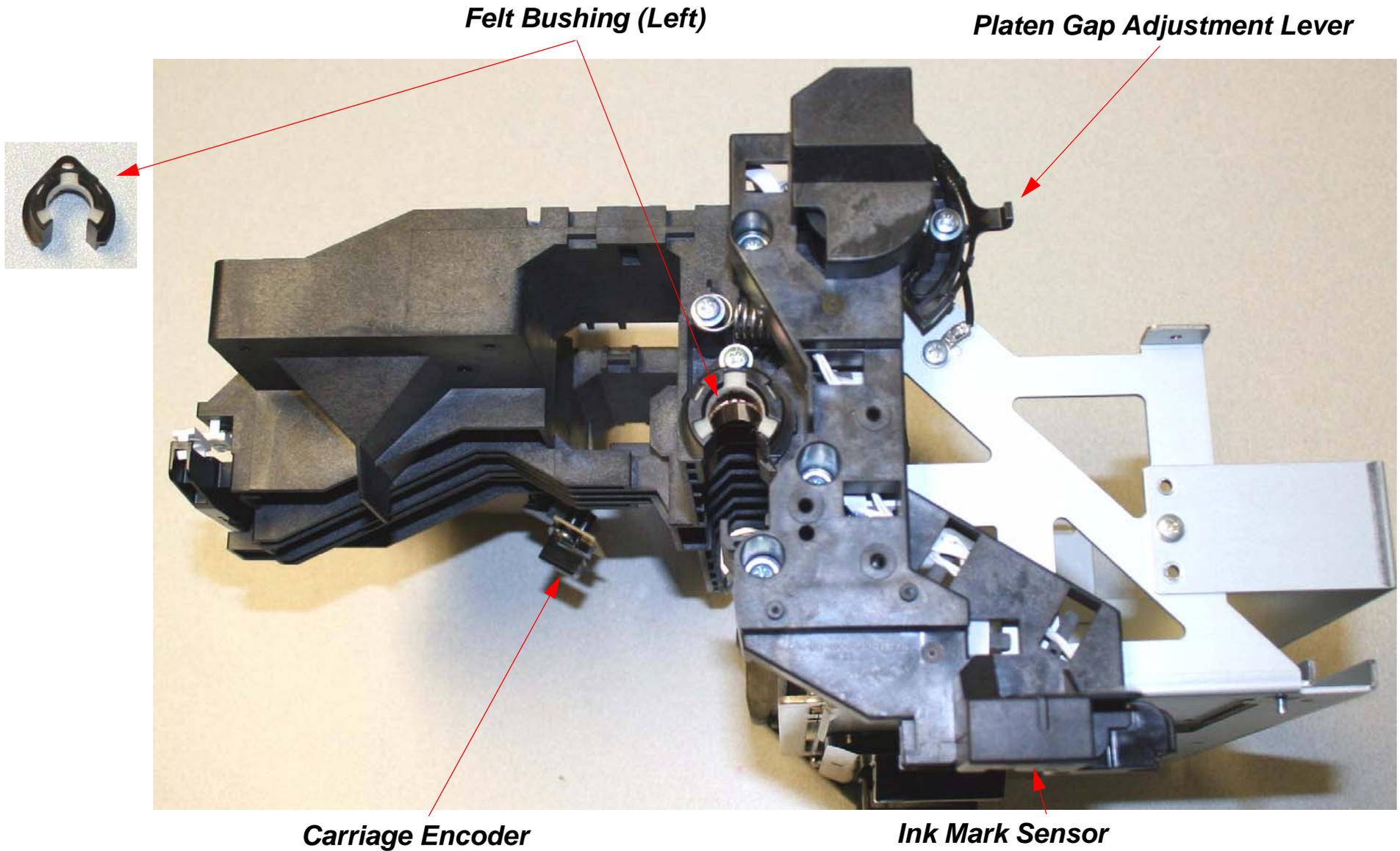
(CN301) to Main Board

(CN001) AC input

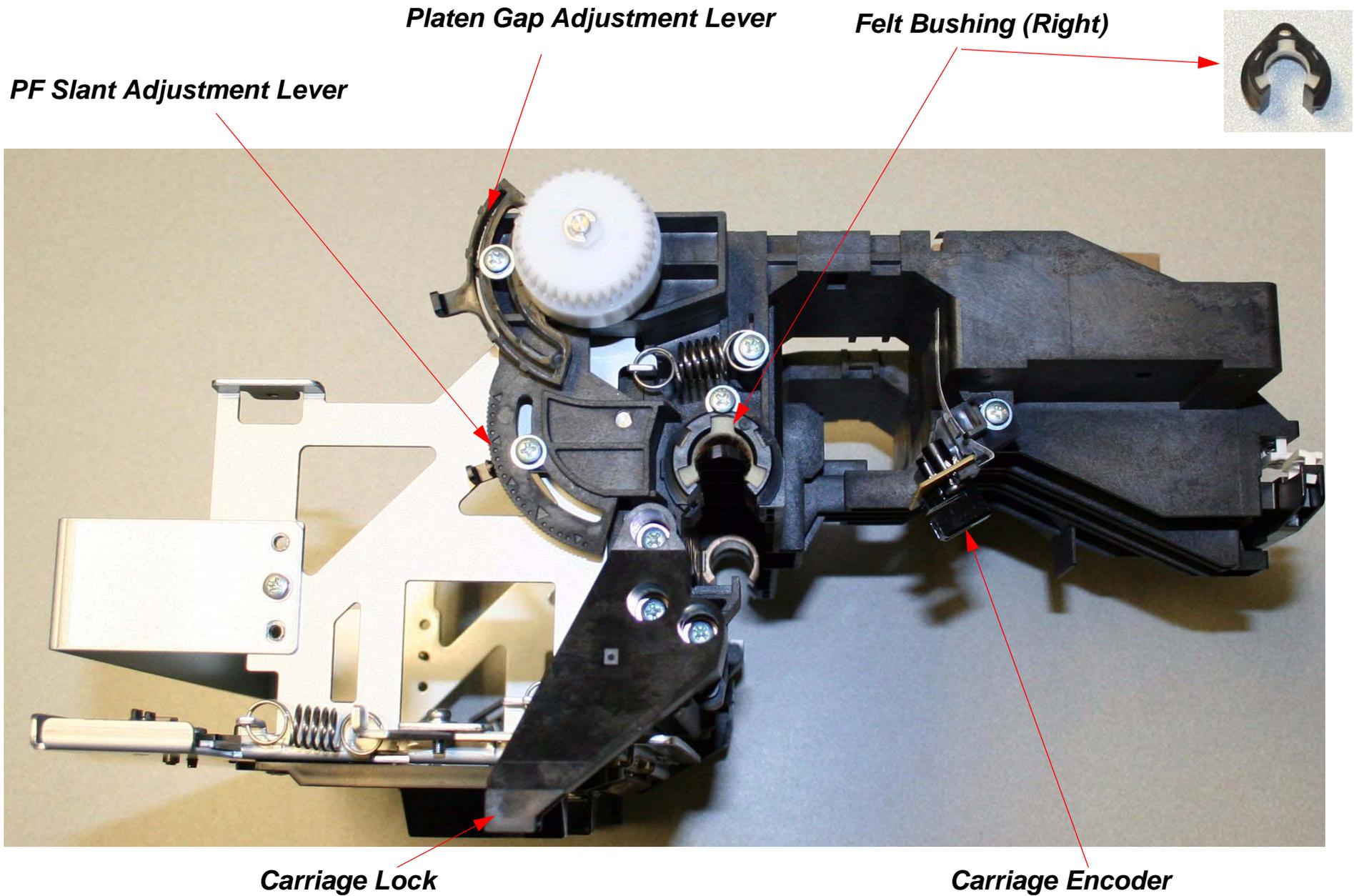
(F001) 8 amp, 250 Volt Fuse

Carriage Assembly Pictures

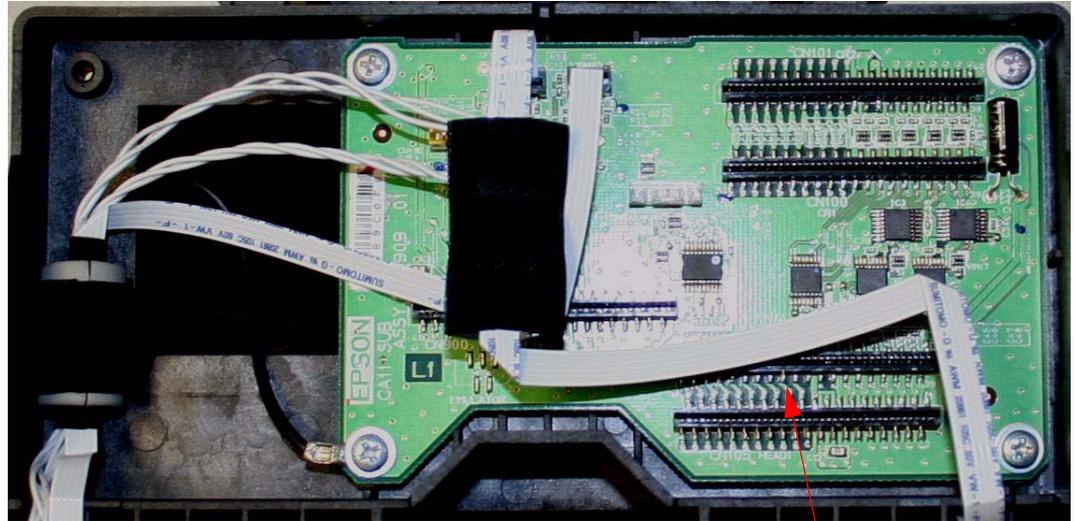
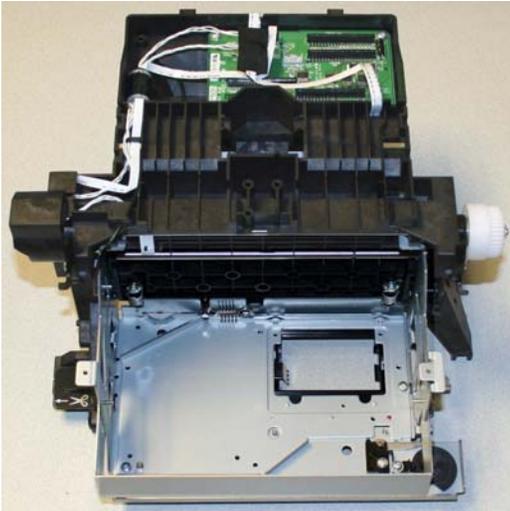
Left Side View



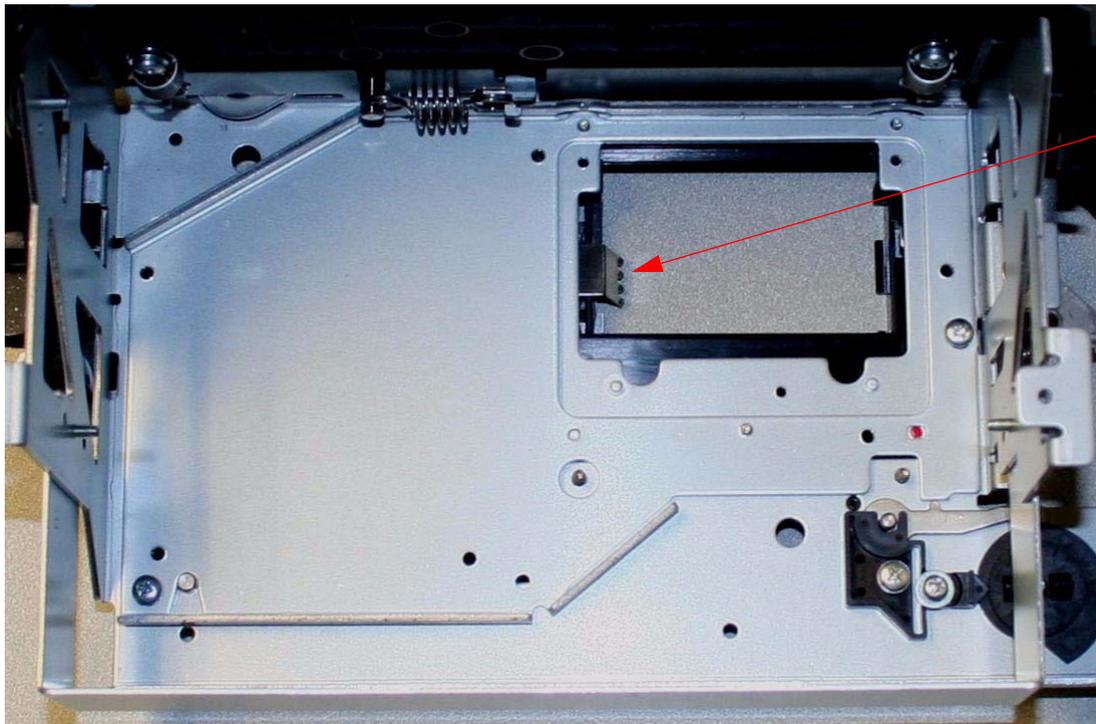
Right Side View



Top View



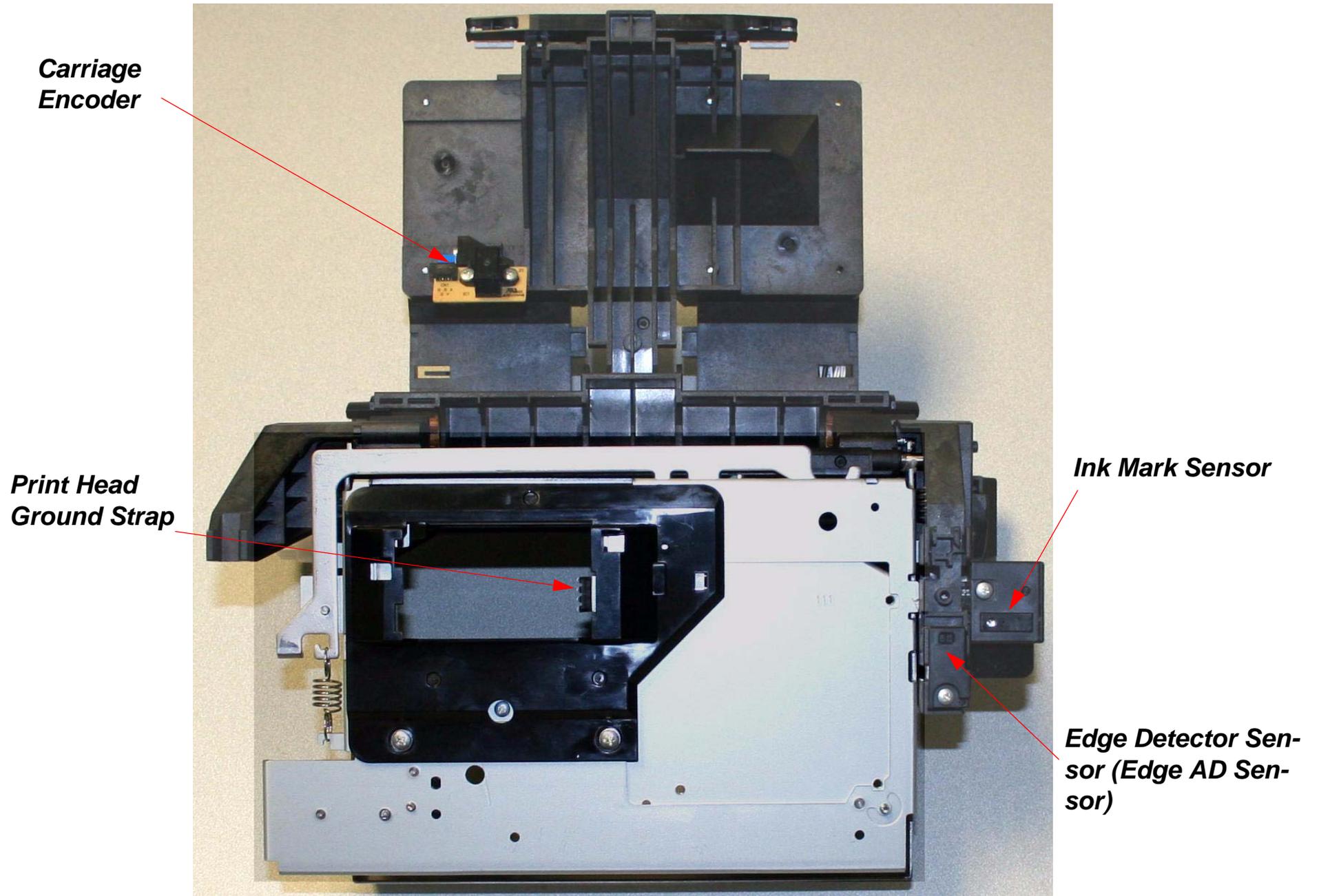
**Carriage Board
(CA11 Sub Board)**



Print Head Ground Strap

CR Slant Adjustment Dial

Bottom View



Carriage Motor Pictures



Induced Voltage Value

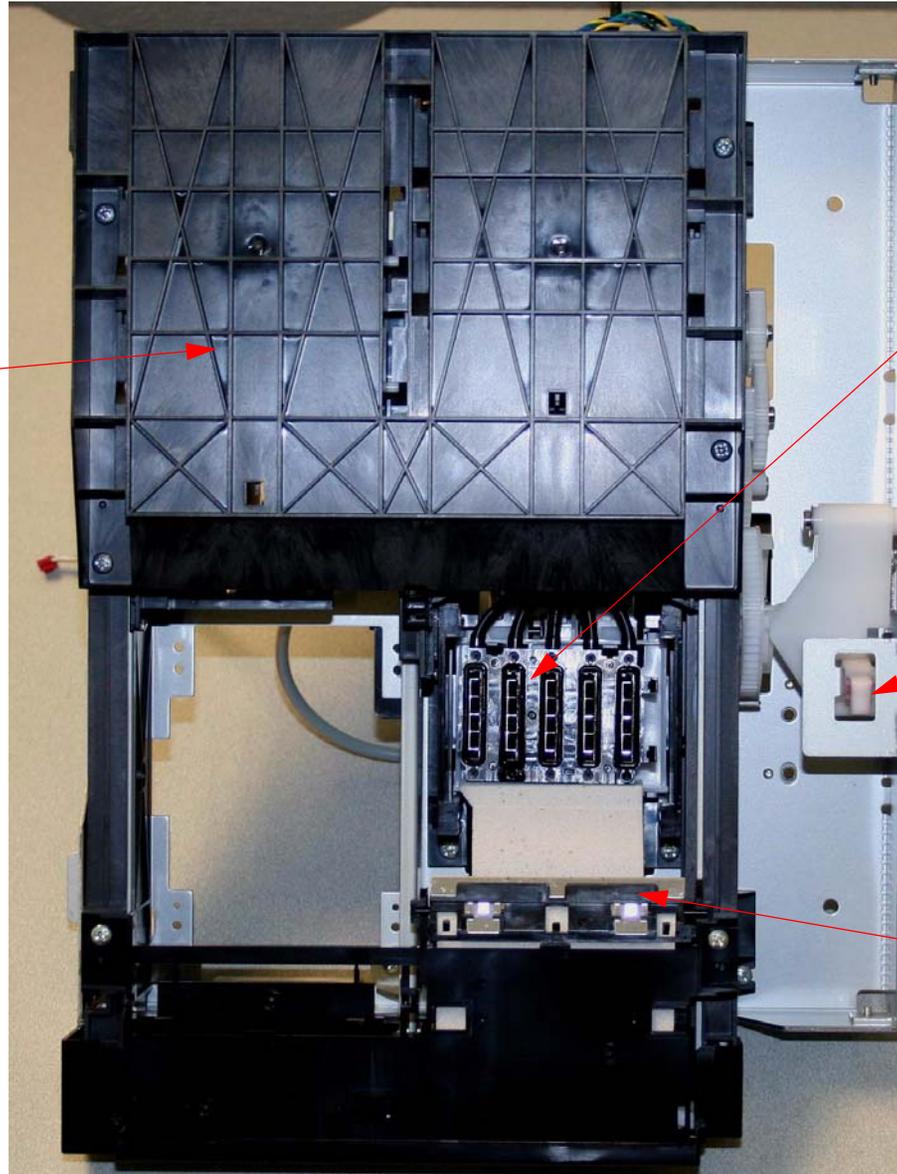


Motor Resistance Value

Cleaning Unit Pictures

Front View

Retracted *Flushing Box* is under here.

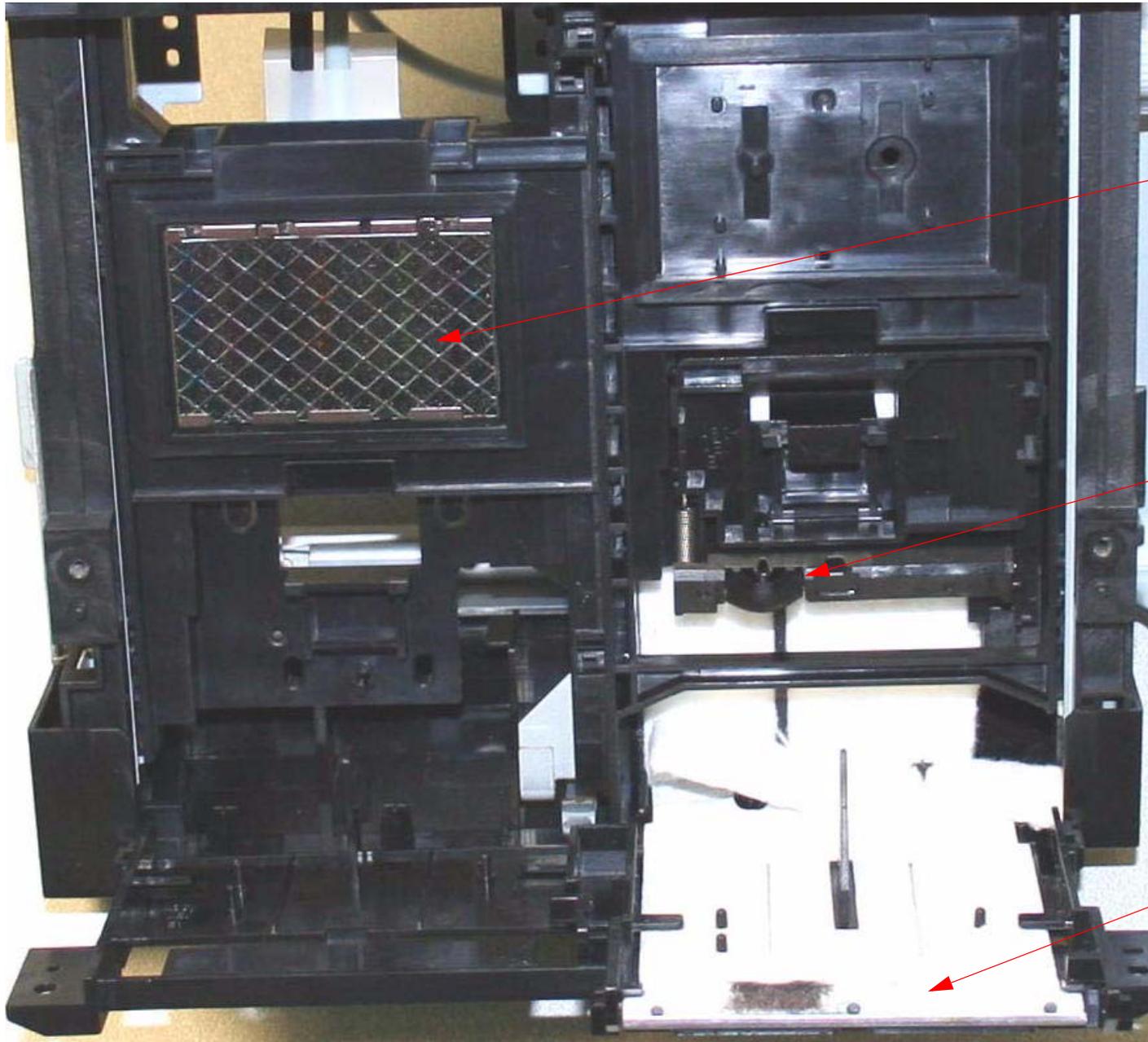


5 Caps (1 **Cap** for each Color Pair)

Carriage Lock

Wiper Blade Cleaner

Wiper Blade and Flushing Box

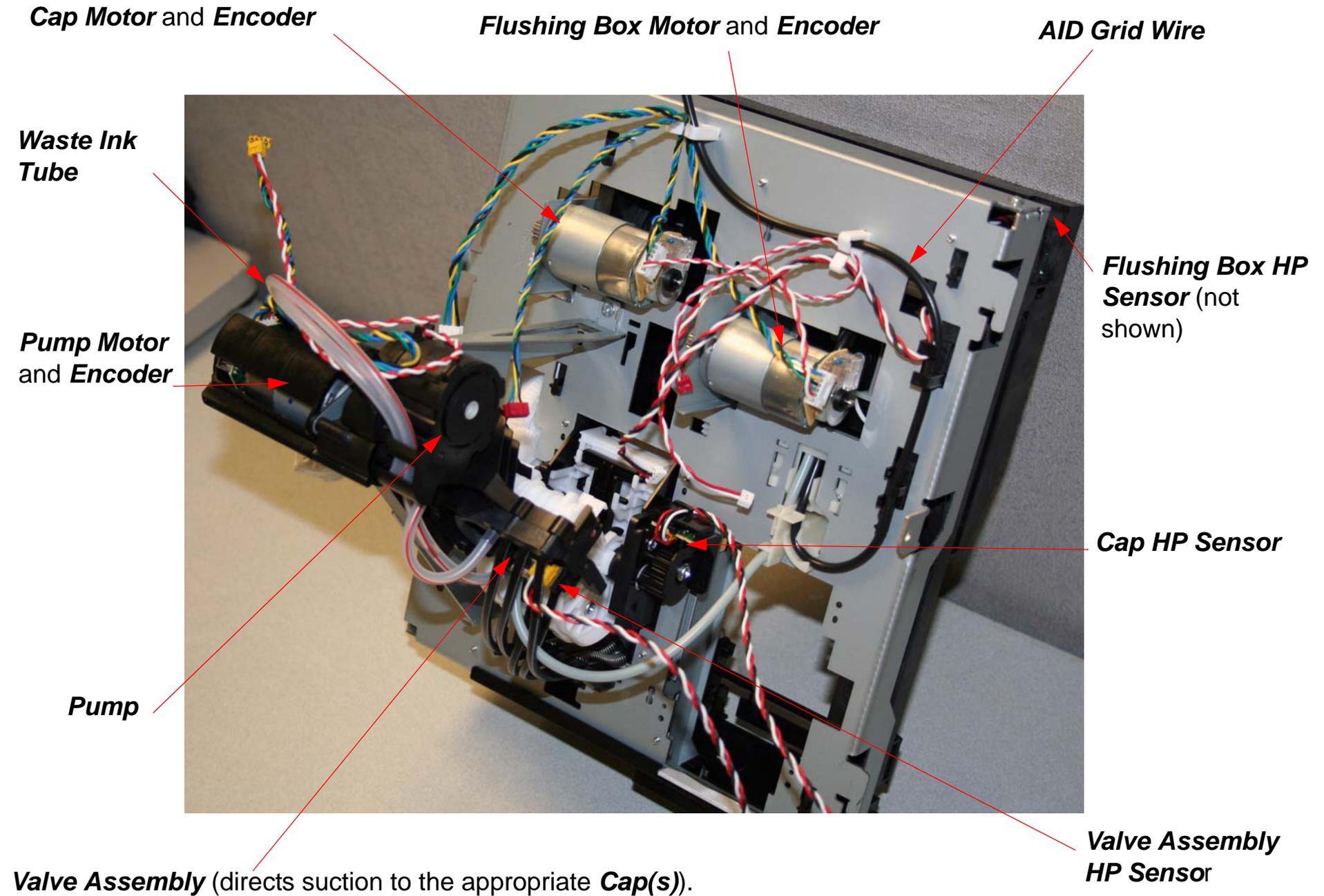


Flushing Box

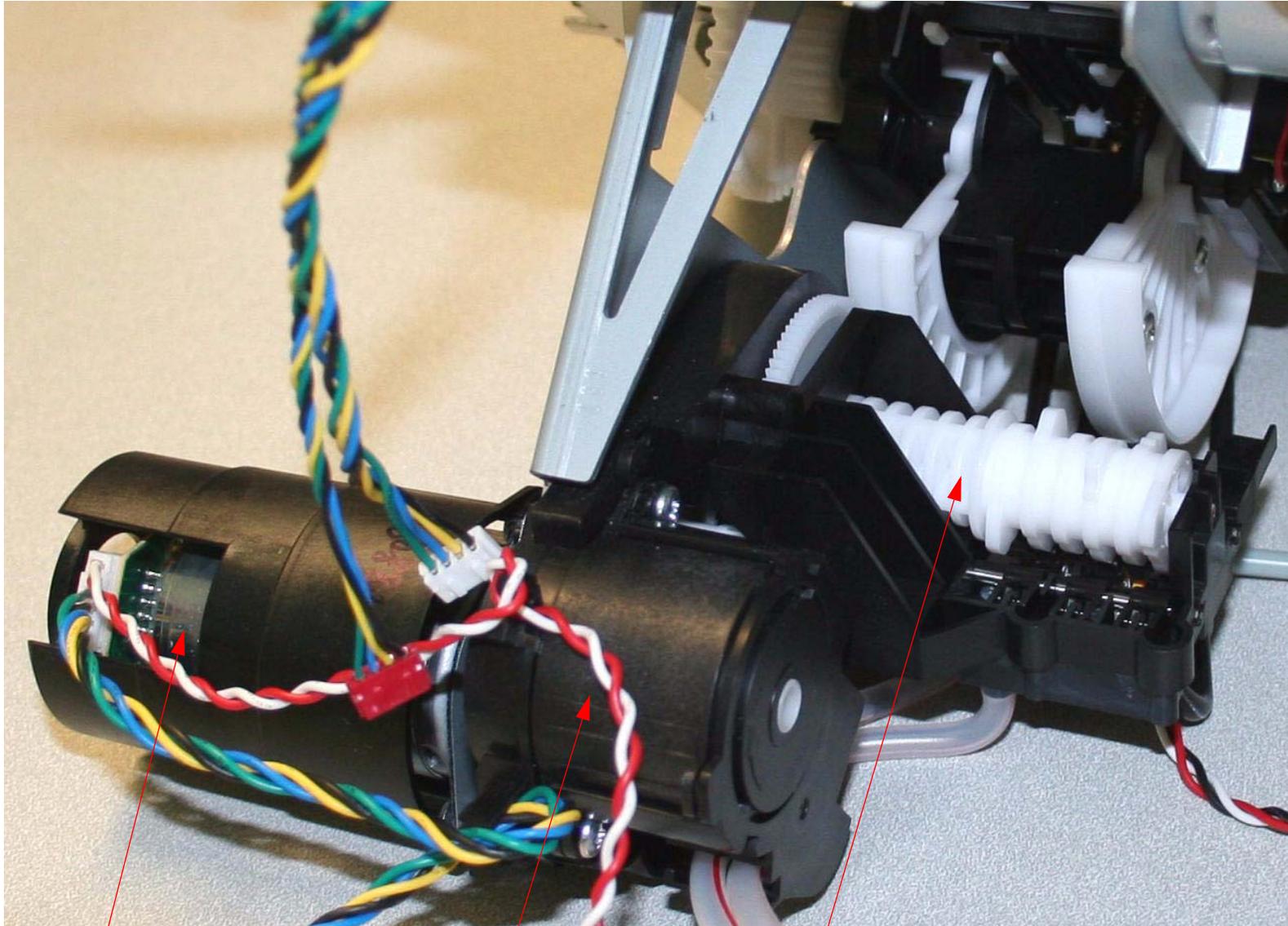
1 Wiper Blade (for cleaning 1 color pair at a time).

Wiper Blade Cleaner

Rear View



Pump Assembly

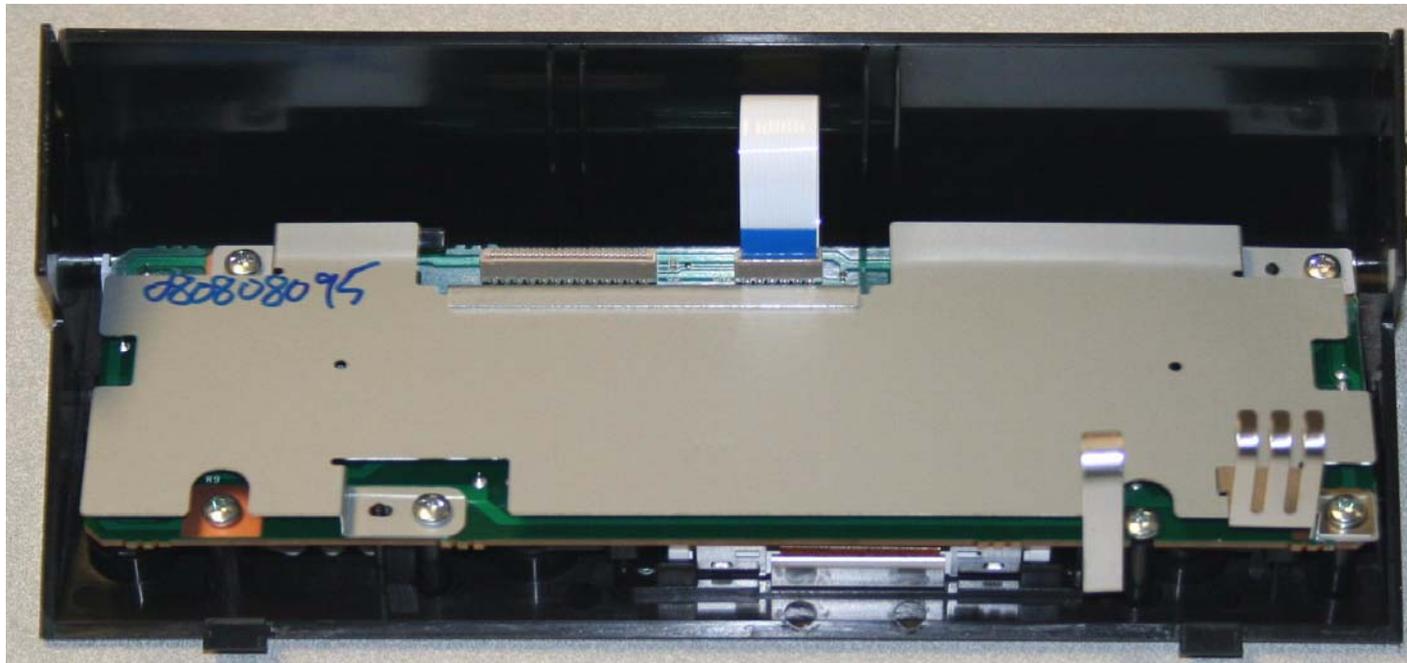


Pump Motor

Pump

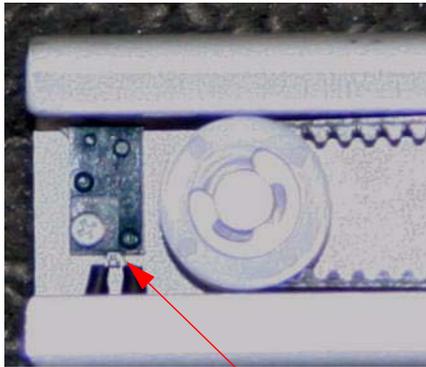
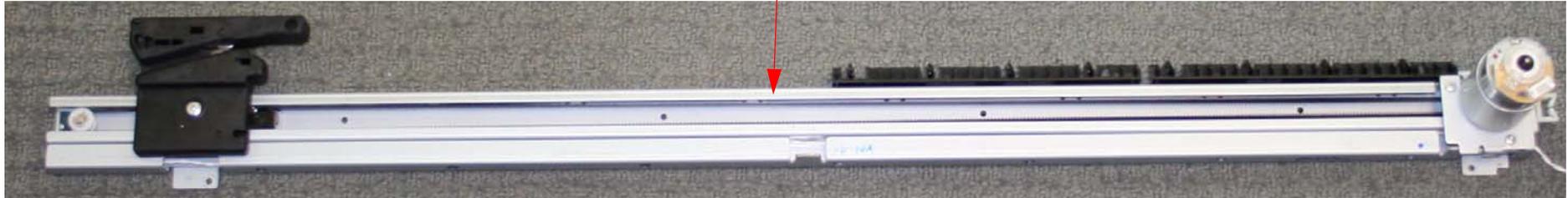
Valve Assembly (directs suction to the appropriate **Cap(s)**).

Control Panel Pictures

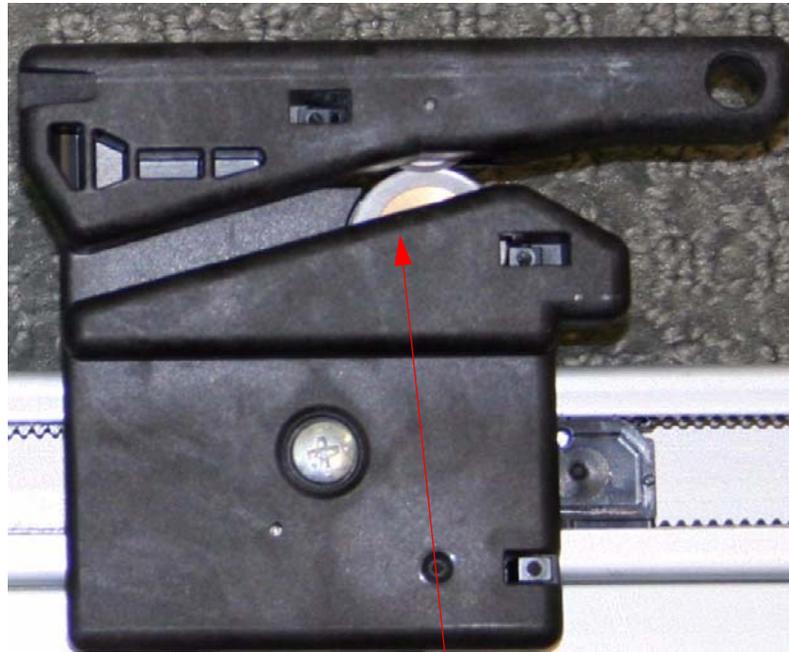


Cutter Assembly Pictures

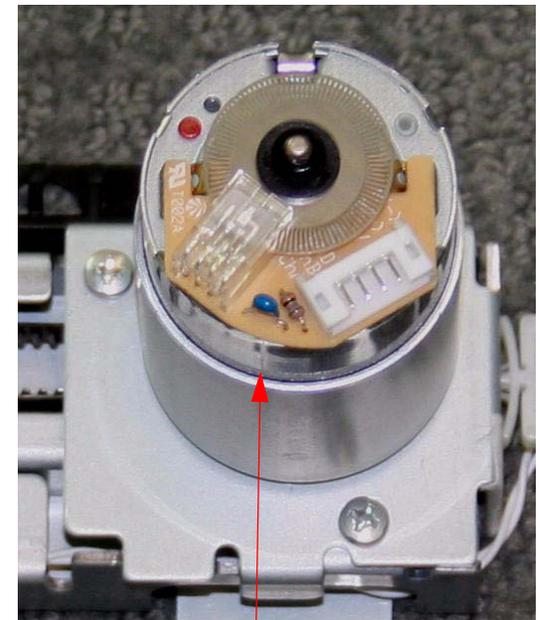
Cutter Assembly



Cutter Home Position Sensor



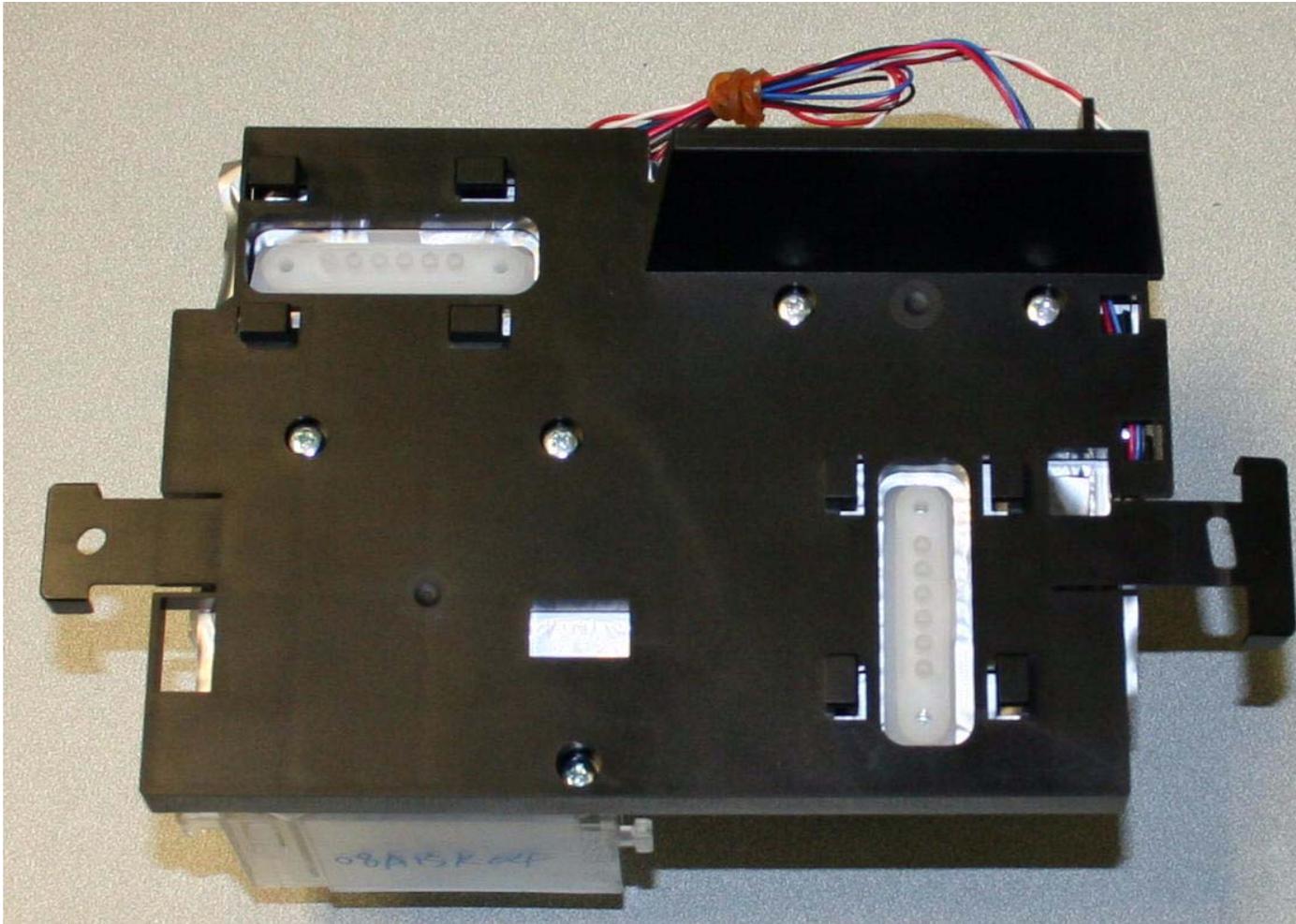
Cutter Blade



Cutter Motor and Encoder

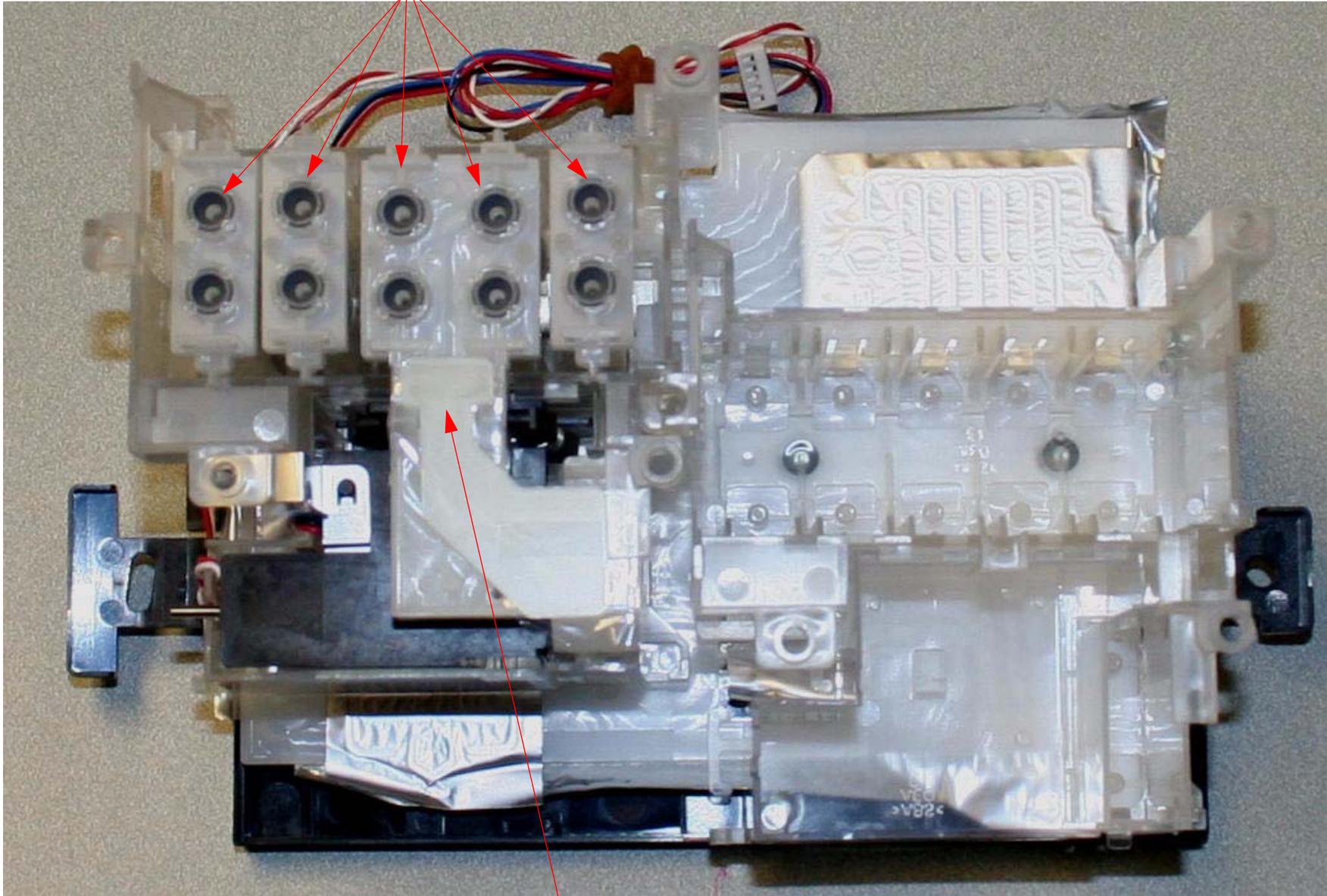
Damper (Selector) Assembly Pictures

Top View



Bottom View

5 Damper Assemblies (Included with **Damper Assembly**)

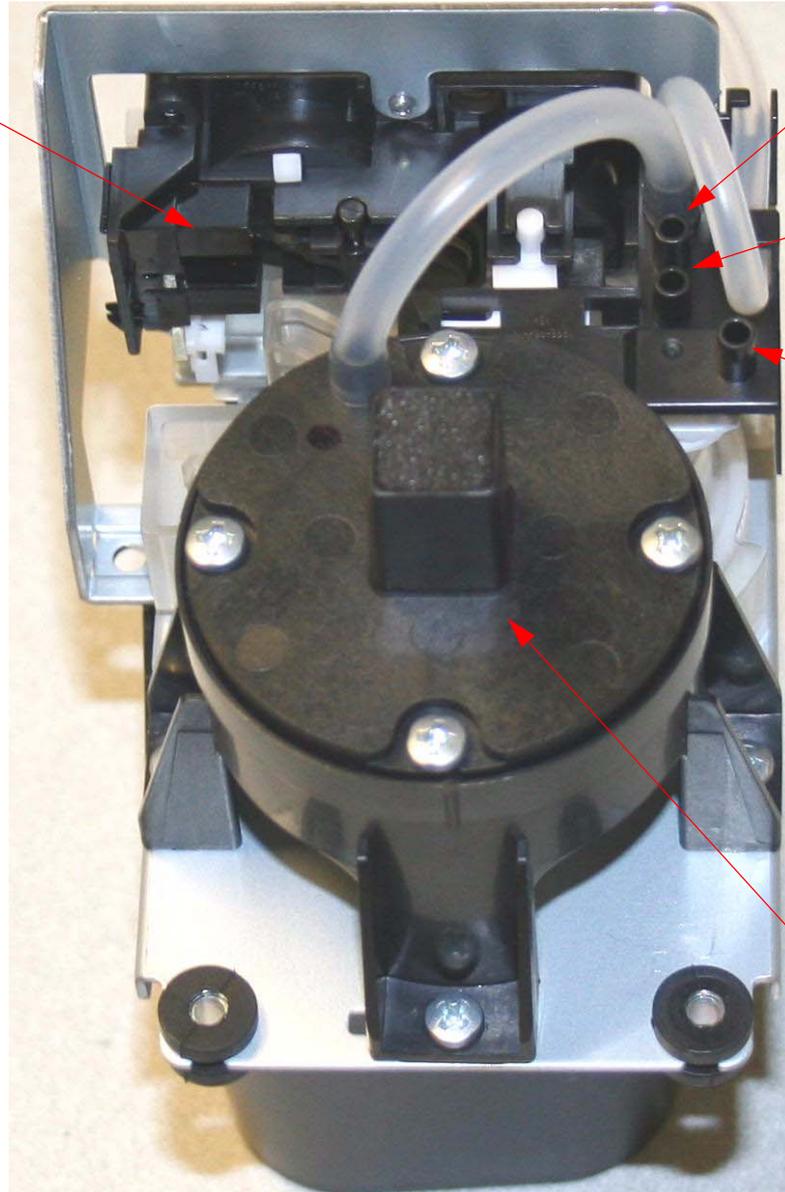


Photo/Matte Black Valve

Pressure Pump Assembly Pictures

Top View

Pressure Sensor



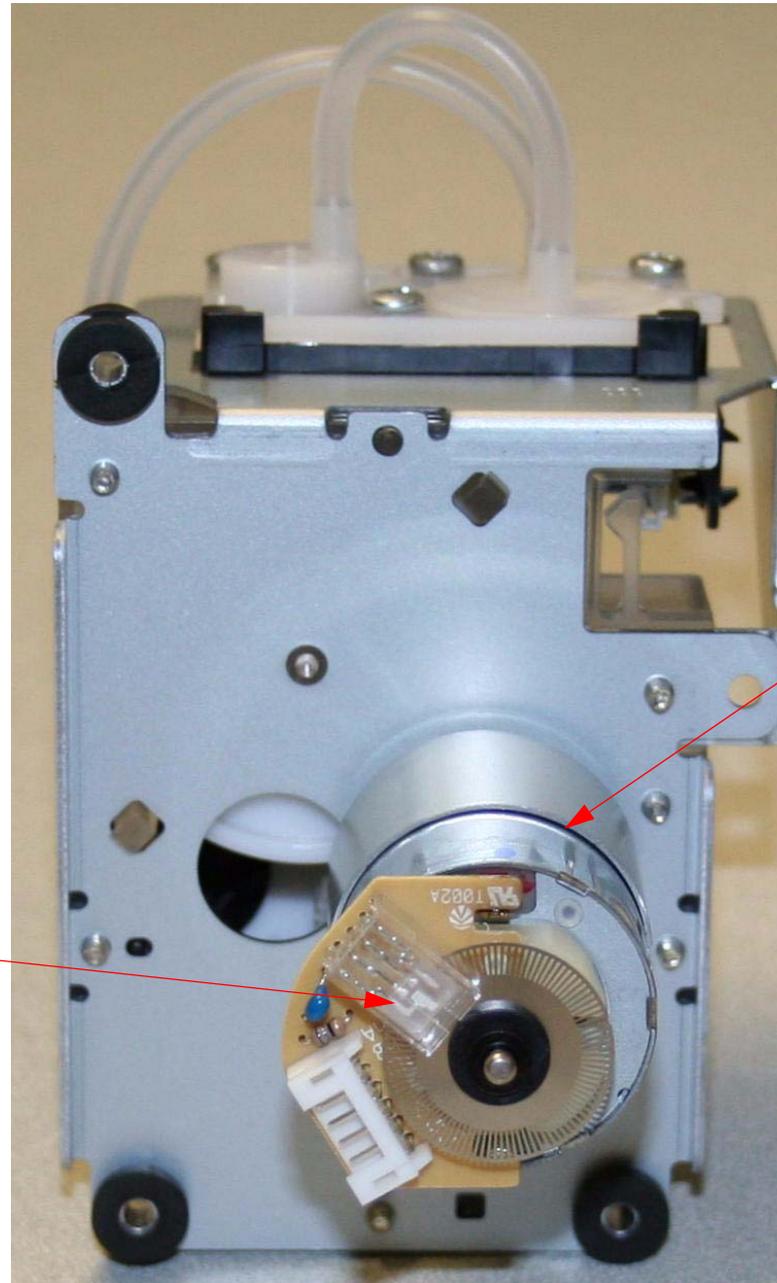
Tube for the **Left Ink Bay**

Tube for the **Right Ink Bay**

Not Used

Air Pump

Bottom View



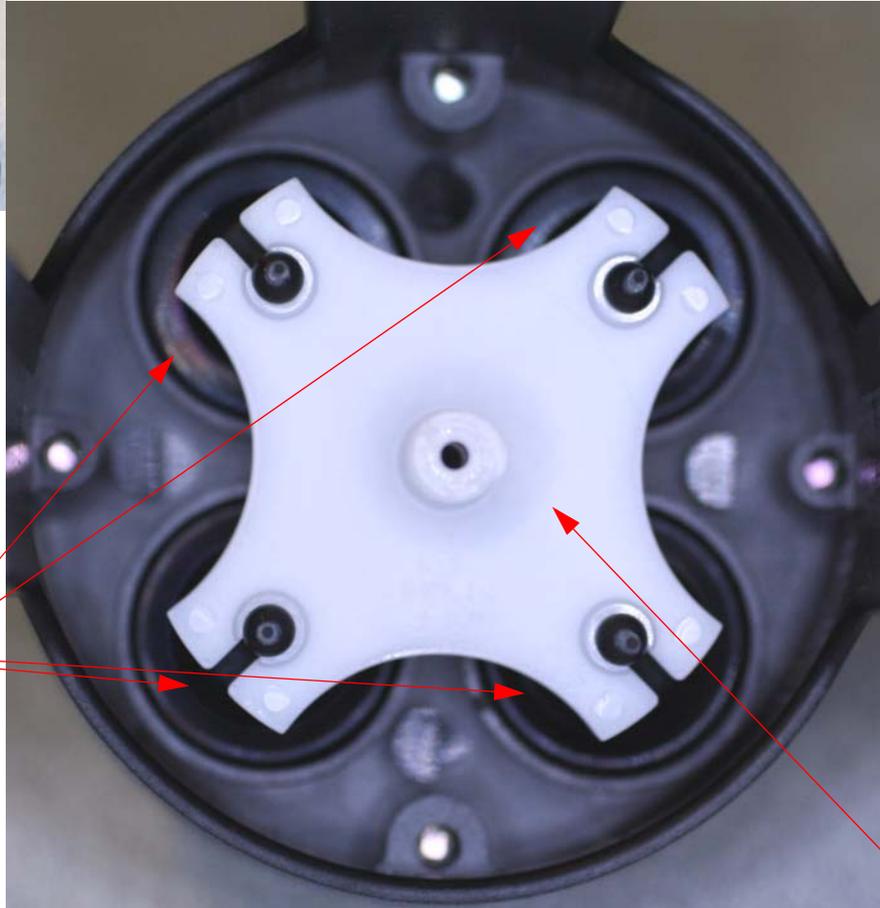
Pump Motor

Pressure Pump Motor Encoder

Pressure Pump



View from the top.



4 Diaphragms



View from the bottom.

This **Actuator** depresses each **Diaphragm** in sequence, generating pressurized

Pressure Regulator and Release Mechanism

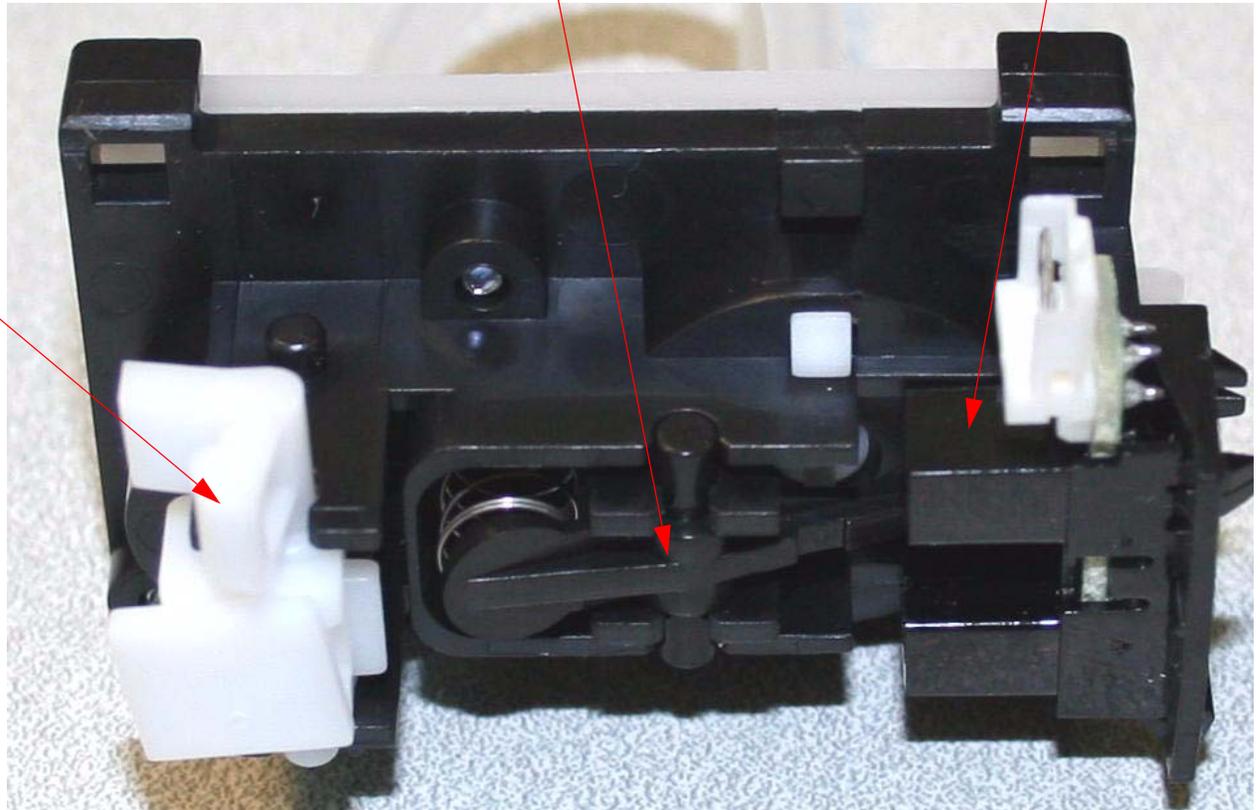


Front View

Pressure Sensor Flag

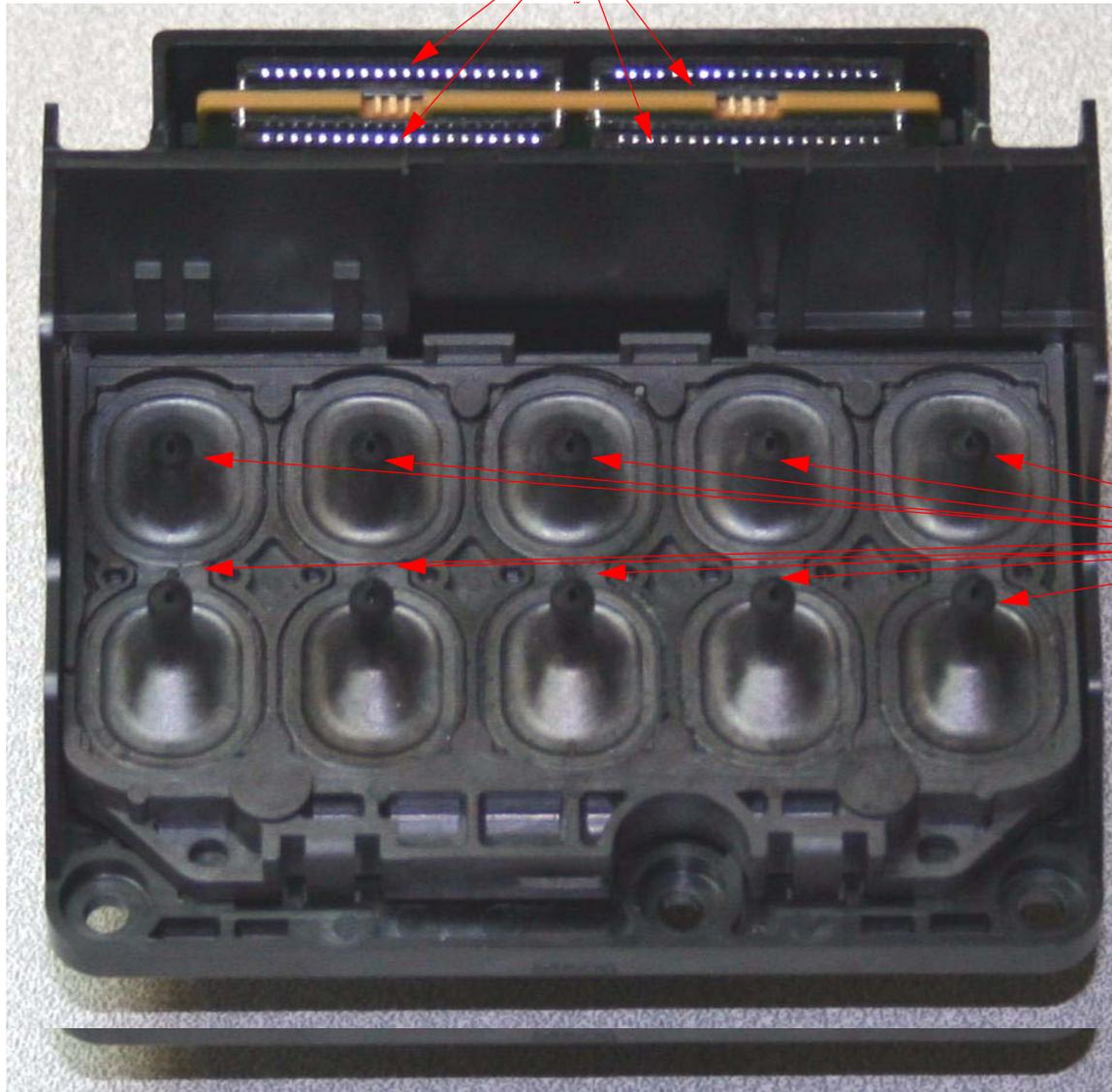
Pressure Sensor

Pressure Release Valve



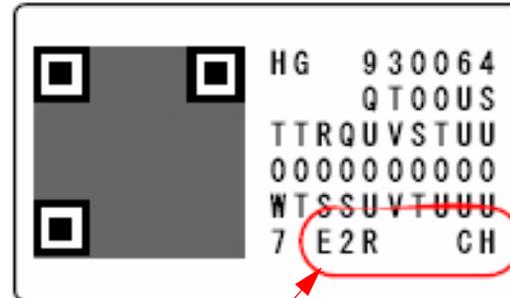
Print Head Pictures

4 Cable Connectors

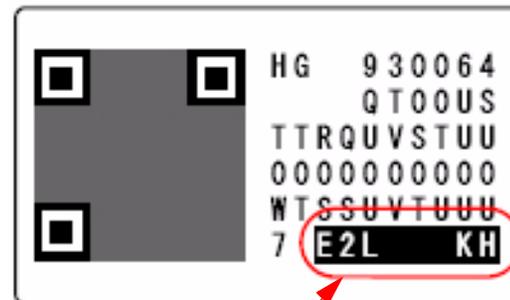
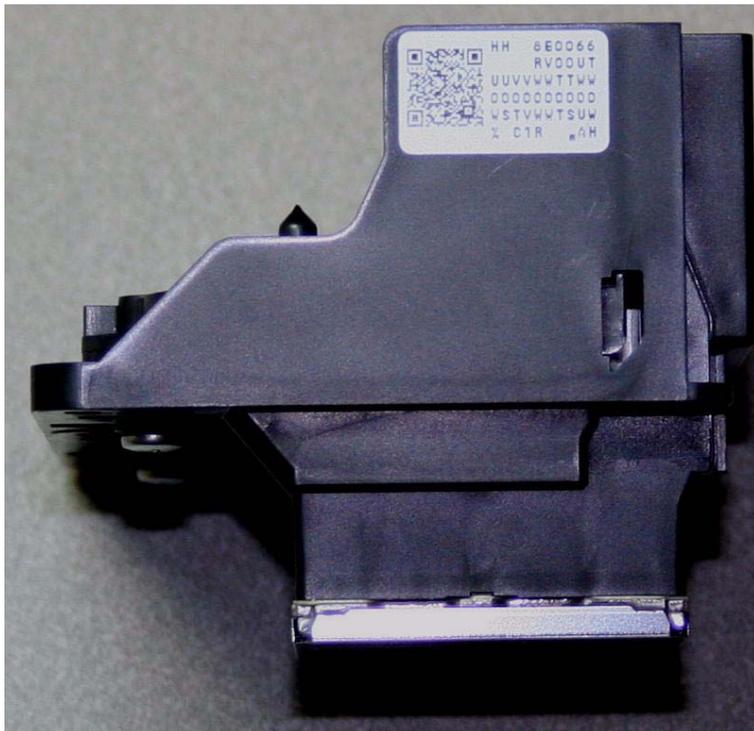


Ink inlets

7900 and 9900 Head Rank Sticker



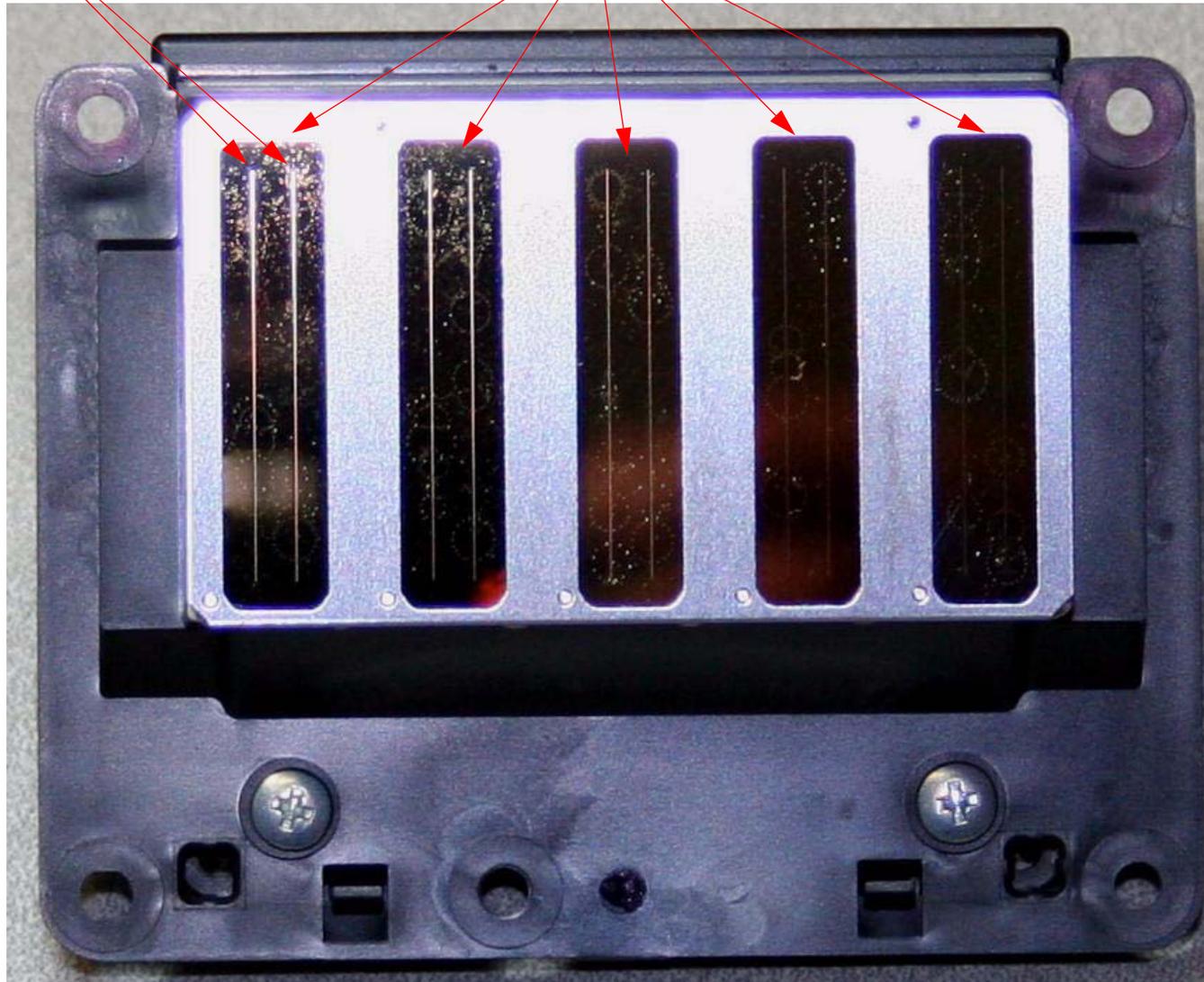
A Head Rank Sticker with black letters on a white background is intended for a 7900 or 9900 only.



A Head Rank Sticker with white letters on a black background is intended for a 7700, 9700, 7900, or 9900.

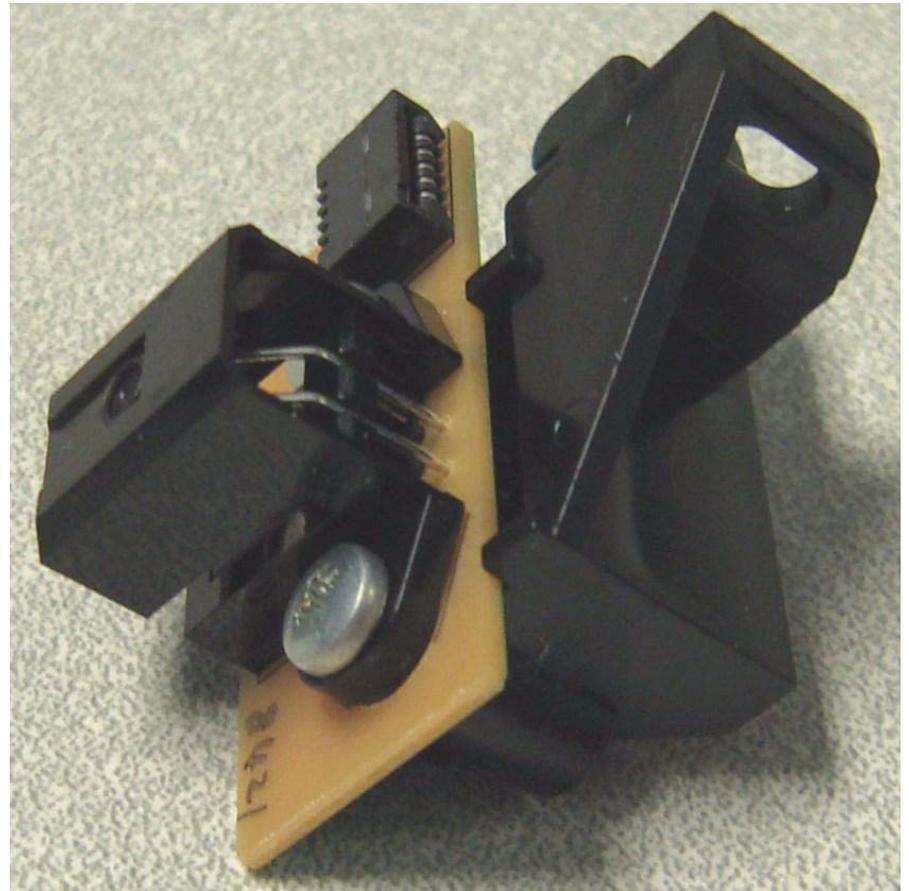
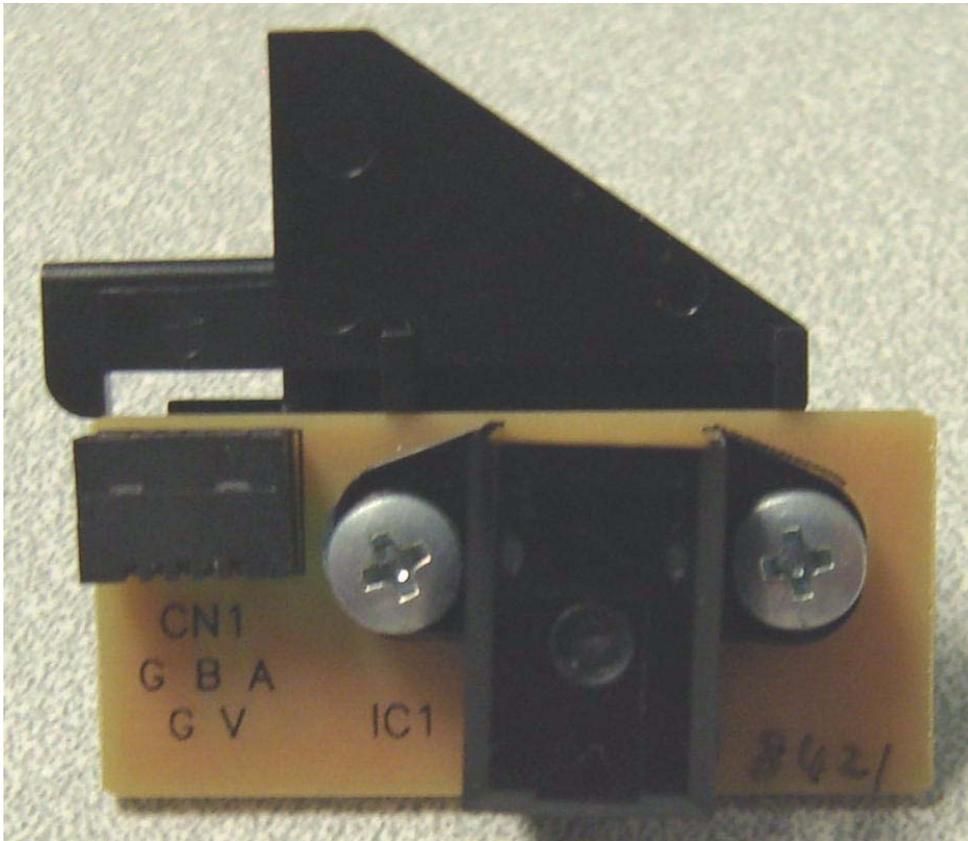
2 Channels (colors) per **Nozzle Plate**

5 Nozzle Plates

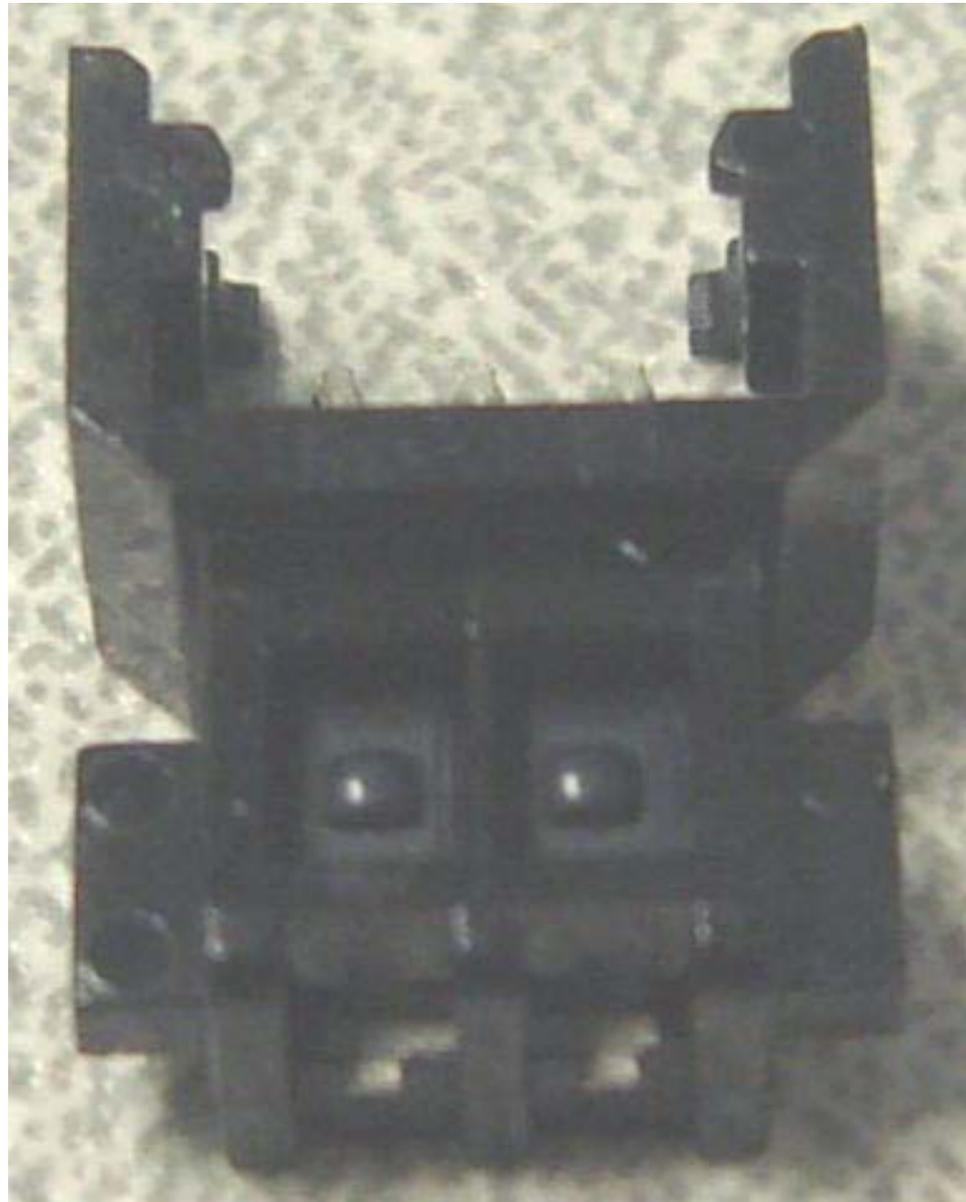


Note: the Nozzle Plates are very fragile and will be damaged with a minimum of force.

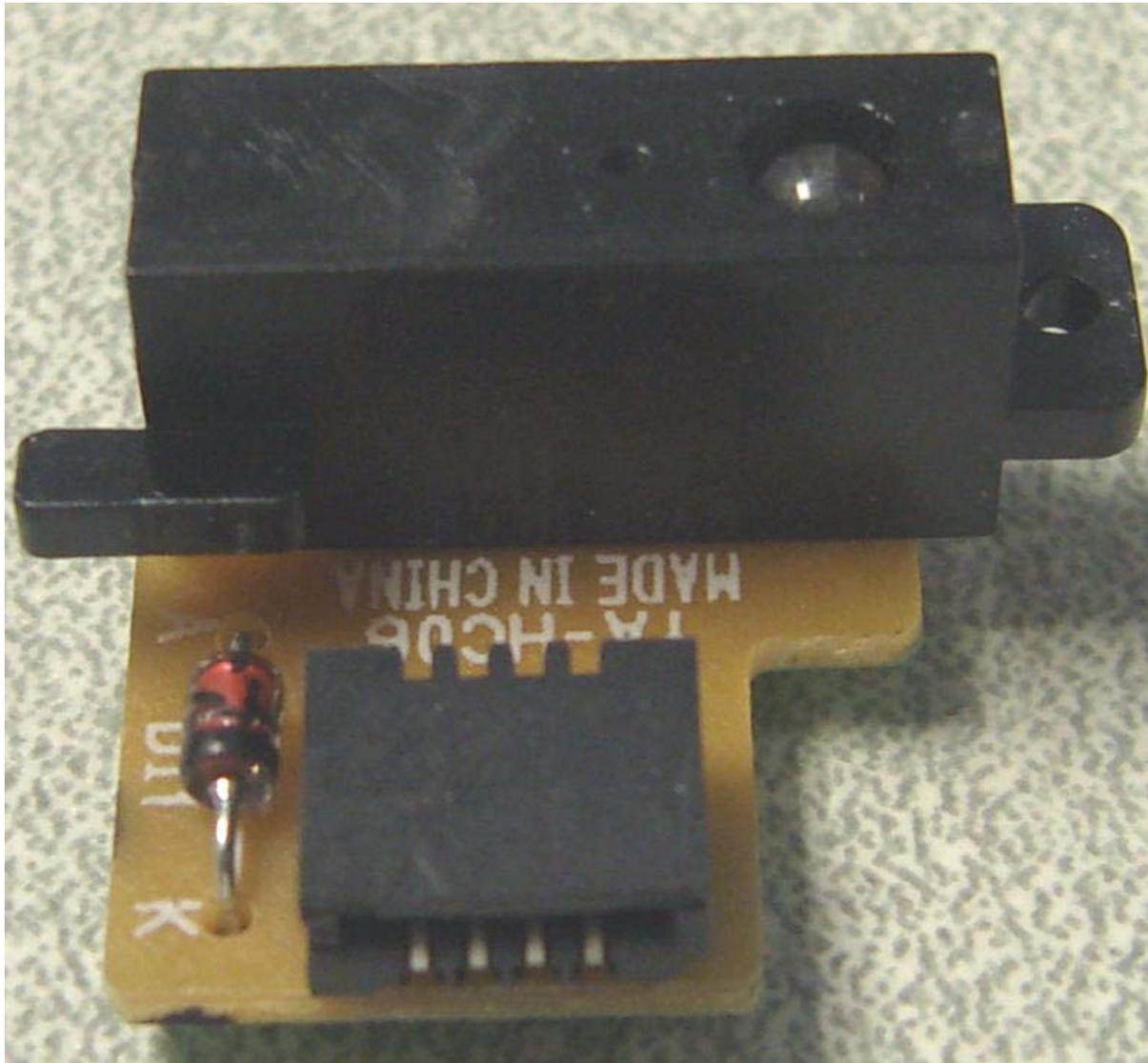
Sensor (Carriage Encoder) Pictures



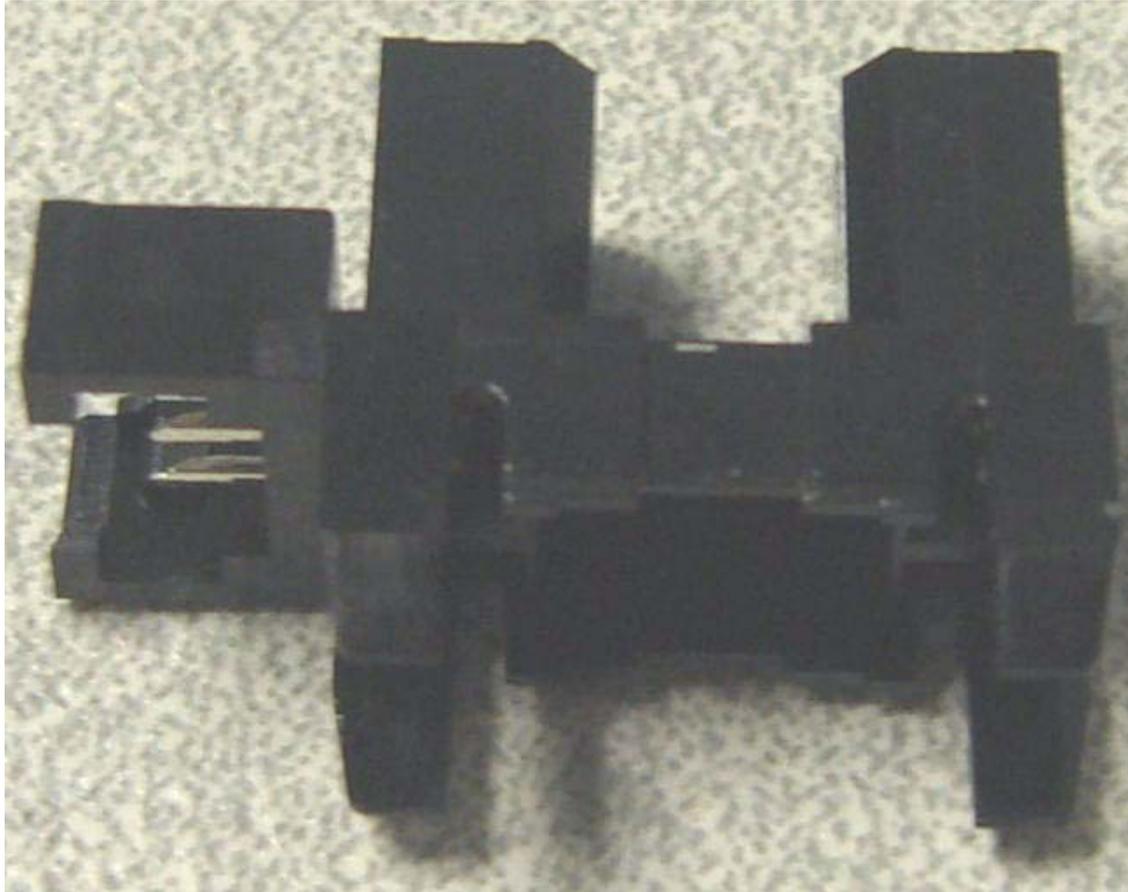
Sensor (Edge Detector) Picture



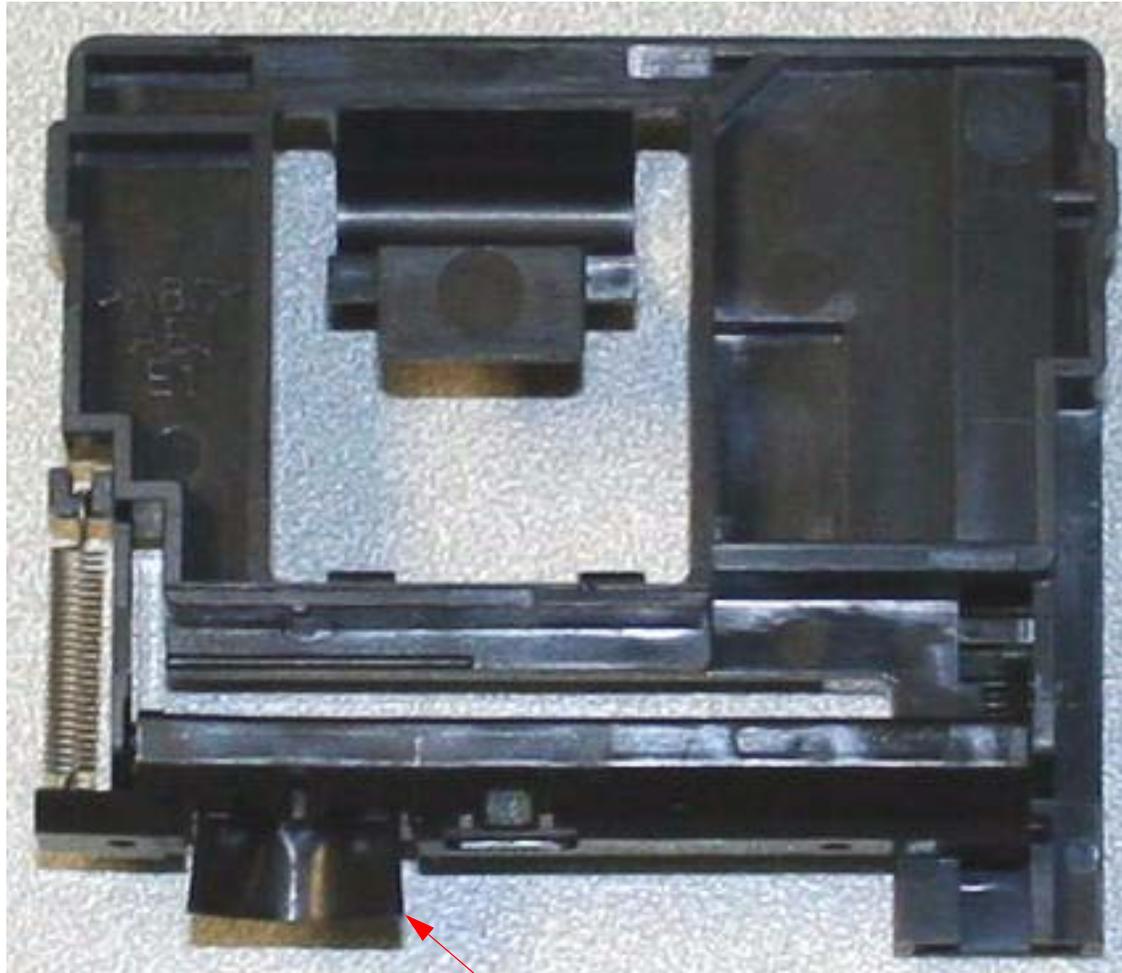
Sensor (Ink Mark) Picture



Sensor (Platen Gap) Picture



Wiper Blade Assembly Picture



Wiper Blade

Reference

Accessories List

Accessories

Sales Part Number	Description
C12C815331	Replacement I Cutting Blade
C12C811241	Replacement Roll Media Adapters (qty. 2)
C12C890191	Maintenance Tank
C12C815321	Auto Take Up Reel Assembly
SPECTRO24	24" SpectroProofer
SPECTRO24UV	24" SpectroProofer with UV filter
SPECTRO44	44" SpectroProofer
SPECTRO44UV	44" SpectroProofer with UV filter

Carriage Release (Auto)

Note: Releasing the Carriage Mechanism is a delicate operation. It is extremely easy to damage the Print Head if a mistake is made.

Auto Carriage Release Method

1. Enter **Self Testing** mode: **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.
2. Navigate to **SELF TESTING\Mecha Adjustment\IM Sensor Gap**
3. Press the **Right Arrow** to display the **[Enter] Start**.
4. Press the **OK** button to release the **Carriage**.

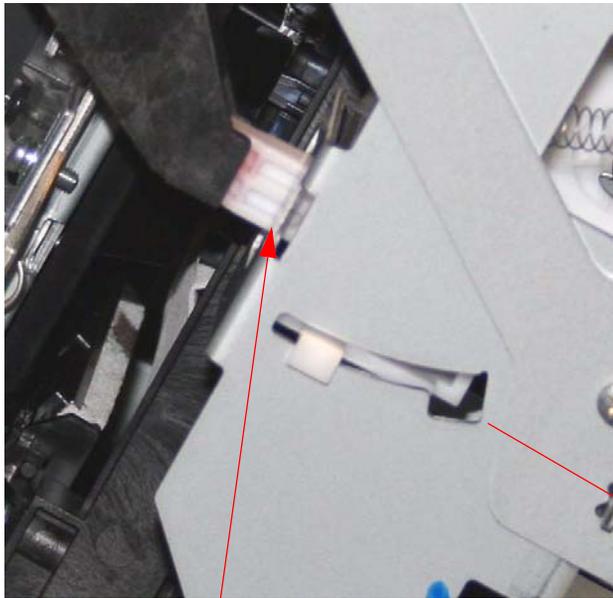
Carriage Release (Manual)

Note: Releasing the Carriage Mechanism is a delicate operation. *It is extremely easy to damage the Print Head if a mistake is made.*

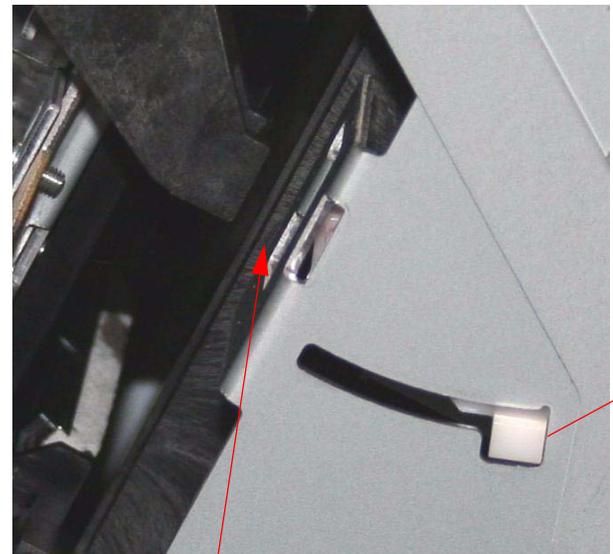
Manual Carriage Release Method

1. Unplug the **Printer**.
2. Remove the **Side Cover**.

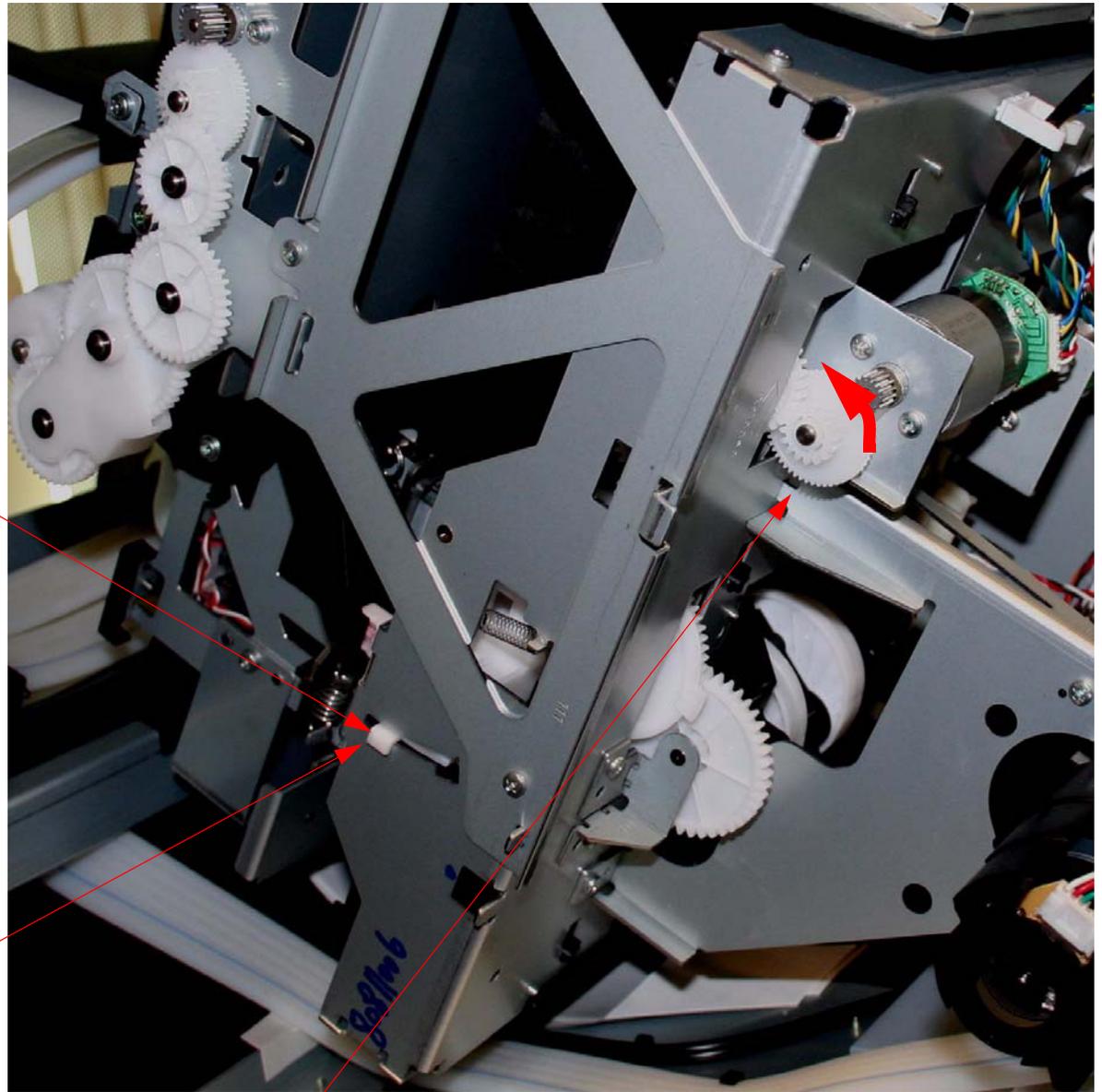
3. Rotate the **White Gear** counter clockwise to unlock the **Carriage**.



Condition 1 - Carriage **Locked**.



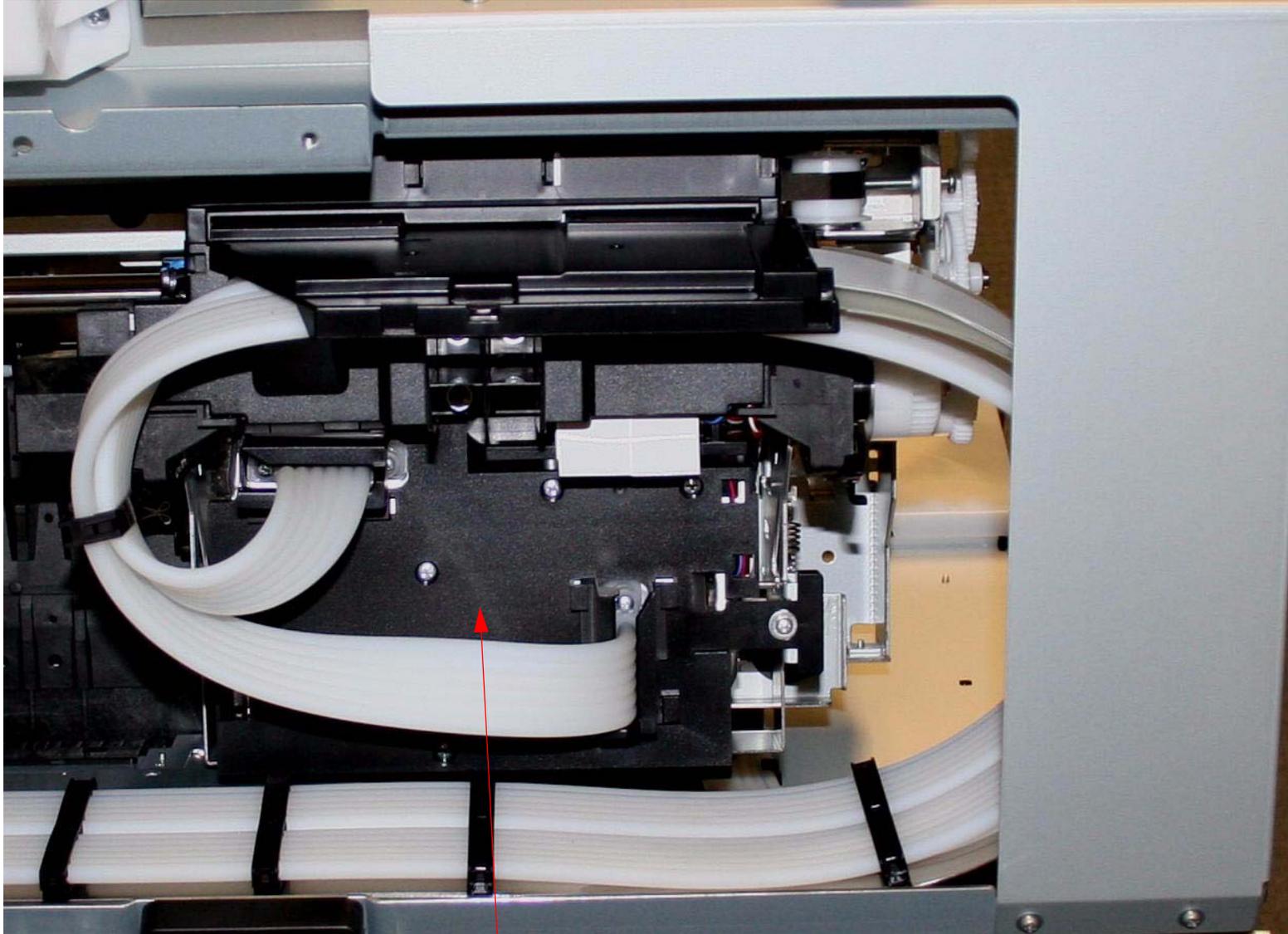
Condition 2 - Carriage **Un-Locked**.



Rotate the **White Gear** counter clockwise until the **Carriage** is un-locked.

Manual Carriage Lock

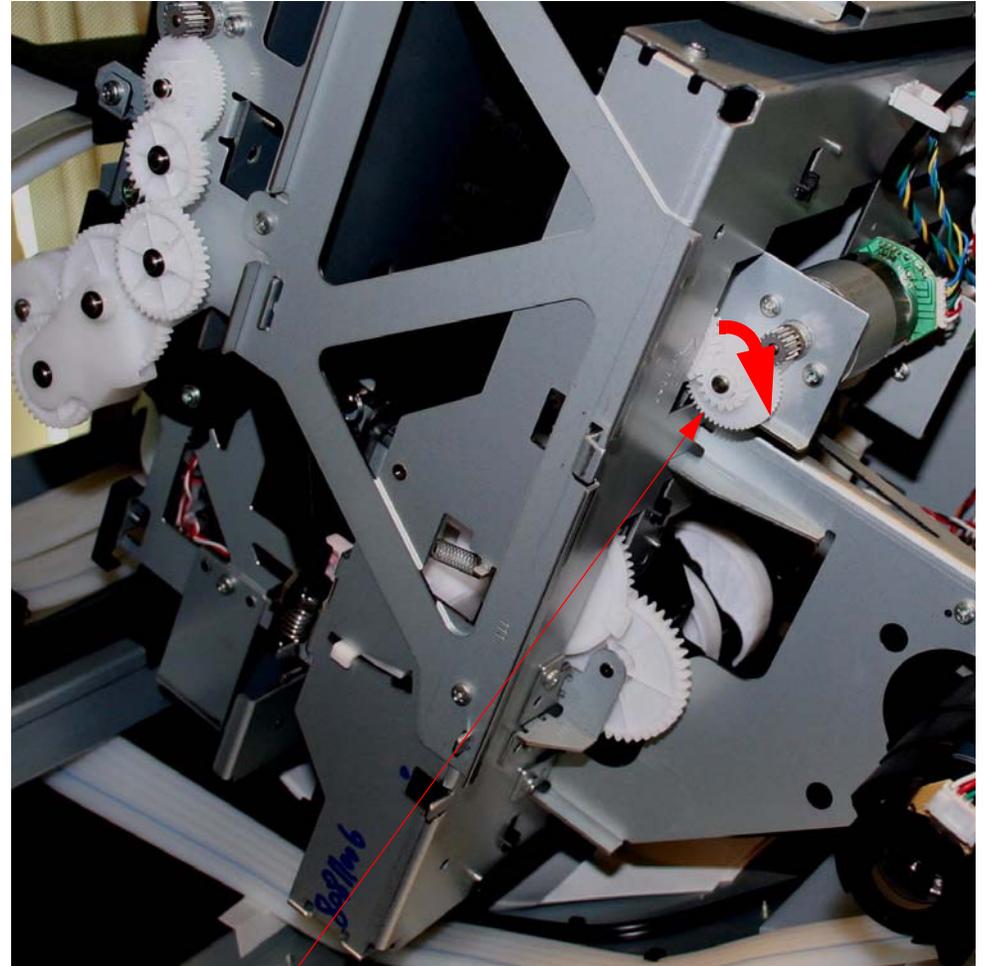
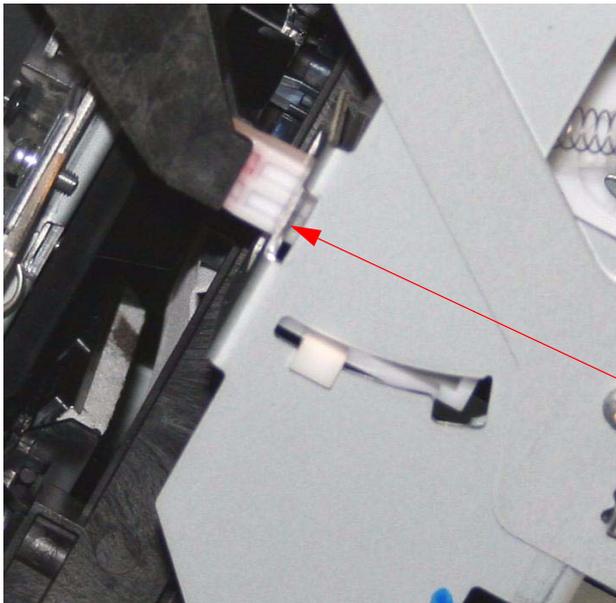
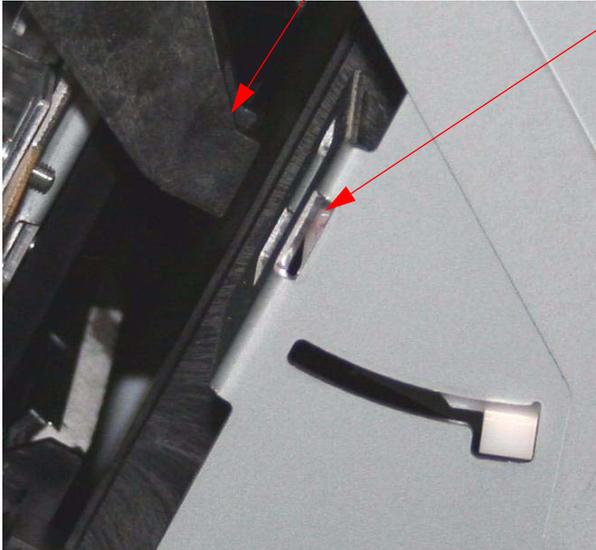
1. Center the **Carriage Assembly** over the **Cap Assembly**.



Center the **Carriage Assembly** over the **Cap Assembly**.

2. Rotate the **White Gear** clockwise and lock the **Carriage Mechanism**.

1. Center the **Carriage Stop** over the **Carriage Lock**.



2. Rotate the **White Gear** CW.

3. Guide the **Carriage Lock** into the **Carriage Stop**.

4. Stop rotating the **Cap Motor** CW when the **Lock Mechanism** is in this position.

Cleaning Cycles (Types and Uses)

About All Cleaning Cycles

The **Ink System** is tuned to the gentle ink flow demand generated by printing.

All Cleaning cycles employ a much stronger ink demand than printing.

It is not unusual for the **Ink System** to “pull back” after a cleaning cycle drawing air or ink from the **Cap** into the **Print Head Nozzle Plate**. This can cause more **Nozzles** to be missing after a cleaning cycle than before. It also can cause contaminated (used) ink to be mixed with the “fresh” ink in the **Nozzle Plate**.

If the same **Nozzles** are missing after each cleaning cycle, continue cleaning.

If different **Nozzles** are missing after each cleaning cycle, stop cleaning, and print until the air or contaminated ink has been expelled from the **Print Head**.

Normal Cleaning: User Menu/MAINTENANCE/CLEANING/NORMAL

When a normal cleaning is activated, the **Printer** cleans all 5 color pairs, and uses the **AID Circuitry** to check results. According to the information reported by the **AID Circuitry** the **Printer** increases or decreases the strength of the cleaning cycle appropriately, and only cleans the color pairs that require additional cleaning.

The **Printer** always cleans color pairs individually. A color pair is defined as 2 colors that share a **Cap**. In theory the **Printer** will only clean the color pairs that have missing **Nozzles**. Cleaning color pairs individually takes more time, but saves **Ink**.

Color Pair Cleaning: User Menu/MAINTENANCE/CLEANING/CLEAN FOR EACH COLOR

Color pair cleaning is the cleaning method with the most efficient use of ink.

How to use effectively:

1. Print a nozzle check, and identify the color pair with the most missing nozzles.
2. Clean that color pair only.

After the **Printer** cleans the instructed color pair, it will use the **AID Circuitry** to determine the appropriate cleaning levels for any remaining missing nozzles on other color pairs. **This method uses less ink than any other.**

Power Cleaning: User Menu/Maintenance

The purpose of the Power Cleaning cycle is to remove air from the **Negative Pressure Dampers**, or air from the **Print Head** side of the **Dampers**.

The Power Cleaning cycle closes the **Valves** that restrict ink flow from the **Ink Bays** while simultaneously running the **Cleaning Pump** to build a vacuum on the **Print Head Nozzle Plate**. When sufficient vacuum is created, the **Printer** opens the **Valves** allowing the ink to “fill the vacuum”. This technique facilitates the removal of air from the system.

Air in the system causes Nozzle drop out while printing.

Technicians: Use the Power Cleaning cycle after changing **Dampers** or **Print Head**.

User: Use the Power Cleaning cycle if **Nozzles** drop out while printing.

SS Cleaning: Maintenance Mode 1 (Hold the Pause button at power on)

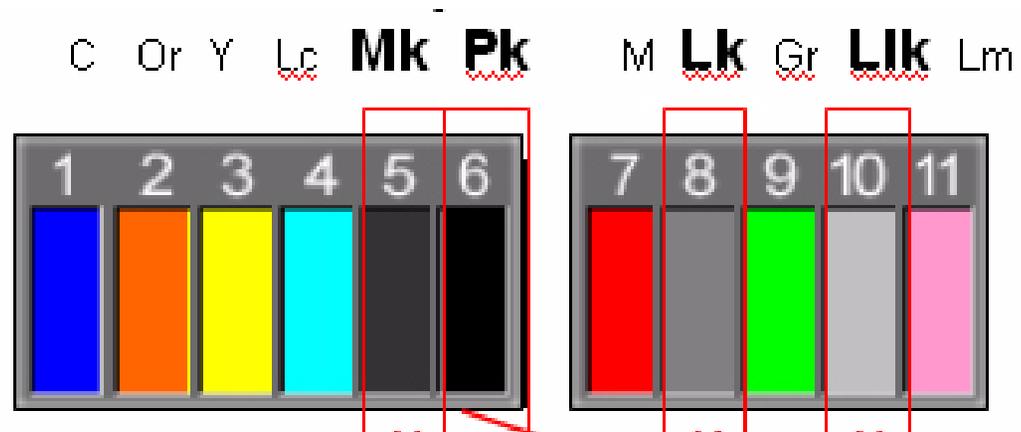
SS Cleaning has a strong ultra sonic component. The **Piezo Elements** internal to the **Print Head** are used to attempt to break up pigment particles that may be clogging the interior of the **Print Head**.

Use SS Cleaning when a **Nozzle** can not be cleared through normal cleaning.

Color Order

Color Order For installed Cartridges (Listed Left to Right)

1. Cyan
2. Orange
3. Yellow
4. Light Cyan
5. Matte Black
6. Photo Black
7. Vivid Magenta
8. Light Black
9. Green
10. Light Light Black
11. Vivid Light Magenta

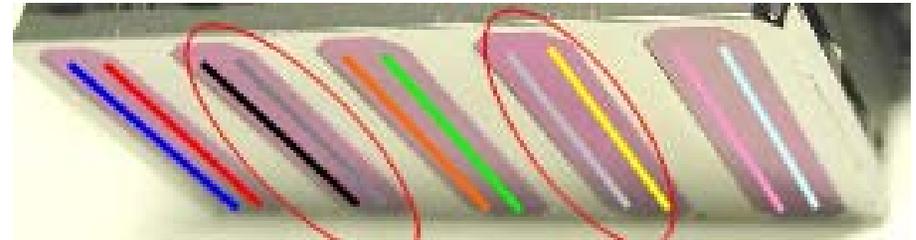


User Nozzle Check Color Order (Stair Step) (Listed Left to Right)

1. Cyan
2. Orange
3. Yellow
4. Light Cyan
5. Matte/Photo Black
6. Vivid Magenta
7. Light Black
8. Green
9. Light Light Black
10. Vivid Light Magenta

Color Pairs on the Print Head (Listed Left to Right)

1. **Cyan and Vivid Magenta**
2. **Photo Black (Matte Black) and Light Black**
3. **Orange and Green**
4. **Light Light Black and Yellow**
5. **Vivid Light Magenta and Light Cyan.**



C / VM PK&MK / LK O / G LLK / Y VLM / LC

Connectors / Wiring

Main Board Connectors

Connector #:	Connected To:	Pins:
CN1	Power Supply CN301	20
CN3	Suction Fan	3
CN4	Suction Fan	3
CN5	Suction Fan	3
CN10	Ink System Pressure Motor	2
CN14	Ink System Pressure Motor Encoder	4
CN19	Control Panel	25
CN20	Pressure Sensor	3
CN21	Right Front Cover Sensor	3
CN22	Left Front Cover Sensor	3
CN23	AID Board	9
CN28	USB	4
CN36	Pinch Roller Release Motor Encoder	4
CN37	Pinch Roller Release Motor	2
CN100	Carriage Board CN100	40
CN101	Carriage Board CN101	40
CN104	Carriage Board CN104	40

Connector #:	Connected To:	Pins:
CN200	Sub Board B CN200	34
CN201	Sub Board B CN201	34
CN202	Sub Board B CN202	10
CN300	Sub Board C CN300	34
CN301	Sub Board C CN301	12
CN400	Right Ink Bay Sub Board D CN400	34
CN500	Left Ink Bay Sub Board D CN400	34
CN501	Ethernet Port	8

C594 Sub-B Board

Connector #:	Connected To:	Pins:
CN200	Main Board CN200	34
CN201	Main Board CN201	34
CN202	Main Board CN202	34
CN204	Paper Thickness Sensor (Left)	3
CN205	Paper Thickness Sensor (Right)	3
CN206	Right Maintenance Tank	7
CN207	RearAD Sensor	3
CN213	Pump Motor Encoder	4
CN214	Pump Motor	2

Connector #:	Connected To:	Pins:
CN216	Suction Valve Home Position Sensor	3
CN217	Cap Home Position Sensor	3
CN218	Flushing Box (Wiper) Home Position Sensor	3
CN219	Rewind Motor Encoder	4
CN220	Rewind Motor	2
CN221	Flushing Box / Wiper Motor	2
CN222	Flushing Box / Wiper Encoder	4
CN223	Cap Motor	2
CN224	Cap Motor Encoder	4
CN226	Platen Gap Motor	2
CN227	Platen Gap Encoder	4
CN229	Carriage Home Position Sensor	3

C594 Sub-C Board

Connector #:	Connected To:	Pins:
CN300	Main Board CN300	34
CN301	Main Board CN301	34
CN302	Paper Feed Encoder	4
CN303	Paper Feed Motor	2
CN304	Carriage Motor	2

Connector #:	Connected To:	Pins:
CN305	Left Maintenance Tank (9900 only)	7
CN309	Cutter Motor	2
CN310	Pinch Roller Release Home Position Sensor	3
CN311	Cutter Motor Encoder	4

Carriage Board (CA11 Sub Board)

Connector #:	Connected To:	Pins:
CN100	Main Board CN100	40
CN101	Main Board CN101	40
CN104	Main Board CN104	40
CN105	Print Head	40
CN106	Print Head	40
CN111	Platen Gap Home Position Sensor	3
CN112	EdgeAD Sensor	3
CN113	Ink Mark Sensor	4
CN114	Carriage Encoder	4
CN116	Ink Selector Motor (PK/MK)	5
CN118	Ink Selector Sensor (PK/MK)	3

Power Supply

Connector #:	Connected To:	Pins:
CN001	AC Power	2
CN301	Main Board CN1	20

Consumable/Service Parts List

Ink is intended as a service tool (Warranty Service Only), and is not for sale. Use the Service Part Number, and claim it on a warranty form.

<i>Service Part #</i>	<i>Sales Part #</i>	<i>Ink Cartridges</i>	<i>ECCC Cost after 40% discount</i>
WAT642100	T642100	UltraChrome HDR Photo Black	<i>Warranty use only</i>
WAT642200	T642200	UltraChrome HDR Cyan	<i>Warranty use only</i>
WAT642300	T642300	UltraChrome HDR Vivid Magenta	<i>Warranty use only</i>
WAT642400	T642400	UltraChrome HDR Yellow	<i>Warranty use only</i>
WAT642500	T642500	UltraChrome HDR Light Cyan	<i>Warranty use only</i>
WAT642600	T642600	UltraChrome HDR Vivid Light Magenta	<i>Warranty use only</i>
WAT642700	T642700	UltraChrome HDR Light Black	<i>Warranty use only</i>
WAT642800	T642800	UltraChrome HDR Matte Black	<i>Warranty use only</i>
WAT642900	T642900	UltraChrome HDR Light Light Black	<i>Warranty use only</i>
WAT642A00	T642A00	UltraChrome HDR Orange	<i>Warranty use only</i>
WAT642B00	T642B00	UltraChrome HDR Green	<i>Warranty use only</i>

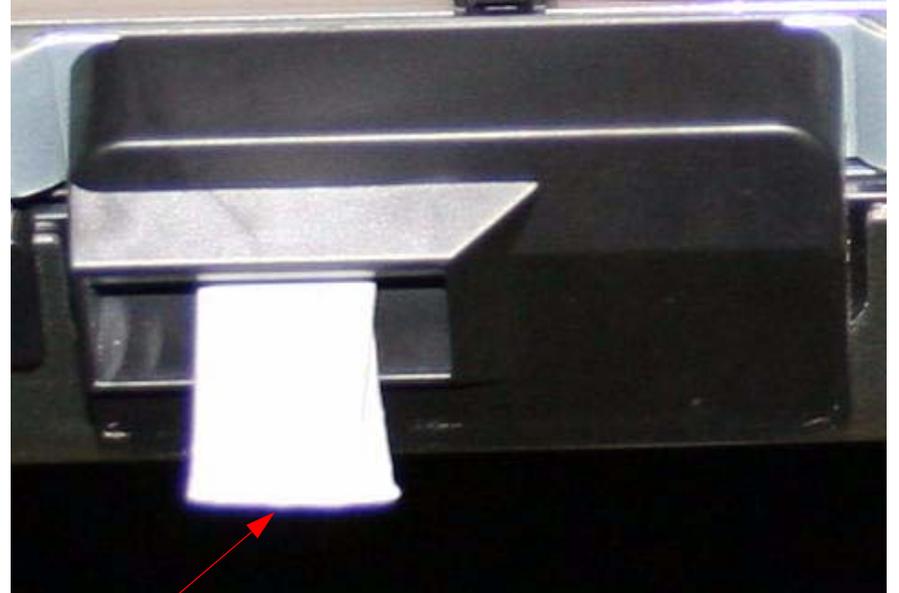
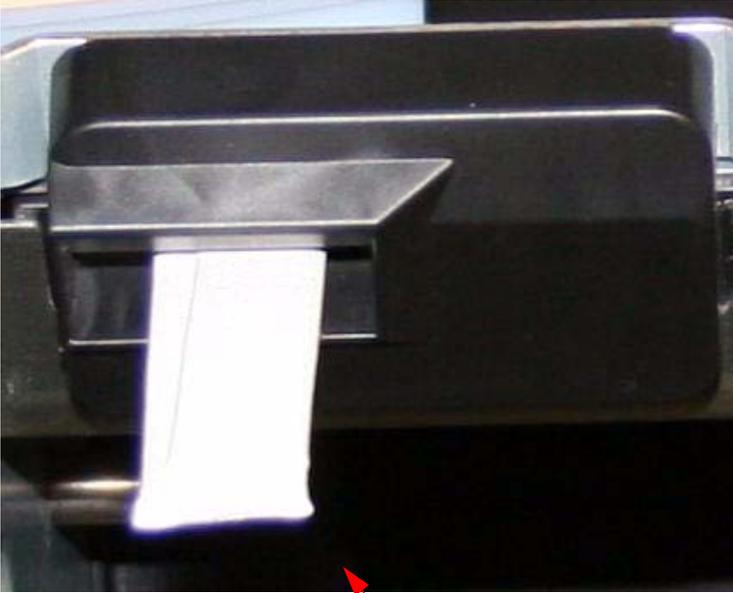
<i>Service Part #</i>	<i>Sales Part #</i>	<i>Paper Type</i>	<i>ECCC Cost after 40% discount</i>
WAS041385	SO41385	Double Weight Matte Paper 24" x 82' roll	\$42.00
WAS041387	SO41387	Double Weight Matte Paper 44" x 82' roll	\$64.64

Service Part #	Sales Part #	Paper Type	ECCC Cost after 40% discount
WAS041393	S041393	Premium Semimatte Photo Paper(170) 24" x 100" roll	\$69.96
WAS041395	S041395	Premium Semimatte Photo Paper(170) 44" x 100" roll	\$123.00
WAS041603	S041603	Enhanced Matte Paper size A4 (250 sheets)	\$106.32
WAS041725	SO41725	Enhanced Matte Paper 17" x 100' roll	\$38.50
WAS041737	SO41737	Premium Luster Photo Paper(250) 16" x 100' roll	\$66.00
WAS041779	S041779	Photo Semigloss 16.5" x 100" roll	\$59.97
WAS041827	S041827	Premium Semimatte Photo Paper 17" x 22" (25 sheets)	\$53.97

Maintenance Tank and Cutter Blades are available through Sales Channels only.

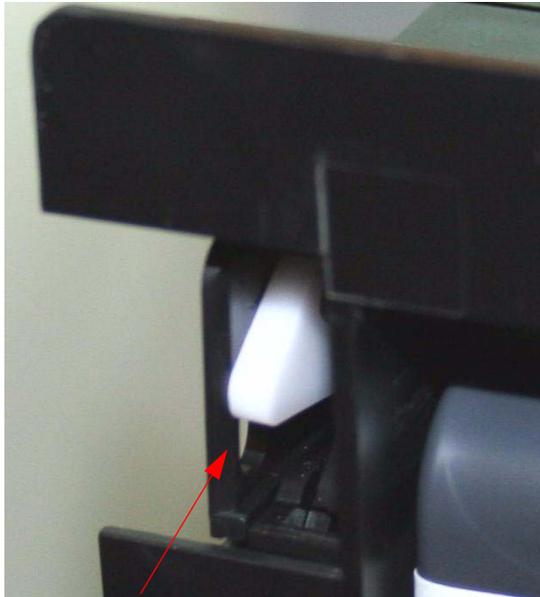
Sales Part Number	Description
C12C890191	Maintenance Tank
C12C815331	Cutter Blade

Cover Sensor (Front) Bypass Procedure

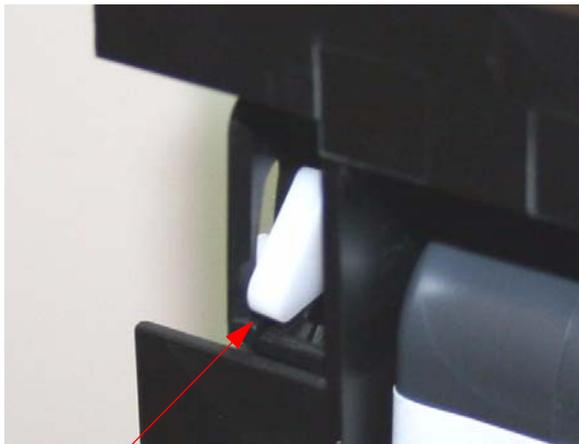


Wedge **2 Cover Sensors** with paper to defeat the **Front Cover Sensors**.

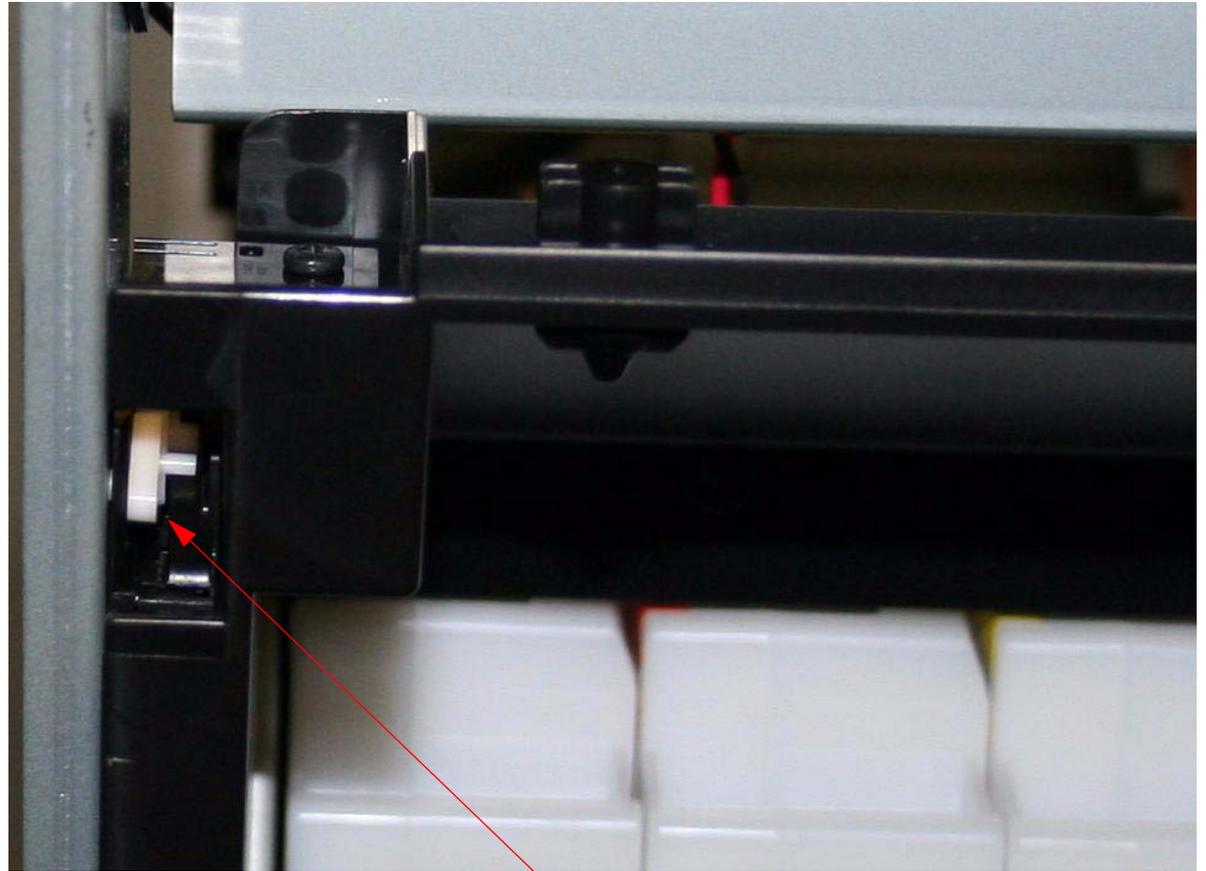
Cover Sensor (Ink) Bypass Procedure



Lever Up = Ink Door Closed



Lever Down = Ink Door Open



Left Ink Door Sensor

CTP(7900) (Computer to Plate) Explanation

What is the 7900CTP

The **Epson 7900CTP** system is designed to create **Press Plates** for offset printing. It requires the use of **Epson Directplate Aluminum Plates**. The **Epson Directplate Aluminum Plates** have a coating that accept ink until they are cured (heated). After curing, the area of the **Plate** that has not been “inked” will reject press ink. The area that was inked before curing will accept ink, and transfer it to the media during the printing process.

Items included with the 7900CTP

Epson Stylus Pro 7900 printer

EFI RIP software for creating the separation images.

Plate Curing Unit (PCU) for heating the plates.

Plate Guide to ensure linear loading of the plates into the 7900.

Epson DirectPlate Aluminum sample pack for aligning the Plate Guide.

Hexagonal (Allen) (2.5 mm) wrench for attaching the Plate Guide.

Hexagonal (Allen) (5 mm) wrench for attaching the Plate Guide (also used for assembling the 7900 printer stand).

Teflon Tape Strip for use with the Plate Guide.

THERMAX temperature strips for testing the PCU

Service Implications

7900

The **7900 Printer** included with the **7900CTP** system is the same 7900 that is sold separately. Servicing the **Printer** is exactly the same with one exception.

After removing the any of the **Right Side Cover Components**, the **Plate Guide** alignment must be adjusted. Directions on how to perform the **Plate Guide** alignment is located in the Adjustment Section of the Field Repair Guide.

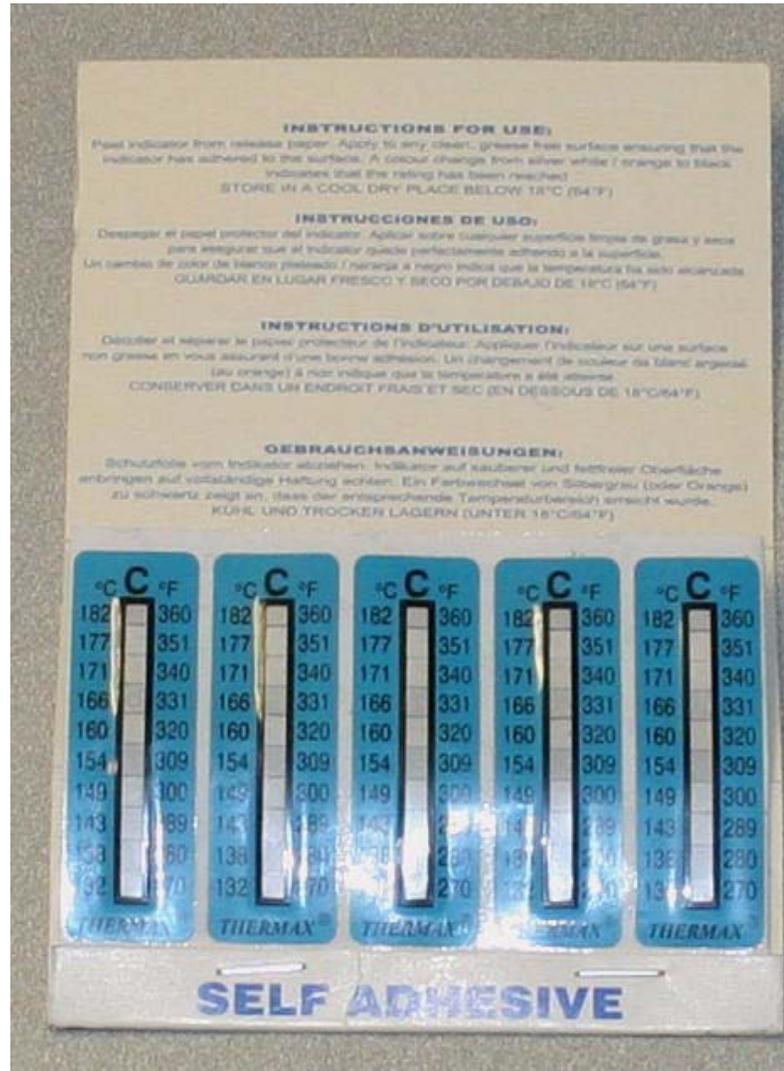
PCU (Plate Curing Unit)

The **PCU** is a whole unit exchange. Directions on how to test/diagnosis the **PCU** are in the Troubleshooting Section of the Field Repair Guide.

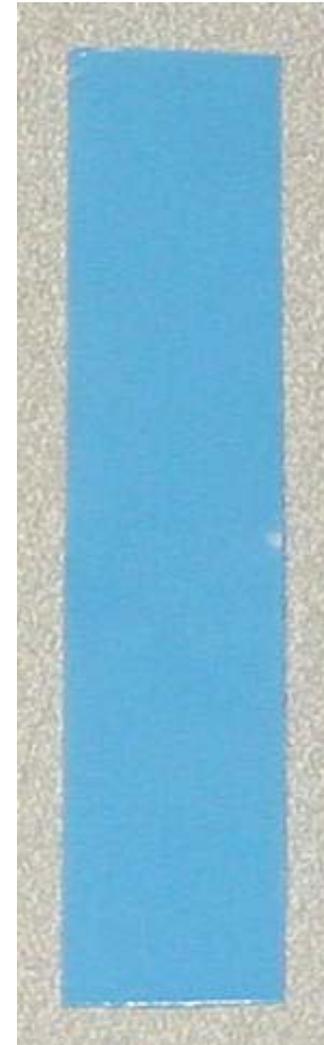
Component Pictures



Plate Guide



Thermax Strips



Teflon Tape Strip



Plate Curing Unit (PCU)

Optional Plate Guide Picture



Optional Plate Guide for use with large ***Plate*** sizes.

Firmware History (Ethernet)

7700 and 9700 Current Ethernet Firmware Ver. 1.05

Firmware File Name: lpe2105.efu

1. Improves Ethernet functionality.

Firmware History (Printer) (7900)

This chart explains the meaning of the firmware version characters.

Epson firmware version is represented as:
Model and the Release Date.

The values are represented in Hexadecimal

HEX	=	Decimal
1	=	1
2	=	2
3	=	3
4	=	4
5	=	5
6	=	6
7	=	7
8	=	8
9	=	9
A	=	10
B	=	11
C	=	12
D	=	13
E	=	14
F	=	15

Example SN00458

SN0	04	5	8
SP7800	DAY	YEAR	MONTH
	4	2005	Aug

Example SN00157

SN0	01	5	7
SP7800	DAY	YEAR	MONTH
	01	2005	Jul

Example:

	DAY	YEAR	MONTH

Stylus Pro 7900 Current Firmware Ver. HN003A9.upg

Release date: 09/03/10

1. Improved support for the “Job Cancel Command”.
2. SpectroProofer functionality was improved.

Stylus Pro 7900 Firmware Ver. HN028A4.upg

Release date: 04/28/10

1. Improved support for the “Job Cancel Command” used by RIPS.
2. AID functionality was improved.
3. Changed the AID missing nozzle message to “**Clogged Nozzles Detected Cleaning Recommended**”.
4. Improve firmware support for the Ink Selector Assembly.

Stylus Pro 7900 Firmware Ver. HN0239A.upg

Release date: 10/23/09

1. The Auto Uni-Directional adjustment was improved.

Stylus Pro 7900 Current Firmware Ver. HN01699.upg

Release date: 09/16/09

1. AID operation has been improved.
2. The 1800 (life counter) Error has been eliminated.
3. The Carriage Life Counter value has been extended (2x).
4. Sleep mode “awakening” issues have been improved.

Stylus Pro 7900 Firmware Ver. HN02995.upg**Release date: 05/29/09**

1. Compatible with the new Main Board configuration, and downward compatible with the old Main Board. The new Main Board uses a new Flash ROM chip. This release of firmware is necessary for that reason.

Stylus Pro 7900 Firmware Ver. HN02793.upg**Release date: 03/27/09**

1. Fixes issues with the Custom Paper menu.

Stylus Pro 7900 Firmware Ver. HN01692.upg

Release date: 02/16/09

1. Disables AID Nozzle Check when the printer is turned on. All other AID functions are retained.

Stylus Pro 7900 Firmware Ver. HN0148A.upg**Release date: 11/14/08**

1. Initial Release

Firmware History (Printer) (9900)

This chart explains the meaning of the firmware version characters.

Epson firmware version is represented as:
Model and the Release Date.

The values are represented in Hexadecimal

HEX	=	Decimal
1	=	1
2	=	2
3	=	3
4	=	4
5	=	5
6	=	6
7	=	7
8	=	8
9	=	9
A	=	10
B	=	11
C	=	12
D	=	13
E	=	14
F	=	15

Example **SN00458**

SN0	04	5	8
SP7800	DAY	YEAR	MONTH
	4	2005	Aug

Example **SN00157**

SN0	01	5	7
SP7800	DAY	YEAR	MONTH
	01	2005	Jul

Example:

	DAY	YEAR	MONTH

Stylus Pro 9900 Current Firmware Ver. HW003A9.upg

Release date: 09/03/10

1. Improved support for the "Job Cancel Command".
2. SpectroProofer functionality was improved.

Stylus Pro 9900 Firmware Ver. HW028A4.upg

Release date: 04/28/10

1. Improved support for the “Job Cancel Command” used by RIPS.
2. AID functionality was improved.
3. Changed the AID missing nozzle message to “**Clogged Nozzles Detected Cleaning Recommended**”.
4. Improve firmware support for the Ink Selector Assembly.

Stylus Pro 9900 Firmware Ver. HW0239C.upg

Release date: 12/23/09

1. The operation of the SpectroProofer in conjunction with the Take Up Reel was improved.

Note: This firmware version is for the 9900 only because there is no Take Up Reel for the 7900.

Stylus Pro 9900 Firmware Ver. HW0239A.upg

Release date: 10/23/09

1. The Auto Uni-Directional adjustment was improved.

Stylus Pro 9900 Firmware Ver. HW01699.upg

Release date: 09/16/09

1. AID operation has been improved.
2. The 1800 (life counter) Error has been eliminated.
3. The Carriage Life Counter value has been extended (2x).
4. Sleep mode “awakening” issues have been improved.

Stylus Pro 9900 Firmware Ver. HW02995.upg

Release date: 05/29/09

1. Compatible with the new Main Board configuration, and downward compatible with the old Main Board. The new Main Board uses a new Flash ROM chip. This release of firmware is necessary for that reason.

Stylus Pro 9900 Firmware Ver. HW02793.upg

Release date: 03/27/09

1. Fixes issues with the Custom Paper menu.

Stylus Pro 9900 Firmware Ver. HW01692.upg

Release date: 02/16/09

1. Disables AID Nozzle Check when the printer is turned on. All other AID functions are retained.

Stylus Pro 9900 Firmware Ver. HW0148A.upg

Release date: 11/14/08

1. Initial Release

Firmware Update Procedure Using FWUpdate.exe

Note: *This procedure is used to update or install firmware. It is the service method because it does not require the Printer to be “Online” to work.*

1. Turn on the **Printer** while depressing the **Up**, **Down**, **Left**, and **Right** buttons.
 - 1.1 The **Printer** will display **UPDATE FIRMWARE**
2. Using **FWUpdate.exe** transmit the current firmware to the **Printer**.
 - 2.1 The Printer will display **UPDATING FIRMWARE**.
 - 2.2 The Printer will display **FIRMWARE UPDATE COMPLETE**.
 - 2.3 The Printer will display **ENERGYSTAR**.
 - 2.4 The Printer will re-initialize and display **EPSON**.
 - 2.5 The Printer will display **PRESS PAUSE BUTTON**.
 - 2.6 The Printer will display **PLEASE WAIT**.
 - 2.7 The Printer display **READY**.

Ink Draining Procedure

Note: This procedure requires 11 Draining Cartridges

Part # 1500853 (order 11 of this part # to receive 11 Draining Cartridges)

Note: This procedure requires a new Maintenance Tank

Sales Part # C12C890191

Note: Each step of this procedure must be followed exactly for the procedure to work.

1. Remove any Media that might be loaded.
2. Turn on the **Printer** in **Self Testing** mode.
 - 2.1 Press and hold the **Down**, **Right**, and **OK** buttons, and turn on the **Printer**.

Note: For detailed instruction for how to enter Self Testing mode, see the Control Panel Map.
3. Navigate to **Self Testing/Maintenance/I/H Exchange/Sequence/Enter[Start]**.
 - 3.1 Install a **New Maintenance Tank** (The Maintenance Tank must not have been installed before).
 - 3.2 Install **11 Draining Cartridges**.
 - 3.2.1 Close the **Right** and **Left Ink Covers**.
 - 3.3 Press the **OK** button to start the procedure.
 - 3.3.1 The **Printer** will display **Please Wait** for a short time.
 - 3.3.2 The Printer will begin the draining sequence
 - 3.3.2.1 Approximately 12 minutes.
4. The **Printer** will set the Ink Charge Flag.
 - 4.1 The next time that the **Printer** is turned on, with ink installed, it will perform an “Ink Charge” (Prime)
5. The **Printer** will display **[Press Power Button]**.

5.1 Turn off the **Printer**.

5.2 Remove **11 Draining Cartridges**.

Note: The Ink Draining procedure uses air pressure to force the Ink out of the Ink Lines through the Print Head. Because of the nature of the hardware the ink in the Lines is replaced by pressurized air. Opening the Ink System will result in the escape of the pressurized air, and a small amount of “ink froth”. Have paper towels ready to capture the ink.

Media Feed Step (about)

Paper Feed Adjustment (990.6mm service adjustment)(calibrates the paper feed mechanism)

+

Media Feed Tables (media feed offset for each Epson media type)

+

LFP Remote Panel 2 media feed adjustment (writes the offset value to the printer modifying the Media Feed Table value for the specified media.

+

Custom Paper: Paper Feed Adjust (Control Panel)

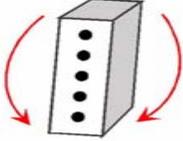
or

Paper Config: Paper Feed Adjustment (Driver)

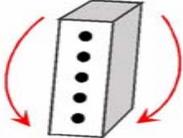
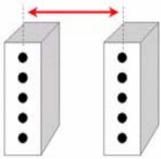
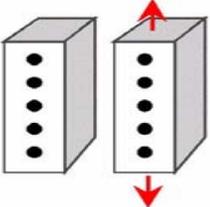
=

Media Feed Step

Glossary

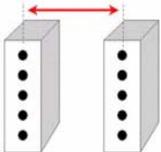
Artifact	A defect, that is within an image. It can mean something on the graphic that was not intended, or something missing that was intended. All image quality defects are artifacts.
Bi-Directional Adjustment:	An electronic adjustment, that ensures that a printer can coordinate left to right, with right to left, printing.
Capped Position:	The print head at it's stand by position, with the cap mechanism sealing the nozzles.
Coating:	The top layer of graphics paper (media) that consists of a special substance designed to trap ink and keep it from being absorbed into the paper fibers. Non-paper based ink jet media uses coating to allow the ink to bond with the surface. A coatings purpose is to minimize dot gain, and control saturation.
Color Shift:	An unintended change of a gradient or tone.
Continuous Tone:	The qualities of a photograph that makes an image appear real. The smooth and life-like transition from one color shade to the next, like in a photograph. Epson Ink Jet printers are not continuous tone printers. But when working properly, their printed images fool the human eye into seeing continuous tone transitions.
CR Slant	<p>A term that refers to a mechanical print head alignment that ensures that an ink jet's print heads nozzles are on the same vertical plane. (Also known as CR Slant.) The head is rotated until it is vertically linear.</p>  <p>The diagram shows a 3D perspective of a rectangular print head nozzle assembly. On the front face, there are four small black dots representing nozzles, arranged vertically. Two red curved arrows, one on the left and one on the right, indicate the rotation of the assembly around a vertical axis to align the nozzles.</p>
Debris:	A term that refers to unintended ink on the page deposited by Ink soaked debris dropping from the print head.

Deflected Nozzle:	A nozzle is firing, but the ink drop is not landing where it is intended too. Irregular spacing on the nozzle check pattern indicates this condition.
Dithering:	The dot pattern placed on the printed surface to create an image. Also known as screening.
Dot Gain:	A drop of ink tends to travel out from its point of impact, as the media absorbs it. The purpose of the coating (on the media) is to minimize dot gain.
Drop of Ink:	Ink that appears to have dripped from the print head, or any other component of the ink supply.
Dye Ink:	Ink that colors the printed surface with dye. It is less durable than pigment ink, but has a wider color range (gamut).
Electronic Alignments:	Printer adjustments, which are performed using software routines that allow the printer to compensate for physical variations in its mechanism.
Error Diffusion:	The type of dithering (screening) proprietary to Epson, that employs a random dot pattern to ensure that the human eye can discern no pattern.
Flight Time:	The time it takes a drop of ink to travel from the print head to the printable surface.
Gamut:	The range of colors that a printer can produce.
Ghosting:	A term that refers to components of an image that are intended to be on top of each other (or adjacent), but are offset.
Gradient:	A smooth transition between one color shade, and the next. A continuous tone image requires a smooth gradient for all its tonal shifts.
Grainy:	A breakdown of the "illusion of continuous tone". A printed image that does not have smooth tonal transition, and sharp detail.

<p>Head Angular Adjustment:</p>	<p>A term that refers to a mechanical print head alignment that ensures that an ink jet's print heads nozzles are on the same vertical plane. (Also known as CR Slant.) The head is rotated until it is vertically linear.</p> 
<p>Head Gap Adjustment:</p>	<p>An electronic print head adjustment that ensures that the printer knows the exact distance between black and the other color nozzle sets. Also known as Uni-Di.</p> 
<p>Head ID:</p>	<p>The calibration value written on the print head that allows the printers electronics to compensate for the print heads "personality" (inaccuracies).</p>
<p>Head Linear Adjustment:</p>	<p>A mechanical print head alignment that ensures that on a two-head ink jet printer that all the nozzles are on the same horizontal plane. (Also known as Head Height and BC Head Slant.) The right head is moved in relation to the left head.</p> 
<p>Home Position:</p>	<p>The print head's horizontal reference position, as determined by the Home Position Sensor</p>

Horizontal Banding:	An image defect that extends from the left, to the right margin (parallel to the direction of print head movement). The defect could be a lighter or darker “band” than is intended. It usually repeats, with the same interval, from the top margin to the bottom.) Horizontal banding is caused by vertical dot placement errors (print head or paper feed related).
Horizontal Over-lap:	A type of horizontal banding, where multiple print head passes overlap while printing. The banding looks darker than the intended image. Multiple passes of the print head should place ink on the paper next to, but not on top of earlier passes.
Horizontal Under-lap:	A type of horizontal banding, where multiple print head passes have a space between them. The banding looks lighter than the intended image. Multiple passes of the print head should place ink on the paper exactly next to earlier passes with no space in between.
Illusion of Continuous Tone.	A term that refers to “fooling” the human eye into perceiving a dot matrix image as a photograph (continuous tone image). Epson ink jet printers are not continuous tone printers. However, when working properly, their printed images fool the human eye into seeing continuous tone transitions
Ink Color Contamination:	The intended color of the ink supply has been altered.
Ink Impurities:	Foreign objects in the ink supply.
Leading Edge	The first part of the media to leave the printer.
Margin Shift:	A term that refers to an image with irregular right and left side margins.
Mechanical Alignments:	Printer adjustments, that requires physically moving parts of the mechanism.
Media:	The surface that is being printed on, usually paper.
Metamerism:	The different appearance of colors caused by different light sources and viewing angles

Micro Weave:	The way an Epson Ink Jet printer interlaces (weaves) bands of an image during printing.
Moiré Pattern:	A repetitive pattern, within an image, which is not intended. It can appear like a paisley or herringbone pattern.
Nozzle Plate	The portion of the Print Head that faces the media. The print head nozzles are drilled in the nozzle plate.
Over Saturation:	Too much ink has been applied to the printable surface for the media to support.
Paint Brush Effect:	Something horizontally across the printed surface, that was not intended. Usually caused by an ink soaked fiber hanging off the print head.
Pigment Ink:	Ink that deposits colored particles (pigment) on the printed surface to create an image. It is more durable than dye based ink, but does not have as wide a color range (gamut).
Pixelated:	An image quality issue that is caused by a low-resolution image printed at high resolution.
PF Slant	The heel/toe (camber) adjustment of the Print Head. It ensures that nozzle 1 and nozzle 360 are equal distance from the media.
Platen Gap:	The distance between the print head, and the printable surface.
Rippling:	A term that refers to a condition caused by over saturated paper warping.
Saturation:	The amount of ink applied to the printed surface.
Screening:	The dot pattern placed on the printed surface to create an image. Also known as dithering.
Skew:	Crooked paper in the printer.
Smear:	An image that has been rubbed by something, causing it to be deformed, or smeared. The direction or any repetition of the smear should be noted.

Smudge:	Something on the printed surface, that was not intended. Usually transferred to the page because of contact with a dirty roller or the print head. Any repetition should be noted and measured.
Sublimation Ink:	Ink that is first printed on thermal transfer media, and then transferred using heat to another surface.
Sympathetic Nozzle:	A nozzle that is not intended to fire, firing in conjunction with an intended nozzle.
Tone:	The specific shade of a color.
Trailing Edge	The last part of the media to leave the printer.
Under Saturation:	Not enough ink has been applied to the printable surface to properly saturate the media.
Uni-D Adjustment:	An electronic print head adjustment that ensures that the printer knows the exact distance between black and the other color nozzle sets. Also known as Head Gap. 
UN-sharp:	“Fuzzy” qualities in an image usually caused by too much dot gain.
Vertical Banding, Irregular:	Vertical bands perpendicular to the direction of print head movement, that are not linear. Usually created by paper “rippling”, caused by over saturation.
Vertical Banding, Linear:	An image defect that extends from the top, to the bottom margin (perpendicular to the direction of print head movement). It usually repeats, with the same interval, from the left margin to the right.
White Specks:	A term that indicates that the intended image has small missing areas where no ink has been deposited.

Prime, On or Off

Prime, Initial Fill, and Charge mean the same thing. They all refer to filling the Ink System with ink. Controlling the Prime function requires Setting, or Resetting the Init.Fill Flag.

Init.Fill: Reset = The Printer is already primed.

Init.Fill: Set = the Printer will prime the next time it is turned on.

1. Press and hold the **Down**, **Right**, and **Enter** buttons and turn on the **Printer** (**Self Testing** mode).
2. Using the **Down** button, navigate to the **Parameter** menu, and press the **Right** button.
3. Using the **Down** button, navigate to the **Update** menu, and press the **Right** button.
4. Using the **Down** button, navigate to the **InkParameter** menu, and press the **Right** button

Note: the Printer will always display SET. This does not mean that the Init.Fill Flag is SET.

- 4.1 Change to **Reset**, and press the **Enter** button, to **turn off the Prime** routine.
 - 4.1.1 The **Printer** will display **Update Param?**
 - 4.1.2 Press the **Enter** button.
- 4.2 Change to **Set**, and press the **Enter** button, to **start a Prime** routine.
 - 4.2.1 The **Printer** will display **Update Param?**
 - 4.2.2 Press the **Enter** button.

Revision History

October 6, 2010

1. The Firmware History chapters were updated.
2. A chapter titled PCU (Plate Curing Unit) Troubleshooting was added to the Troubleshooting Section.
3. A chapter titled CTP Alignment was added to the Adjustment Section.
4. A chapter titled CTP Explanation was added to the Reference Section.

July 08, 2010

1. The Firmware history Chapters were updated.

June 08, 2010

1. A chapter on SpectroProofer Troubleshooting was added to the Troubleshooting Section.

March 22, 2010

1. The Control Panel Map was modified to reflect changes implemented by new firmware.
2. The 7900 Firmware History chapter was updated.
3. The 9900 Firmware History chapter was updated.

February 9, 2010

1. A chapter titled Ink Holder Assy Adjustment was added to the Adjustment section.
2. A chapter titled Ink Bay Installation (Left) was added to the Component Replacement section.
3. A chapter titled Ink Bay Installation (Right) was added to the Component Replacement section.
4. A chapter titled Missing Nozzle Diagnosis was added to the Troubleshooting section.
5. A chapter titled AID Issue Troubleshooting was added to the Troubleshooting section.

January 28, 2010

1. The Main Board Installation chapter was modified to reflect new information about writing the MAC Address.
2. A chapter titled Remote Panel was added to the Utility Section.
3. A chapter titled Epson Net Config was added to the Utility Section.
4. A chapter titled Service Procedure (recommended) was added to the Reference Section.
5. A chapter titled Media Feed Step (about) was added to the Reference Section.
6. A chapter titled Firmware History (Ethernet) was added to the Reference Section.
7. The Input MAC Address chapter was modified to reflect new information.
8. A chapter titled Vertical Banding was added to the Troubleshooting Section.

9. A chapter titled Random Nozzles was added to the Troubleshooting Section.
10. A chapter titled Stuck in Cut Sheet Mode was added to the Troubleshooting Section.
11. A chapter titled Smear was added to the Troubleshooting Section.
12. A chapter titled Smudge was added to the Troubleshooting Section.
13. A chapter titled Scratch was added to the Troubleshooting Section.
14. A chapter titled Horizontal Banding was added to the Troubleshooting Section.
15. A chapter titled Grainy or Ghosting was added to the Troubleshooting Section.

December 23, 2009

1. The ServProg.exe chapter located in the Utility section was modified to reflect the change in utility security policy. ***Servprog.exe is no longer ASI enabled, and is available for download on Epson Insider.***

November 03, 2009

1. The Printer Error Codes (Maintenance) chapter was updated.
2. The Firmware History Chapter was updated.

August 10, 2009

1. The Firmware History chapters were updated.

June 18, 2009

1. The Printer Error Codes (Service) chapter was updated to reflect new data on the 1497 Error.
2. The Board (Main) installation chapter was modified to reflect new information on Generic Parameter installation.
3. The NVRAM Backup Utility chapter was modified to reflect new information on Generic Parameter installation.
4. The PF Slant Adjustment Chapter was modified to reflect the newly released procedure.

May 28, 2009

1. A Connector and Wiring chapter was added.
2. Control Panel Map was modified to reflect new data.
3. A chapter on Servprog.exe was added to the utility section.
4. The Cutter Blade Assembly Removal chapter was modified.
5. The Firmware History chapters were updated.
6. A chapter on the NVRAM.exe utility was added to the Utility section.
7. A chapter titled Cleaning Cycles (Types and Uses) was added to the Reference section.
8. A chapter titled Damper Assembly Pictures was added.
9. A chapter titled Carriage Assembly Pictures was added.

10. A chapter titled Option Error Codes was added to the Troubleshooting section.
11. A chapter titled PF Slant Adjustment was added to the Adjustment section.
12. A chapter titled Ink Draining Procedure was added to the Reference section.
13. A chapter titled Damper Assembly Removal was added to the Component Replacement chapter.
14. A chapter titled Ink Bay (Left) Removal was added to the Component Replacement chapter.
15. A chapter titled Ink Bay (Right) Removal was added to the Component Replacement chapter.
16. A chapter titled Feed Adj(ustment) was added to the Adjustment section.

March 5, 2009

1. A Setting Destination chapter was added.
2. A Rewind Cover Removal chapter was added.
3. An Ink Mark Sensor Removal chapter was added.
4. An Edge Detector Removal chapter was added.
5. An Ink Mark Sensor Position Adjustment chapter was added.
6. An AID Check chapter was added.
7. A Cleaning PG Adjustment chapter was added.
8. A3 paper sizes were added to the TBS Pos chapter.

9. The Error Code chapter was updated to reflect new information regarding the 2010 error code.

February 24, 2009

1. The Firmware History chapters were updated.
2. Multiple Component Replacement chapters were added.
3. Multiple Adjustment chapters were added.

February 2, 2009

1. Multiple chapters dealing with counter resets were added.
2. Multiple chapters dealing with how to write data to the board were added.
3. A CR Head Slant chapter was added.
4. A chapter on how to replace the Wiper Blade was added.

December 12, 2008

1. Second Beta Release.
 - 1.1 Various errors were corrected.
 - 1.2 Updated information regarding current adjustment names were incorporated.

November 26, 2008

1. Initial Beta Release

Sensors, Motors, Solenoids, and Fans

<p>Home Position Sensors:</p>	<p>Carriage HP Sensor (Detects the Home Position of the Carriage Mechanism)</p> <p>Platen Gap HP Sensor (Detects platen gap home position)</p> <p>Pump Valve HP Sensor (Detects the position of the Suction Valves)</p> <p>Cap Home Position Sensor (detects the home position of the Cap Assembly)</p> <p>Pinch Roller Release HP Sensor (Detects the position of the Pinch Roller Release Mechanism)</p> <p>Cutter HP Sensor (Detects the position of the Cutter Blade)</p> <p>Flushing Box HP Sensor (Detects the position of the Flushing Box and Wiper)</p>
<p>CSIC's</p>	<p>Waste Ink CSIC (7900 qty-1)(9900 qty-2)</p> <p>Ink Cartridge CSIC (qty-11)</p>
<p>Status Sensors:</p>	<p>Left and Right Ink Cover Sensor (qty2) (Detects open and closed for the Ink Covers)</p> <p>Left and Right Front Cover Sensors (qty2)(Detects Front Cover open and closed)</p> <p>Ink Selector Sensor (Detects the position of the MK/PK Valve)</p>

<p>Encoders:</p>	<p>Carriage Encoder (CR Encoder)(Carriage position and dot timing)</p> <p>Paper Feed Encoder (PF Encoder) (Paper advance timing).</p> <p>Pressure Pump Encoder (Detects the rotation of the Pressure Pump Motors)</p> <p>Platen Gap Encoder (Detects the rotation of the Platen Gap Motor)</p> <p>Pinch Roller Encoder (Detects the rotation of the Pinch Roller Motor)</p> <p>Rewind Motor Encoder (Detects the rotation of the Rewind Motor)</p> <p>Cutter Encoder (Detects the rotation of the Cutter Motor)</p> <p>Flushing Box Encoder (Detects the rotation of the Flushing Box Motor)</p> <p>Cap Motor Encoder (Detects the rotation of the Cap Motor)</p>
<p>Paper Sensors:</p>	<p>RearAD Detects the trailing edge of paper</p> <p>EdgeAD(detects paper width and leading edge)</p> <p>Paper Thickness Sensor (2 Sensors) (Detects paper thickness and Paper Release Mechanism open or closed)</p>
<p>Auto Alignment Sensors:</p>	<p>Ink Mark Sensor (Reads bar code, Auto alignments)</p>
<p>Pressure Sensor</p>	<p>Ink System Pressure Sensor (Ink Press) (Detects the Ink System pressure)</p>

<p>Temperature Sensors:</p>	<p>Head Temperature Sensor (Detects the temperature of the Head Driver Heat Sink) Head Driver Temperature Sensor (Detects the temperature of the Print Head Nozzle Plate)</p>
<p>Motors</p>	<p>Carriage Motor: Moves the Carriage Assembly. Paper Feed Motor: Moves the Paper Feed Roller Pump Motor: (Pump Motor) Runs the Cleaning Pump, switches the Pump Valves Pressure Pump Motor:(Runs the Ink System Pressure Pump) Auto Platen Gap Motor (Sets the platen gap) Cap Assembly Motor (Moves the Cap Assembly) Rewind Motor (Moves the Paper Roll Assembly) Cutter Motor (Moves the Cutter Blade) Ink Selector Motor (Moves the PK/MK Valve) Flushing Box Motor (Moves the Flushing Box and Wiper Blade)</p>
<p>Solenoids</p>	<p>Cutter Solenoid: (Cuts media) Paper Release Lock Solenoid (Locks the Paper Release Lever) Left and Right Ink Cover Lock Solenoid (Releases the Ink Covers)</p>
<p>Fans</p>	<p>Paper Suction Fans: (7900 qty. 2)(9900 qty. 3))(Creates suction to hold down the media)</p>

Service Procedure (recommended)

1. Observe the customer's service issue.
2. Clean or replace the Cleaning Station
 - 2.1 Perform the **Clear Counter [When replacing Pump Motor]**.
3. Clean or replace the **Wiper Blade**, and **Wiper Blade Cleaner**.
 - 3.1.1 Clean the **Print Head Nozzle Plate** if necessary.
 - 3.1.2 Perform the **Clear Counter [When replacing the Wiper]**.
4. Perform the **Clear Counter [When replacing the CR Motor]**.
5. Clean and check the **Borderless Pads**. Replace if necessary.
6. Blow off the **IM Sensor**.
7. Blow off the **Carriage Encoder**.
8. Clean the **Timing Strip** with a damp soft cloth (**Encoder Strip**)
9. Update the Printer **Firmware** to the current version if necessary.
10. Update the Ethernet **Firmware** to the current version if necessary.
11. Repair the customer's service issue, if cleaning did not fix it.
12. Perform the **TBS Pos** Adjustment.

13. Perform the **Gap Adjust: Auto Bi-D** Adjustment.
14. Perform the **Gap Adjust: Auto Uni-D** Adjustment.

Service Tools

Service Part Number	Description
1047746	1000mm Scale (meter stick)
1033657	Grease G-45
1480655	Grease G-71
1409257	Grease G-74
1516265	Grease G-84
1500853	Draining Cartridge (qty-1) 5 required to drain the Printer
1500854	Cleaning Cartridge (qty-1) 5 required to clean the Printer
1507278	Cleaning PG Adjustment Jig
1507506	PG Height Adjustment Jig (1.65)
1507277	PG Height Adjustment Jig (1.75)
1424364	Paper Thickness Sensor Position Jig (.5mm)
1282355	Paper Thickness Sensor Position Jig (.4,.8,.9mm)
1424365	Ink Mark Sensor Position Jig (2.6mm and 2.7mm)

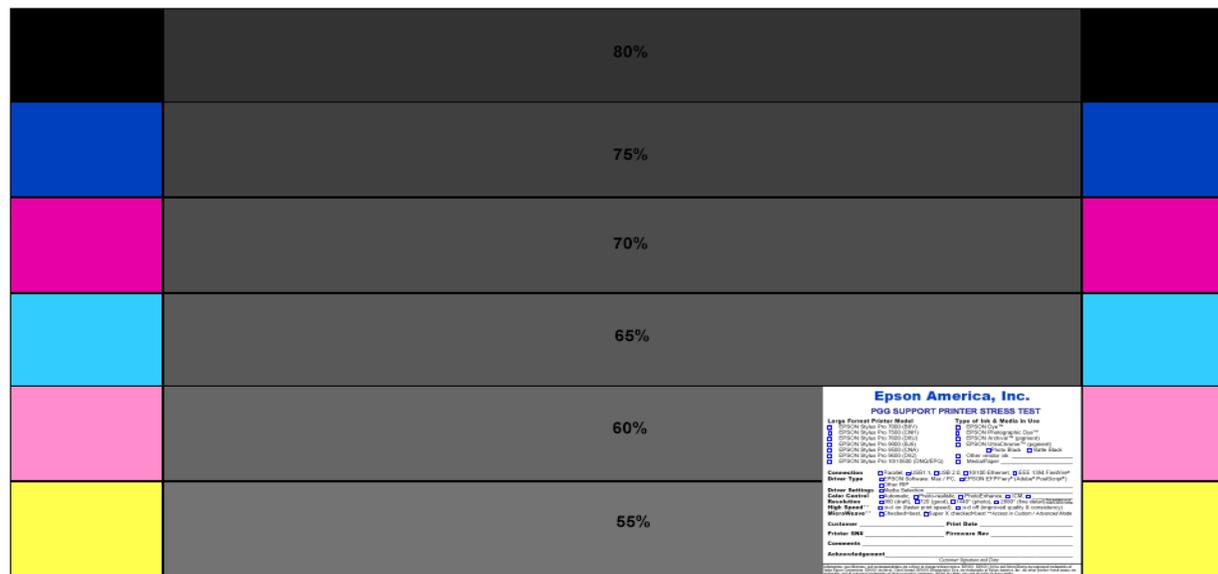
Stress Test (Test Image)

Purpose:

The Printer Stress Test was designed to amplify any print quality issues. It is for diagnosis purposes only. It never looks perfect. There is always some horizontal and vertical banding.

Use:

1. Use it to compare Non-Epson Drivers against the Epson Driver.
2. Use it to look for image quality variances across the entire printable area of the printer.



Is the vertical banding consistent across the entire image?

Is the horizontal banding consistent across the entire image?

Is the density consistent across the entire image?

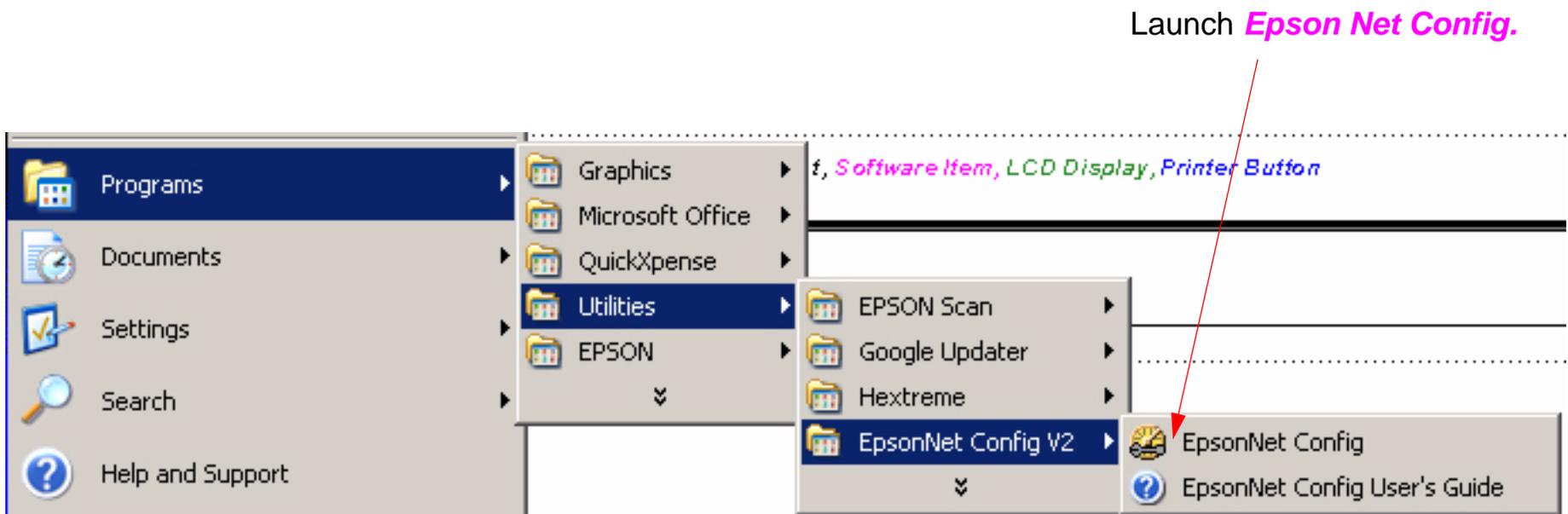
If the answer to any of the above questions is no, **Contact Epson**. It may be a parallelism issue.

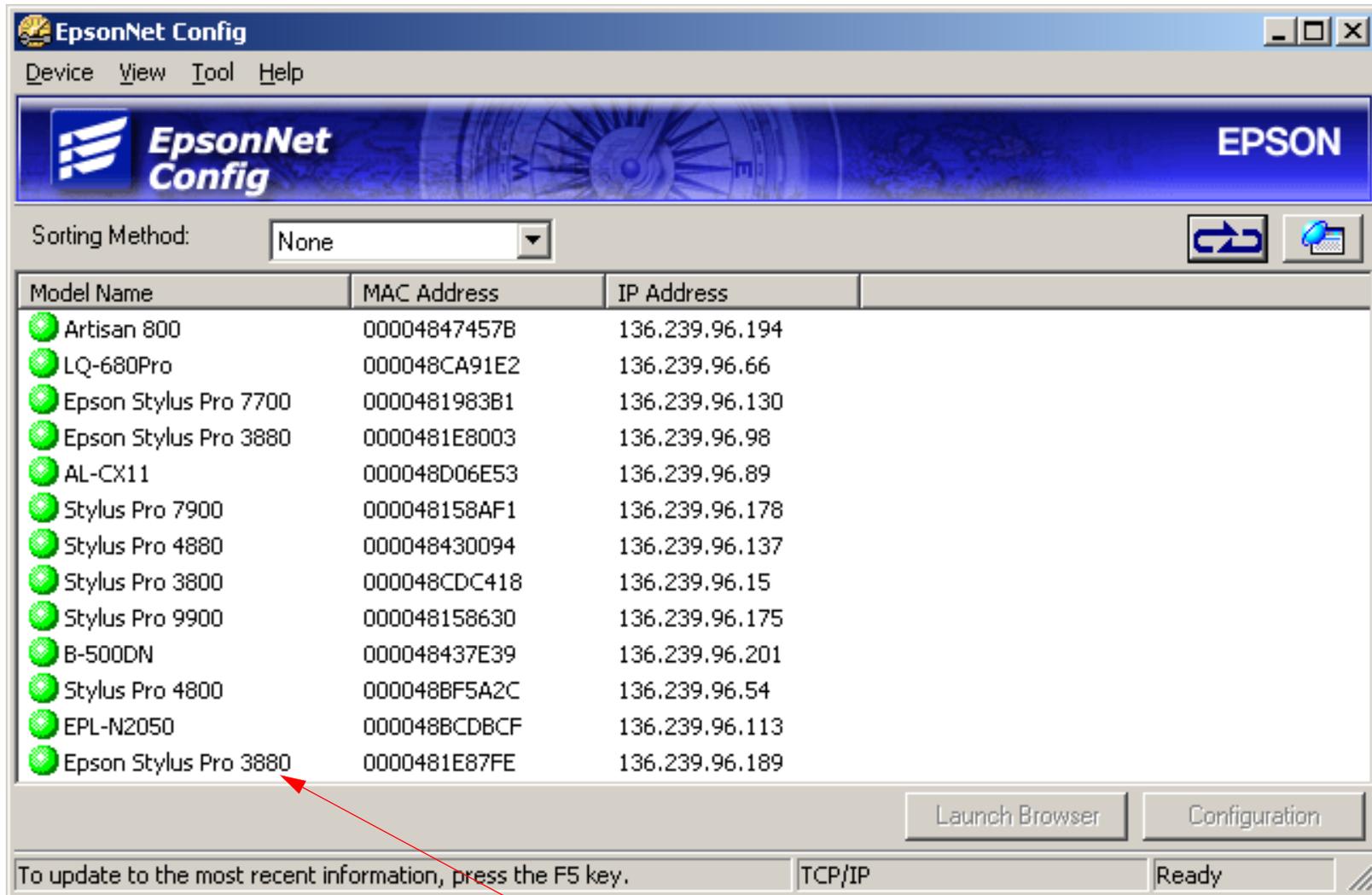
Utilities

Epson Net Config 2.2b

Note: *Epson Net Config is a user utility that allows the user to upgrade an Epson Printer's ethernet firmware, and configure TCPIP settings. Additionally it will display all of the Epson Printers on the same network as the host computer.*

1. Install **Epson Net Config**.
2. Ensure that the host computer is on the same network as the Printer(s) to be accessed.
3. Launch **Epson Net Config**.

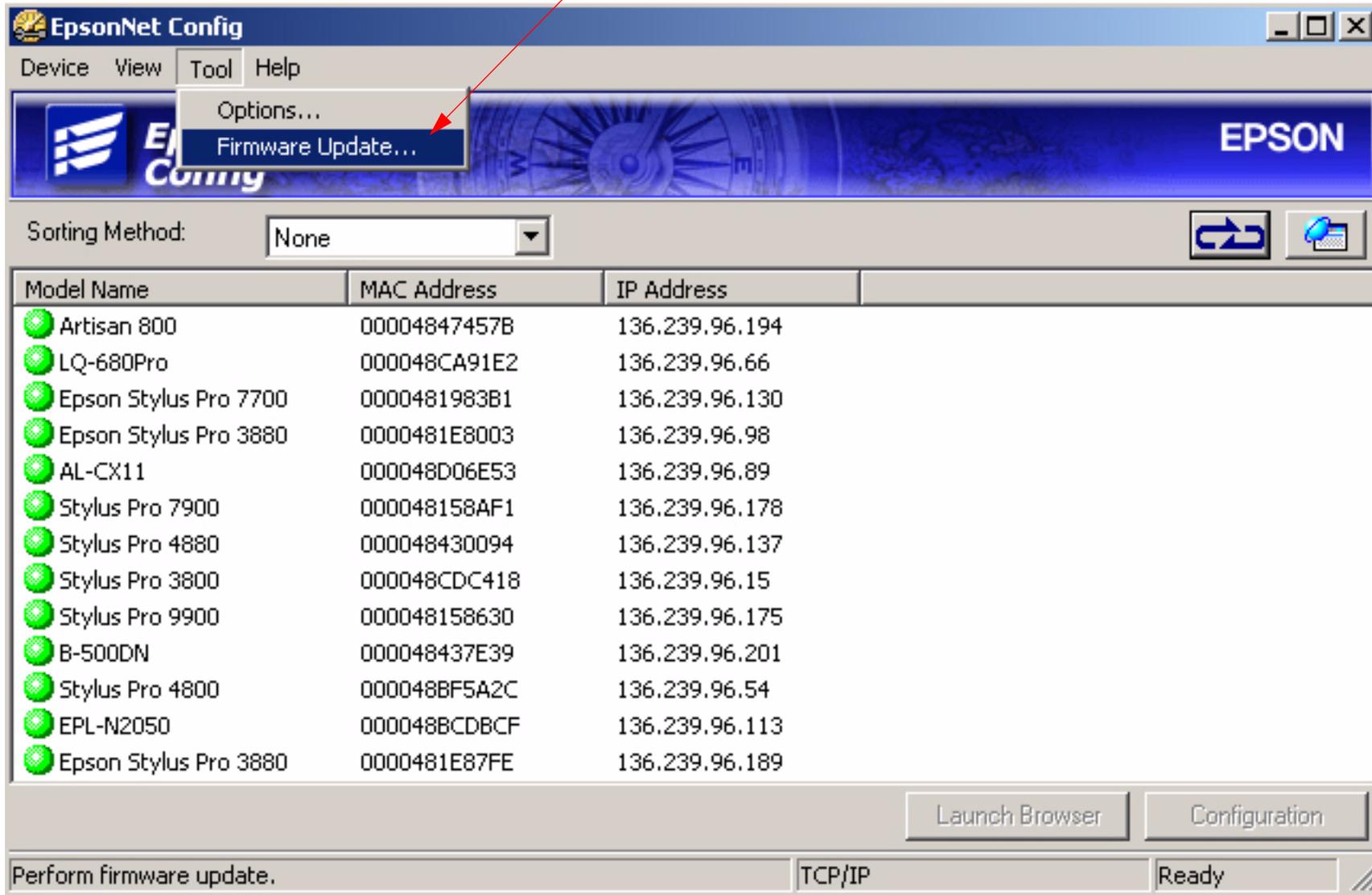


4. *Epson Net Config* main screen.

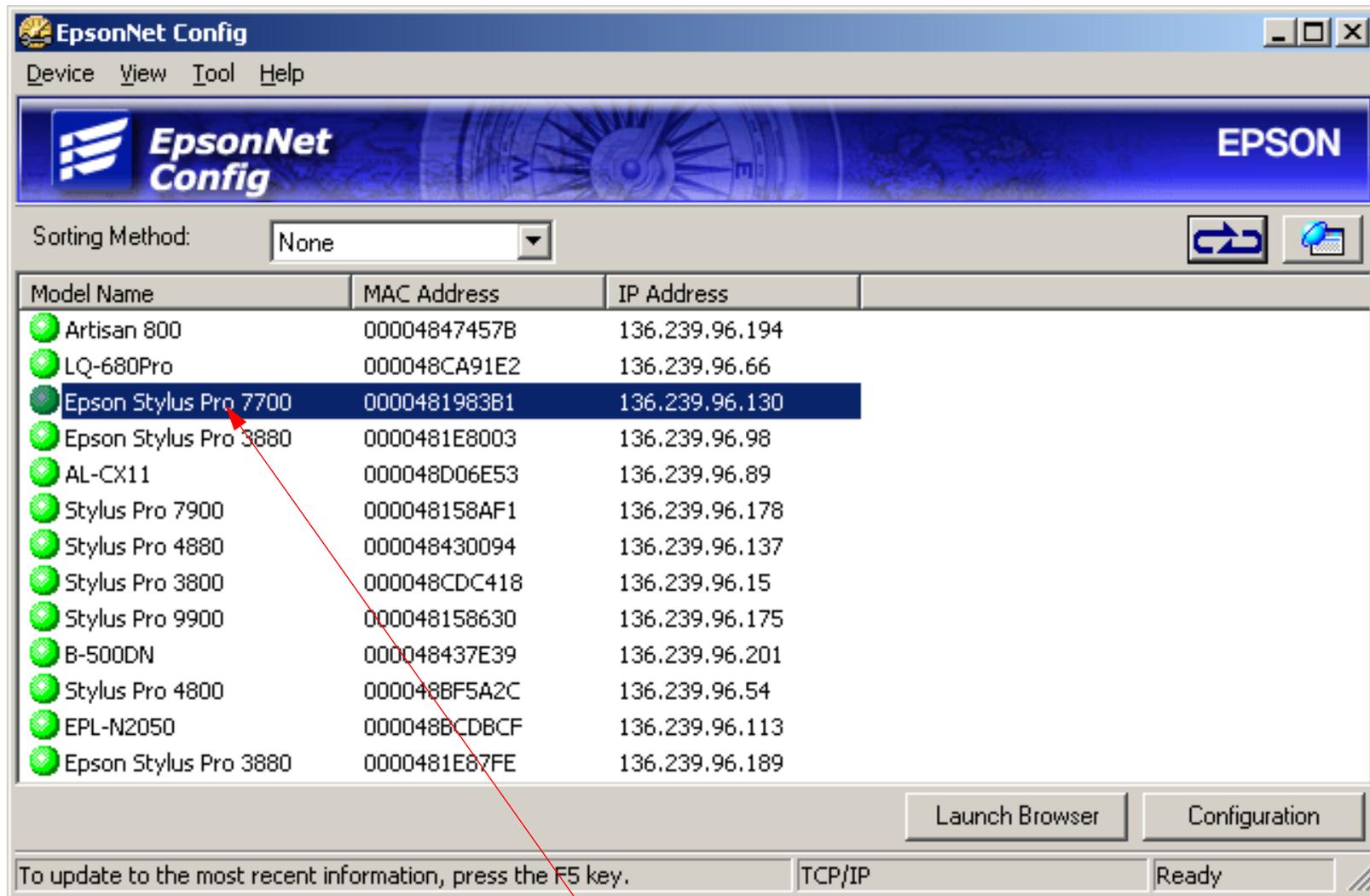
Displays all of the *Epson Printers* on the network.

5. To Update a Printer's Ethernet Firmware.

Click on **Tool: Firmware Update** to start the **Update Wizard**.

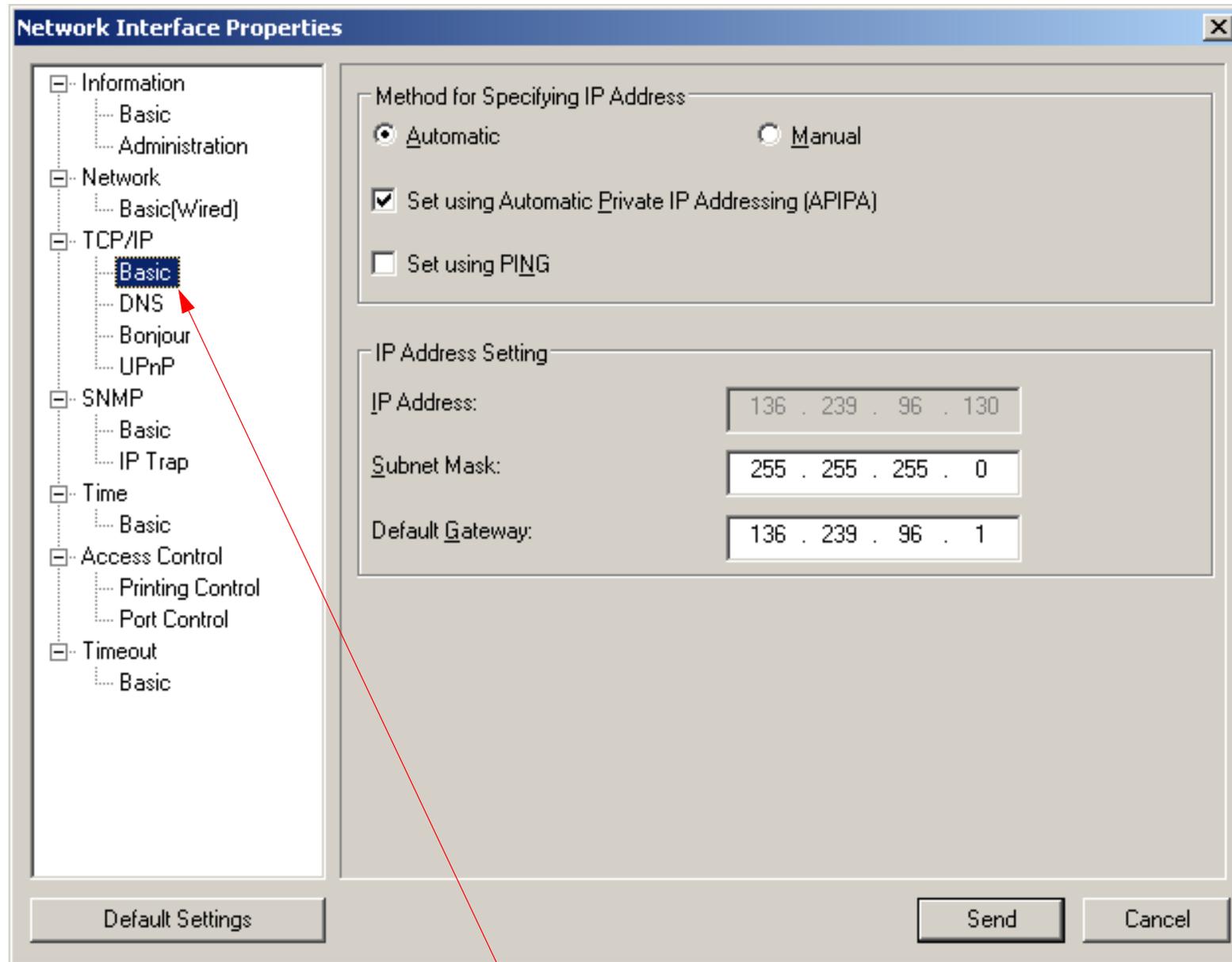


6. To Configure a Printer's TCPIP settings.



Double Click on the **Printer** to be configured.

7. To Configure a Printer's TCPIP settings (continued)



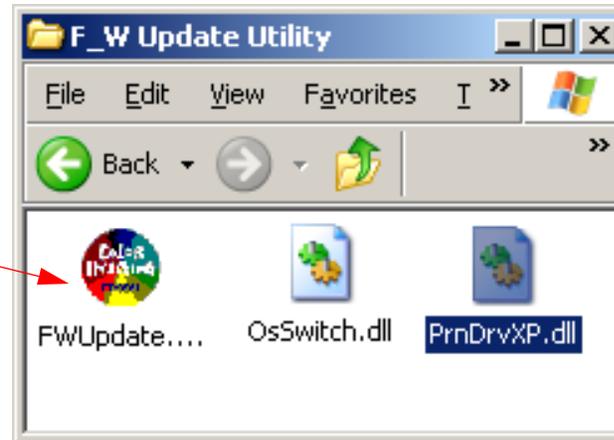
Click on **Basic** to access the TCPIP configuration screen.

FWUpdate.exe

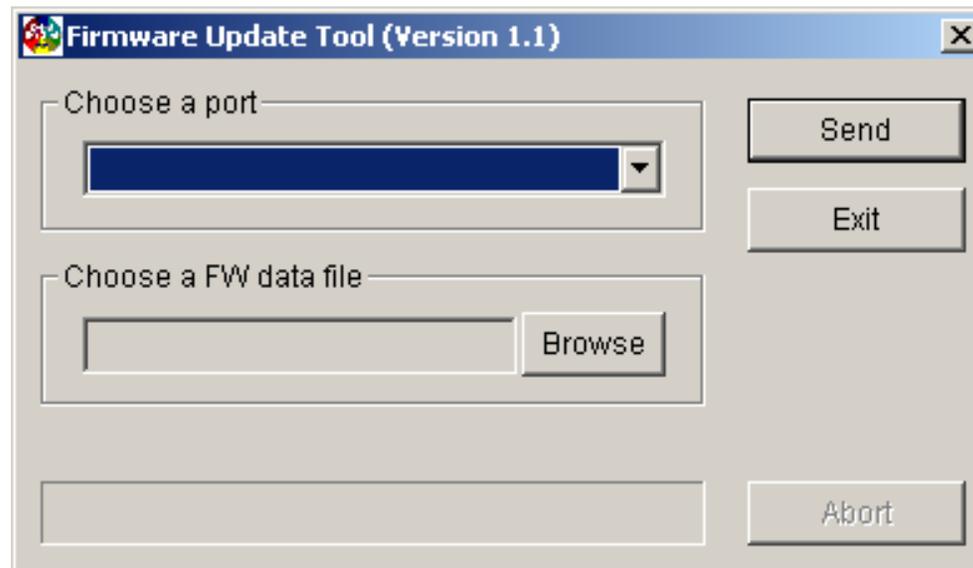
Note: *FWUpdate.exe* is used to copy Firmware to the Printer and works without the printer driver being installed.

1. Double Click on the *FWUpdate.exe* utility Icon.

Double Click on this Icon.

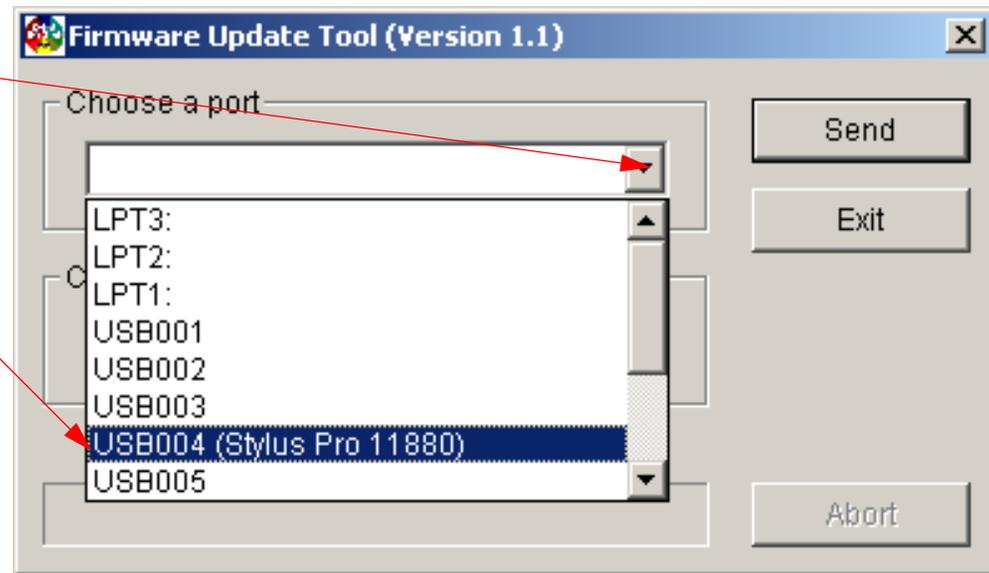


2. The utility will open and look like this.



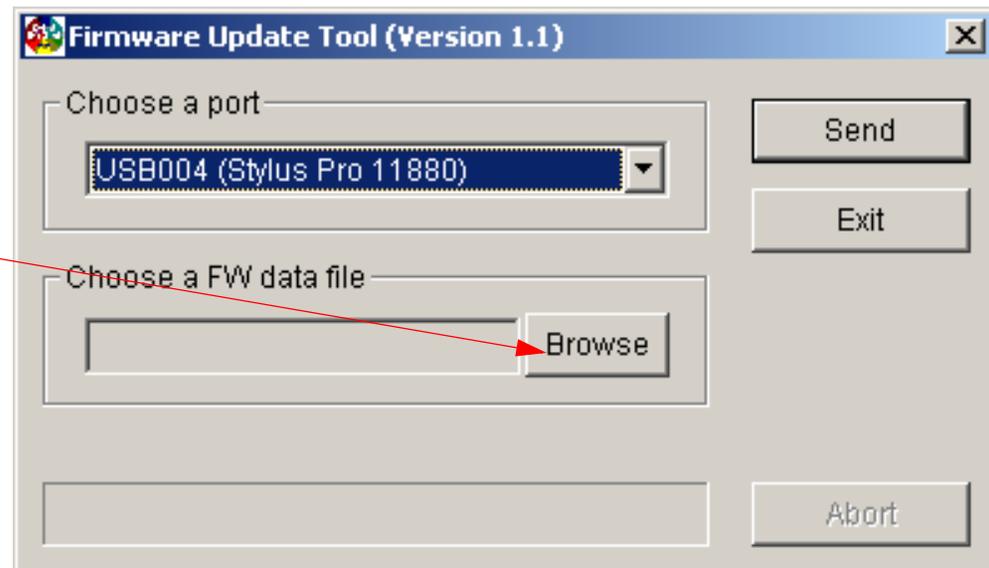
3. Choose a **Port/Printer**.

1. Click on the **Down Arrow** to open up the list of **Ports**.
2. Select the **Port** that is connected to the **Printer** that requires firm-



4. Click on **Browse** and navigate to the **Firmware File** to be uploaded to the **Printer**.

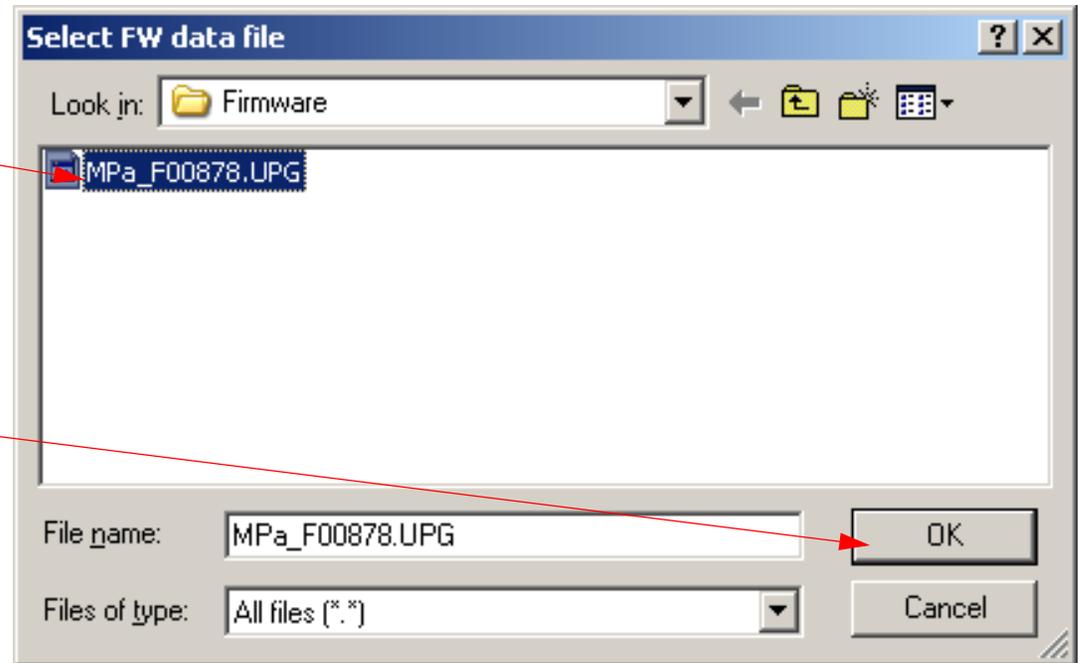
Click on **Browse**.



5. Select the correct *Firmware File*.

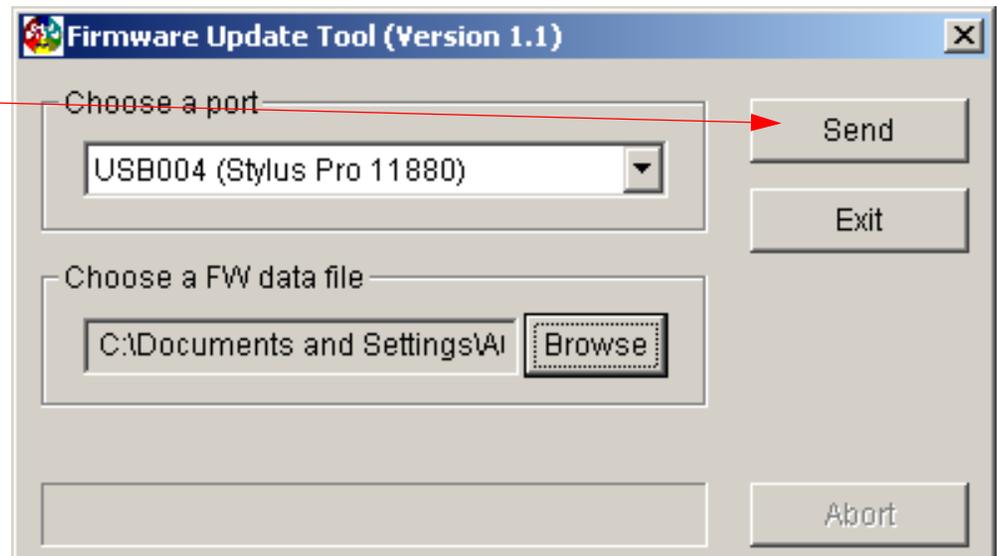
1. Select the correct *Firmware File*.

2. Click on *OK*.



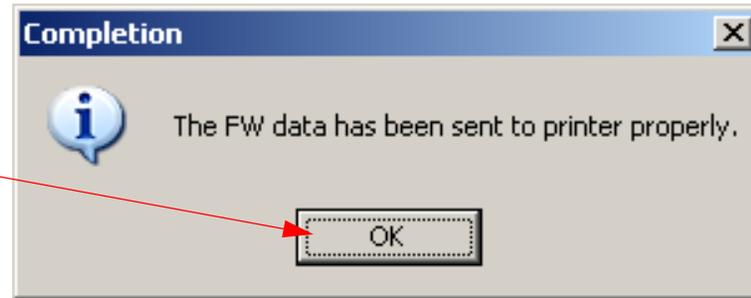
6. Click on *Send* to upload the *Firmware* to the *Printer*.

Click on *Send* to upload the *Firmware*.



7. The utility will display this, click on **OK**.

Click on **OK**



NV-RAM BACKUP UTILITY

Note: The **NV-RAM BACKUP UTILITY** “backs up” and restores the unique data that is on each Printer’s Main Board, and should be transferred to a new Main Board.

Uses for the **NV-RAM BACKUP UTILITY**.

1. At **Main Board** exchange

- 1.1 Backing up the unique data resident on each **Printer’s Main Board**.
- 1.2 Restoring the unique data onto the **Printer’s New Main Board**.

Note: When installing a New Main Board, use Generic NVRAM Data (Generic Parameters) if the Printer’s unique NVRAM data is not available. Follow the procedure documented in the Main Board Installation Chapter.

Note: Install **Photo Black Generic Parameters** on a Printer that is in photo black mode, or **Matte Black Generic Parameters** on a Printer that is in Matte Black Mode. Remove the paper and disconnect all optional devices (Take Up Reel and Spectroproofers). This matches the Printer to the Generic Parameters.

2. Troubleshooting

- 2.1 Note the **Printer’s** symptom.
- 2.2 Backup and store the **Printer’s** unique **NVRAM Data**.
- 2.3 Load Generic **NVRAM Data** onto the **Printer’s Main Board**.
- 2.4 Note any change in the **Printer’s** symptom.

Note: A change in the printers symptom indicates that the Printer’s unique **NVRAM Data** is contributing to the symptom.

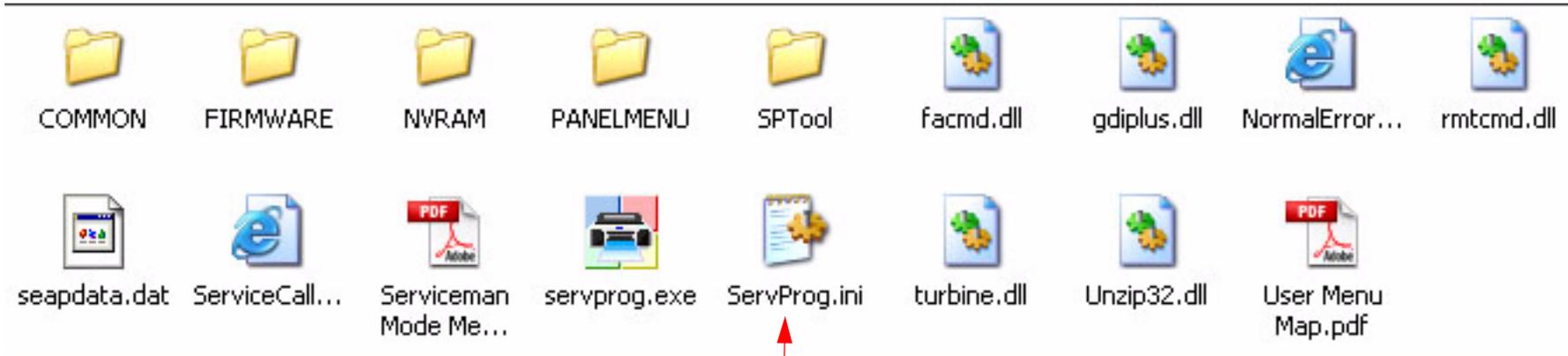
- 2.5 If there **is no change** in the **Printer's** symptom, restore the **Printer's** unique **NVRAM Data**.
 - 2.6 If there **is change** in the **Printer's** symptom, leave the **Generic NVRAM Data** on the **Printer**, and follow the procedure documented in the Main Board Installation Chapter for using **Generic NVRAM Data (Generic Parameters)**.
3. Restore point(s)
 - 3.1 Backup and save **NVRAM Data** to create restore points when experimenting with electronic adjustments.

About **NVRAM Viewer**

Note: **NVRAM Viewer** is a feature of the **NV-RAM BACKUP UTILITY**. It allows the viewing of selected information from the “backed up” NVRAM data. When enabled, it automatically allows viewing of the NVRAM data prior to saving the NVRAM data.

Enabling *NVRAM Viewer*.

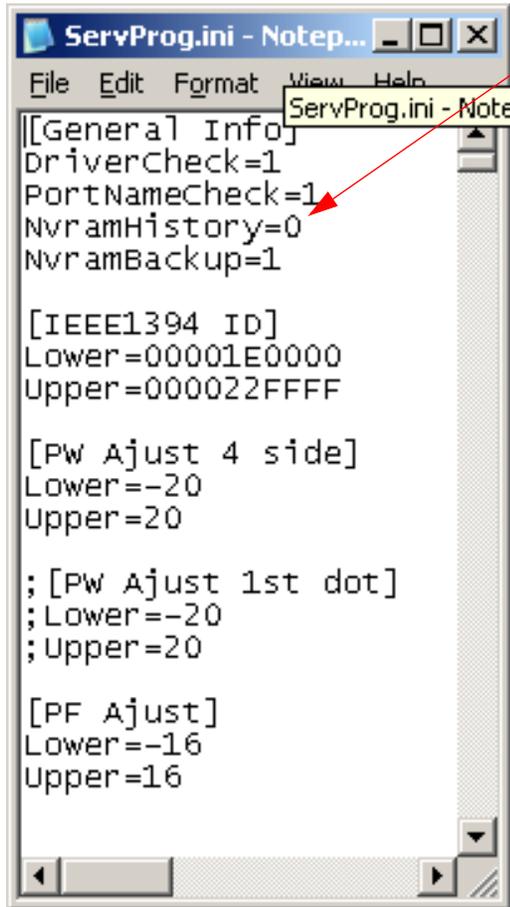
1. Open *ServProg.ini* with a text editor (*Note Pad* used for this example).



Open *ServProg.ini* with a text editor.

2. Modify *ServProg.ini*

1. Change this **0** to **1**.



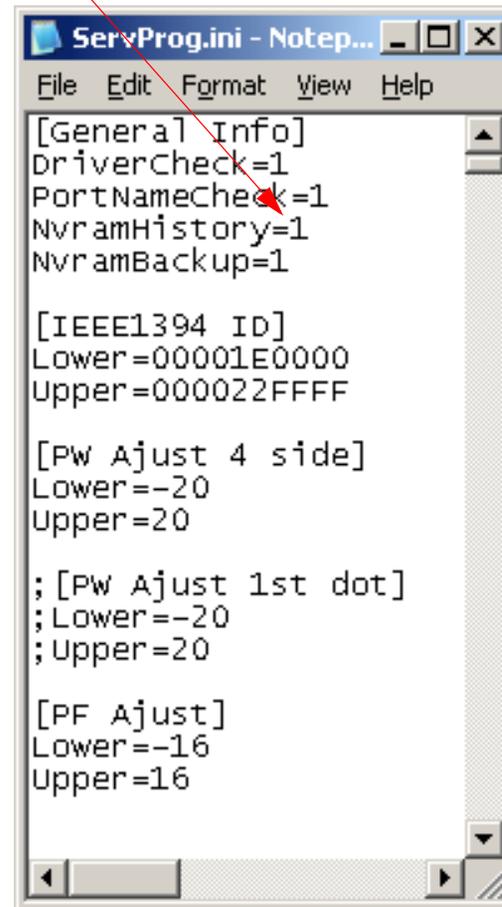
```
[[General] Info]
DriverCheck=1
PortNameCheck=1
NvramHistory=0
NvramBackup=1

[IEEE1394 ID]
Lower=00001E0000
Upper=000022FFFF

[PW Ajust 4 side]
Lower=-20
Upper=20

; [PW Ajust 1st dot]
; Lower=-20
; Upper=20

[PF Ajust]
Lower=-16
Upper=16
```



```
[General] Info]
DriverCheck=1
PortNameCheck=1
NvramHistory=1
NvramBackup=1

[IEEE1394 ID]
Lower=00001E0000
Upper=000022FFFF

[PW Ajust 4 side]
Lower=-20
Upper=20

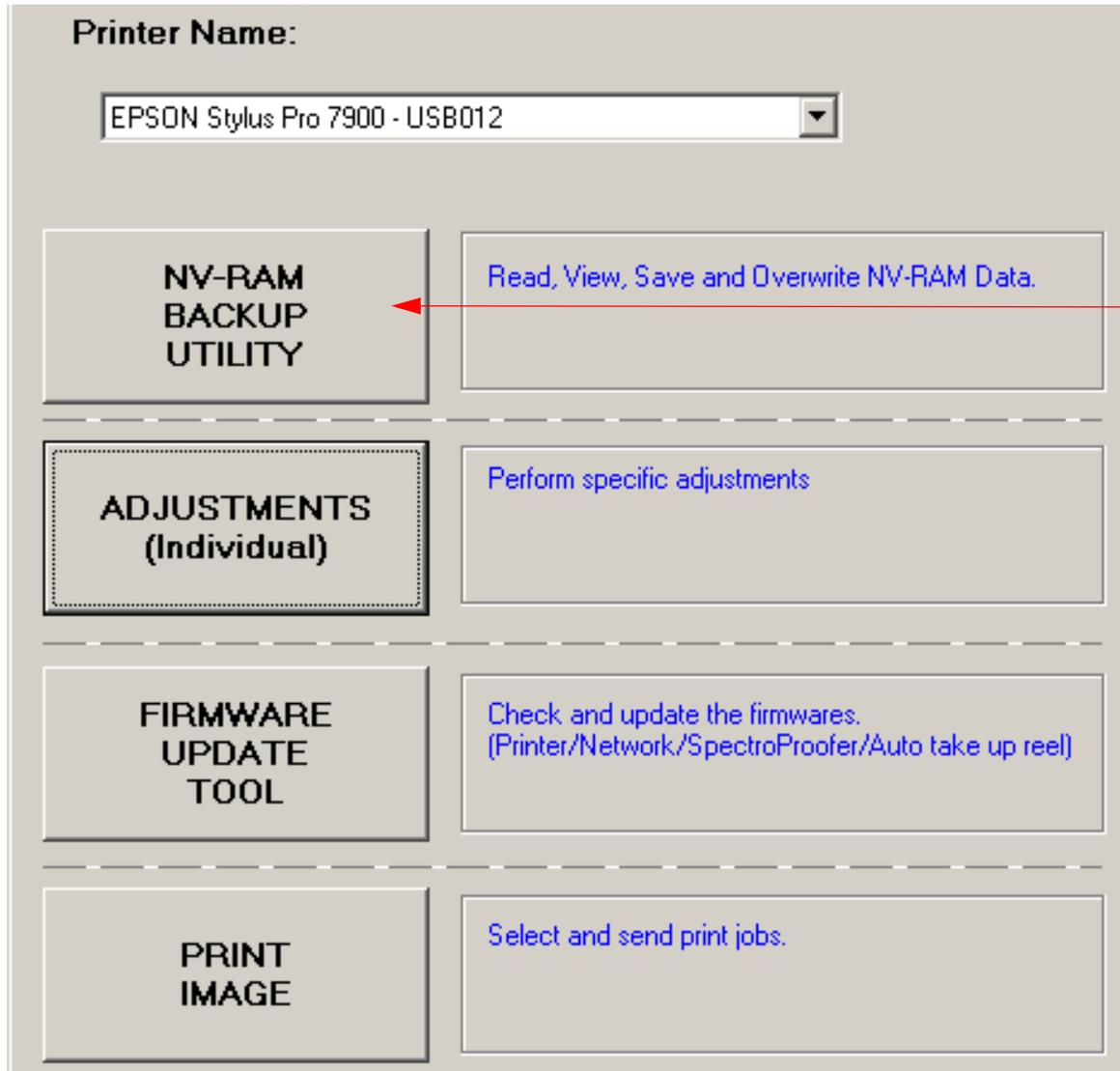
; [PW Ajust 1st dot]
; Lower=-20
; Upper=20

[PF Ajust]
Lower=-16
Upper=16
```

2. Save and close *ServProg.ini*.

NVRAM Backup

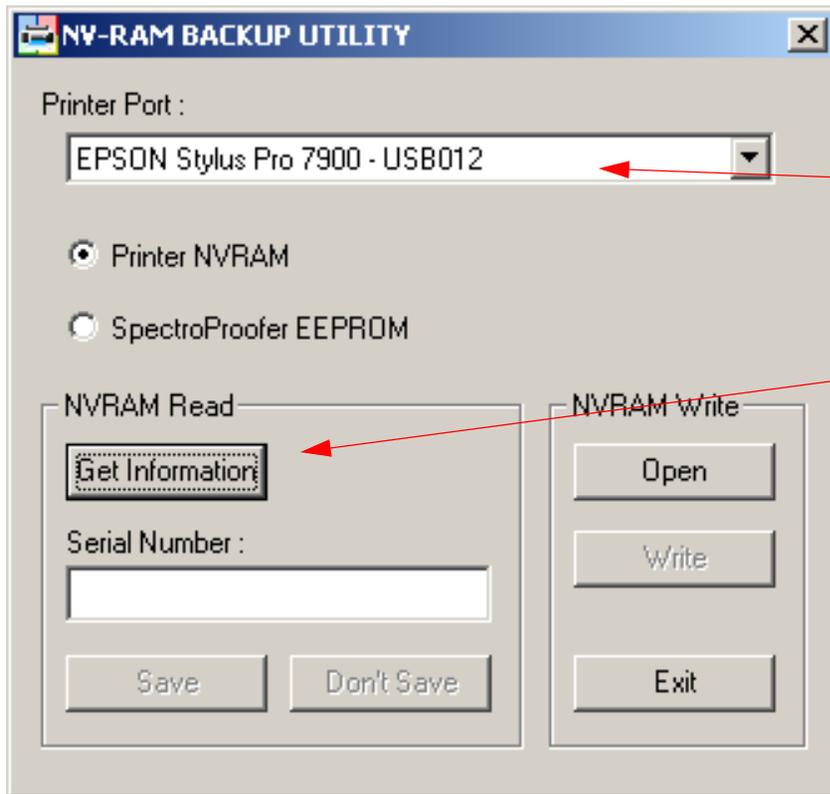
1. From **Servprog.exe** for the 7900 and 9900, select **NV-RAM BACKUP UTILITY**.



Click on **NV-RAM BACKUP UTILITY**.

2. To “back up” NVRAM Data.

1. Start the Printer in NVRAM Data Backup Mode: (Hold the **Up**, **Down**, **Left**, and **Right** buttons and turn on the power. The Printer will display **F/W Download**).

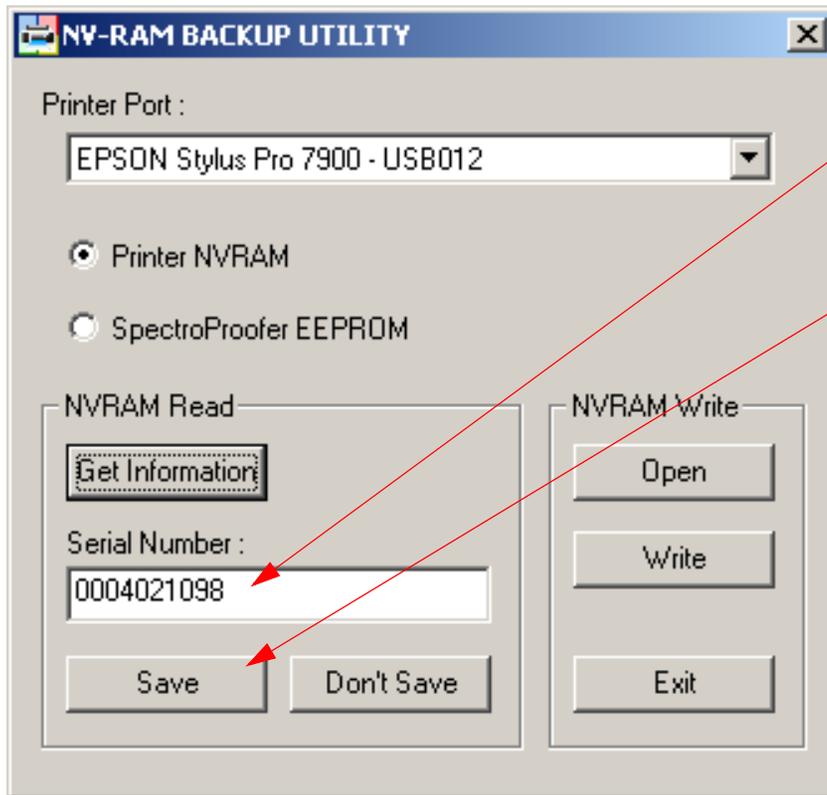


2. Select the correct **Printer/Driver** connection.

3. Click here to start the “backup”

4. The utility will display this while “backing up” the data.





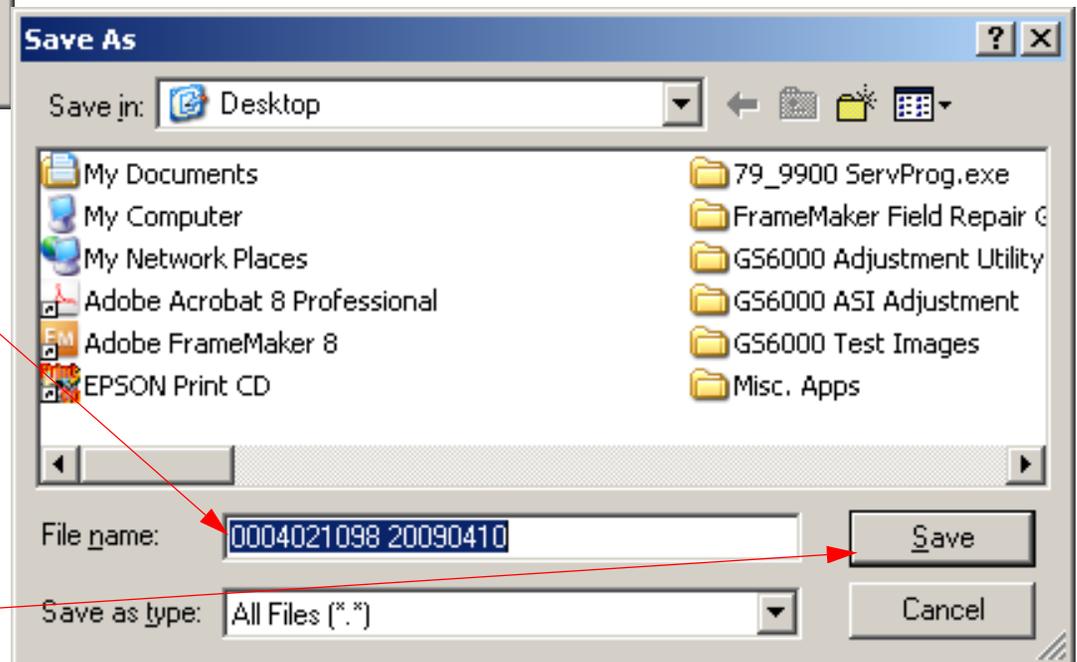
5. The Printer's Serial # will be displayed here.

6. Click on **Save**.

7. The utility will enter the date and serial number for the default file name. Change the name if desired.

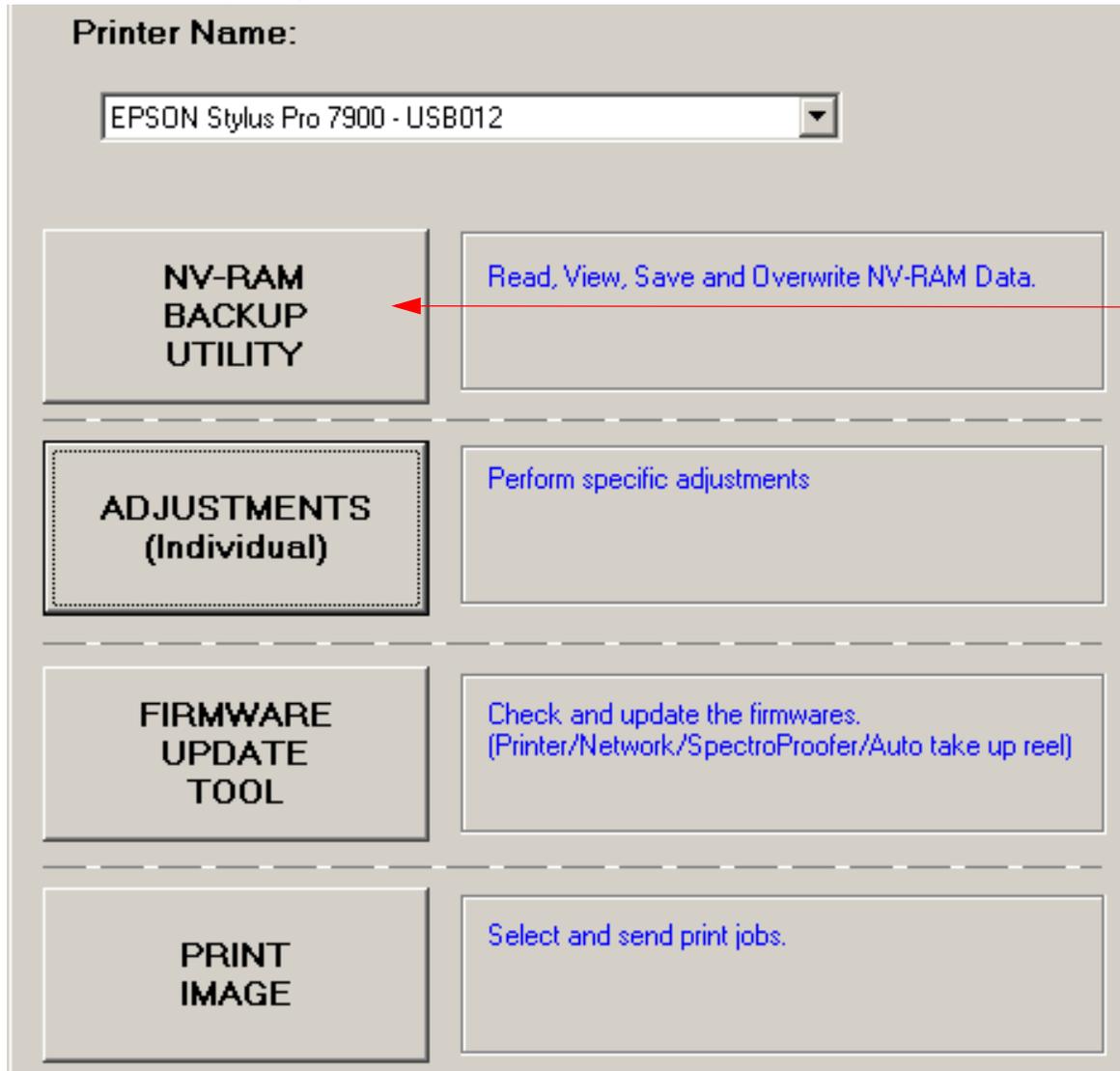
8. Navigate to the appropriate location to save the file (**Desktop** recommended).

9. Click on **Save**.



NVRAM Restore

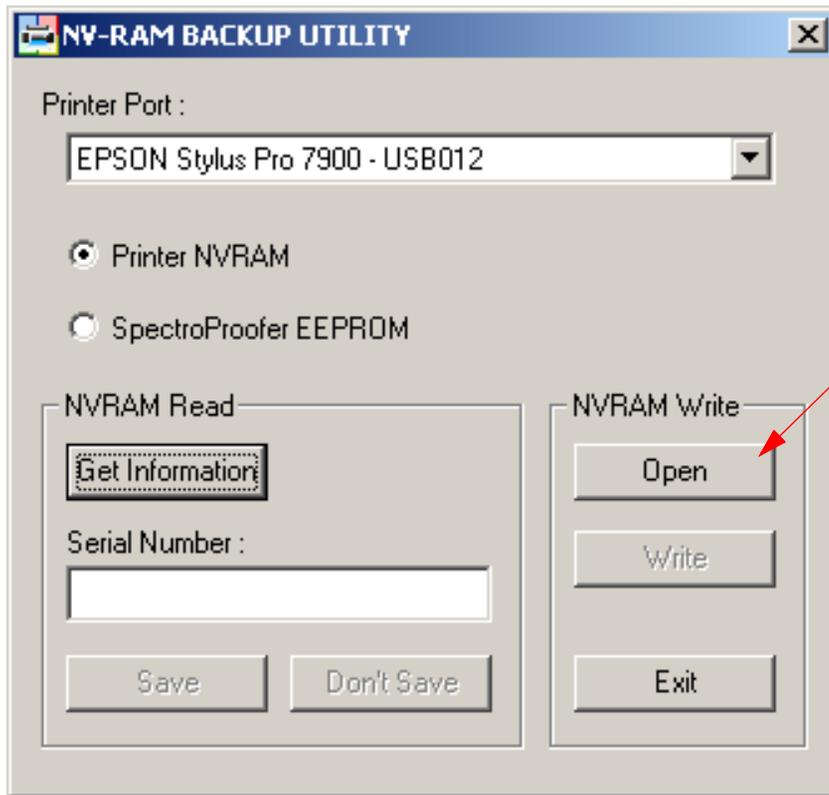
1. From **Servprog.exe** for the 7900 and 9900, select **NV-RAM BACKUP UTILITY**.



Click on **NV-RAM BACKUP UTILITY**.

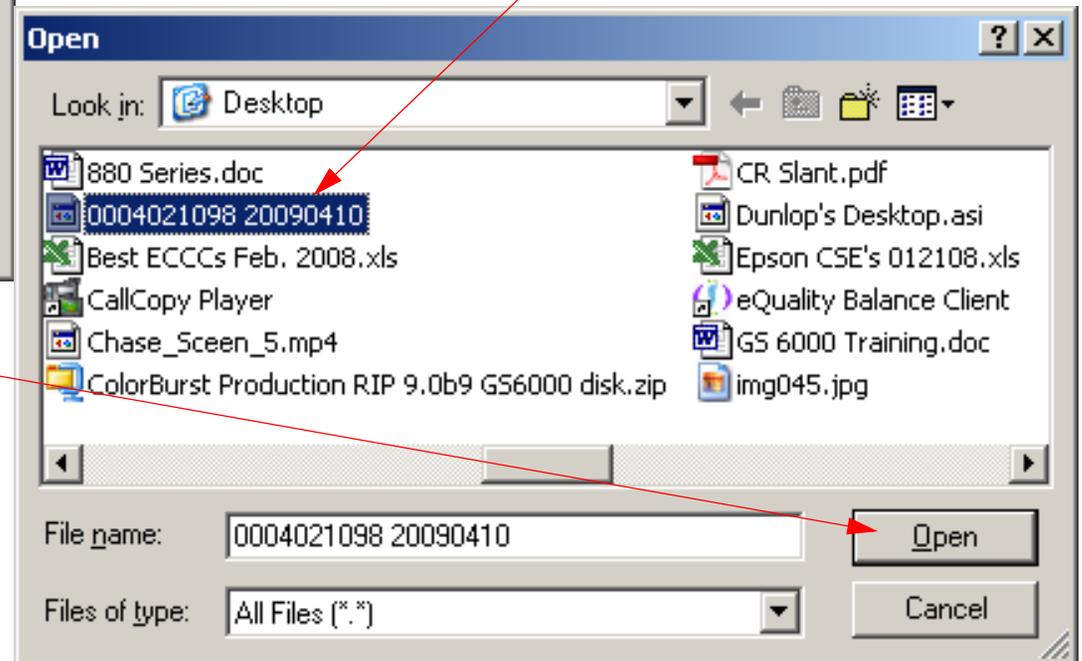
2. To “restore” NVRAM Data.

1. Start the Printer in NVRAM Data Restore Mode: (Disengage **11 Ink Cartridges**, remove the **1 (or 2) Maintenance Tank(s)**, hold the **Up**, **Down**, **Left**, and **Right** buttons and turn on the **Printer**).



2. Click on **Open**.

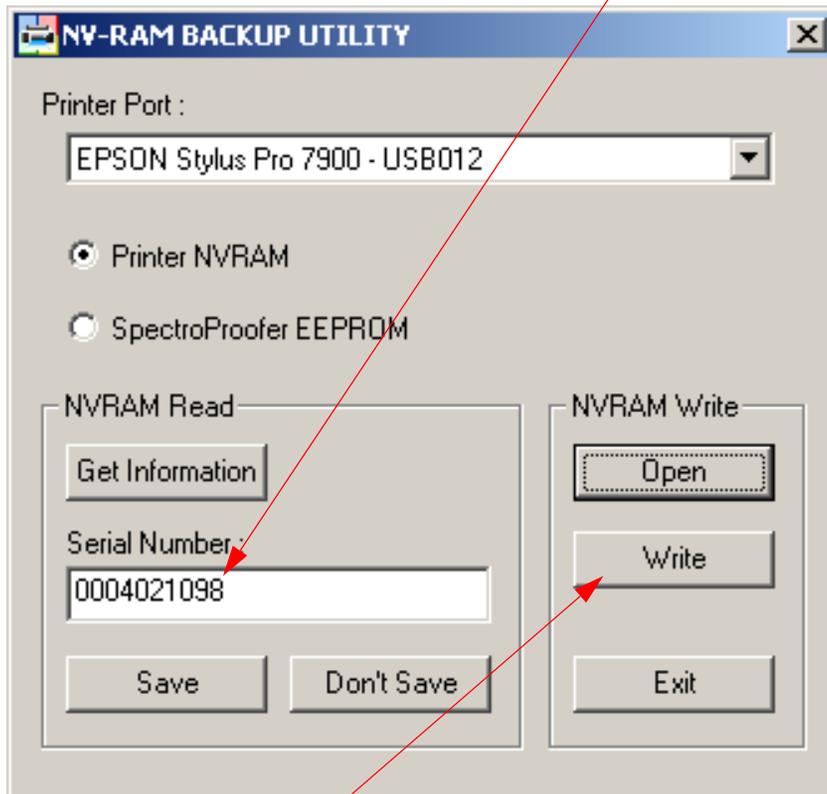
3. Highlight the appropriate **NVRAM** file.



4. Click on **Open**.

3.

5. The utility will display the **Printer's** serial #.



6. Click on **Write** to begin.

7. The utility will display this while writing to the **Printer**.



8. Click on **OK** to finish.

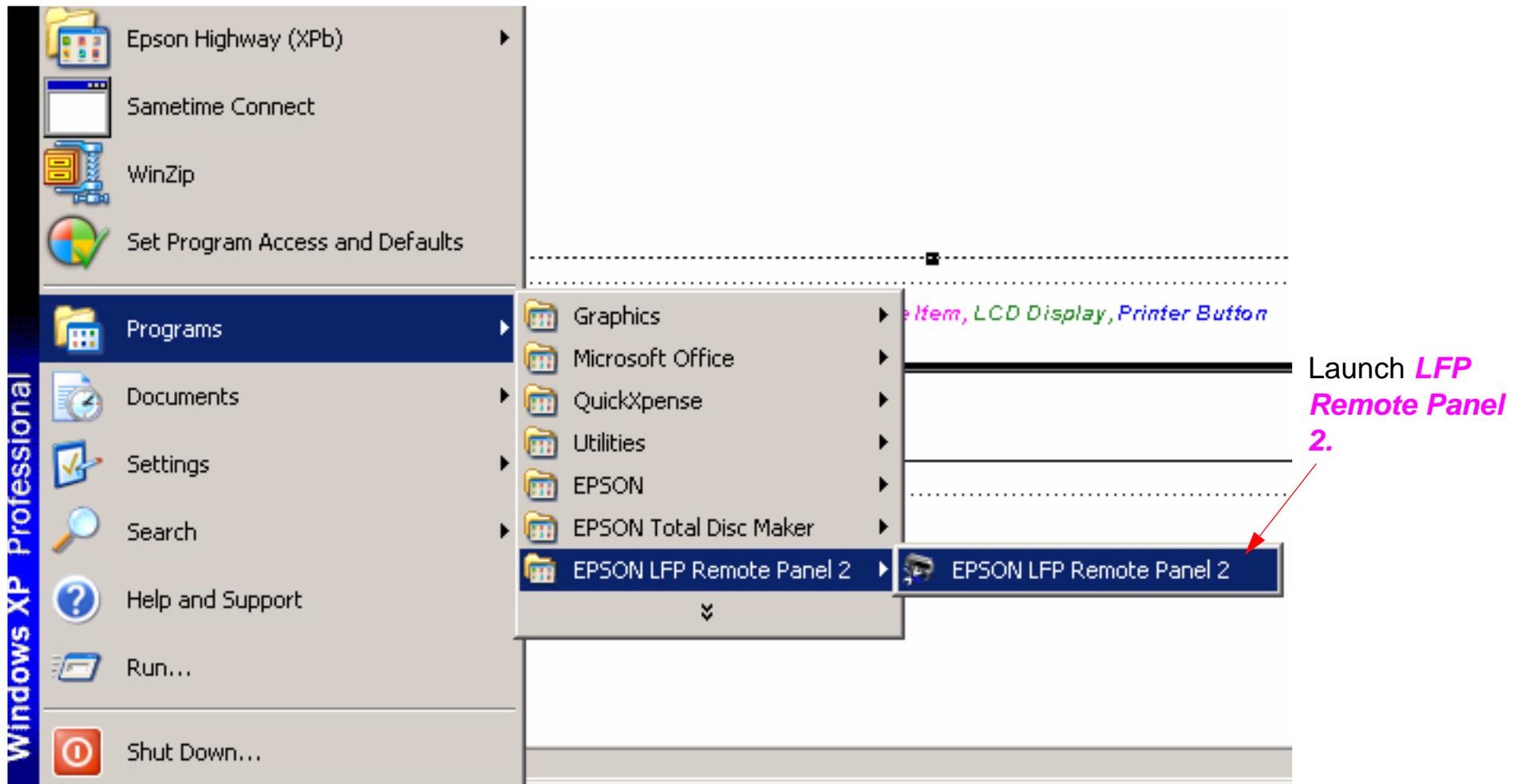


Note: After the utility displays "complete", wait an additional 20 seconds before turning off the Printer.

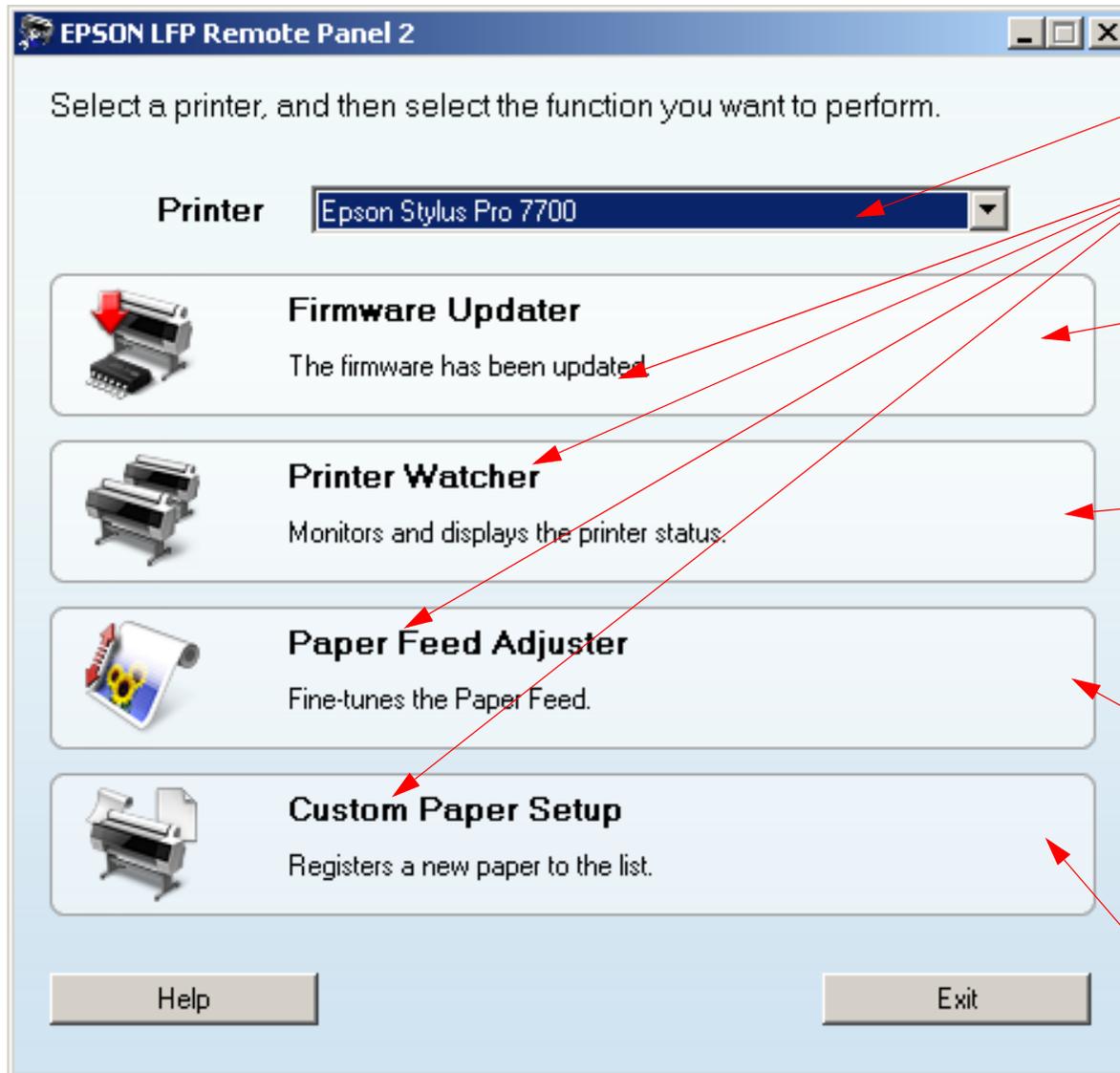
Remote Panel 2 (Epson LFP)

Note: *Remote Panel 2 is a user utility that allows the user to upgrade firmware, adjust paper feed, monitor printer status, and setup custom paper.*

1. Install **Remote Panel 2**.
2. Launch Remote Panel 2.



3. Select your **Printer** and function to perform.



1. Select your **Printer**.

2. Select 1 of 4 functions to perform.

Facilitates the updating of Printer, Ethernet, and optional device firmware.

Displays Printer Status, Serial Number, and IP Address.

Facilitates the customizing of the media feed step for individual media types. These media feed modifications are stored in a unique location on the printer, independent from the Custom Paper Setup locations.

Facilitates the naming and setup of custom paper types. These custom media types are accessed from the control panel on the printer.

Servprog.exe

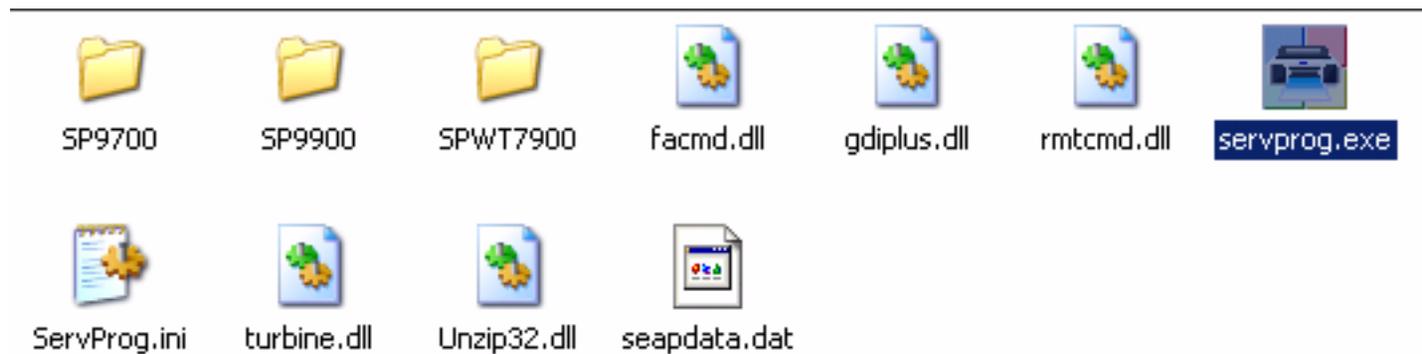
Note: *Servprog.exe is no longer an ASI enabled service utility. It is available for download on Epson Insider.*

Note: *Servprog.exe is the utility that enables counter resets, and some electronic alignments for the 7900 and 9900.*

Note: *Servprog.exe will work when the Printer is in Ready mode, or in Self Testing mode.*

Note: *Self Testing mode will allow the Servprog.exe to function with the Printer, when the Printer is in an error condition.*

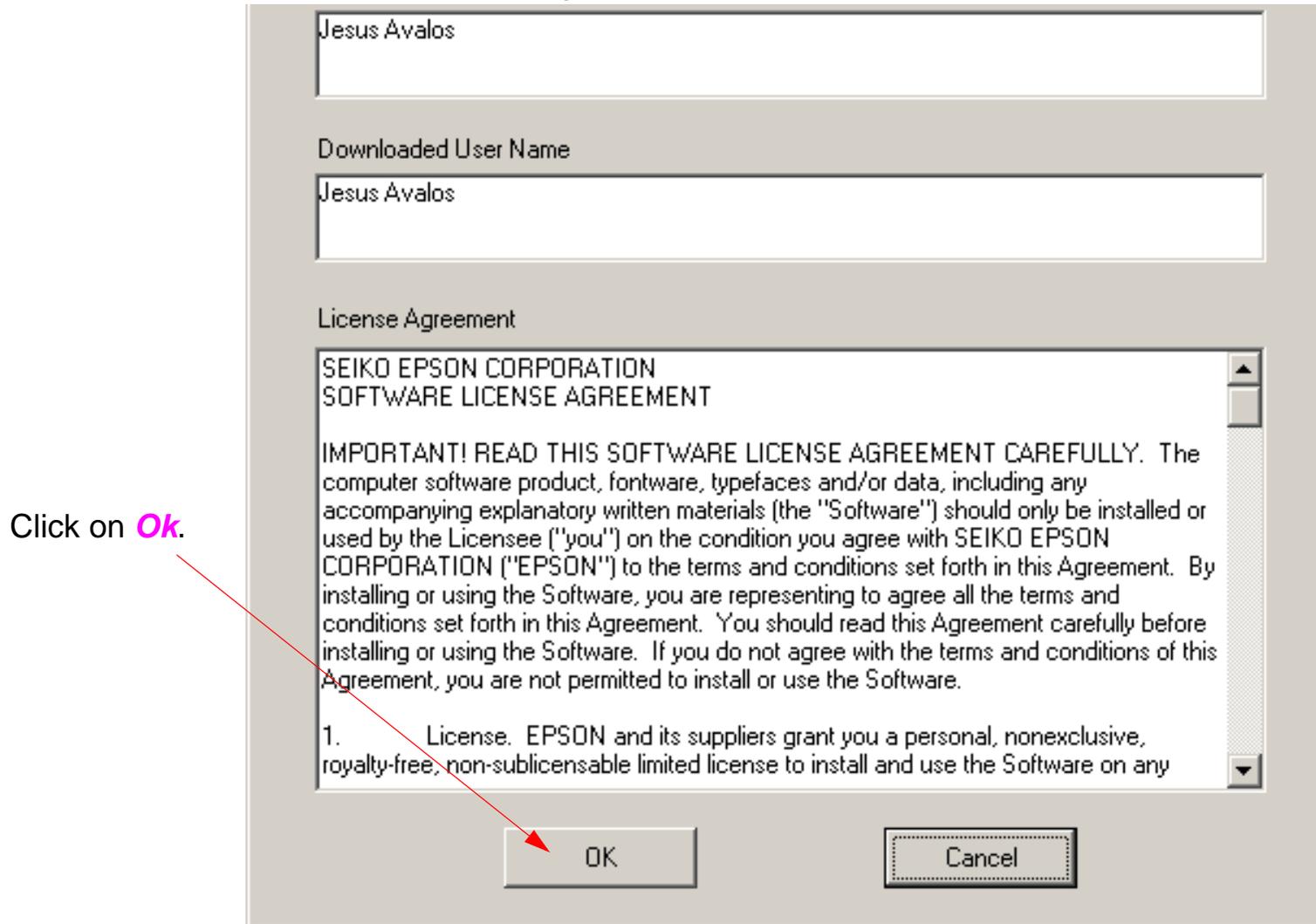
1. Ensure that the **7900** or **9900 Printer Driver** is installed on the system that will be running the **Servprog.exe**.
 - 1.1 Verify that the **Printer Driver** can read the **Printer's** ink quantities.
2. Ensure that the **Servprog** files listed below are all in the same folder.



3. Double Click on **Servprog.exe** to start the utility.

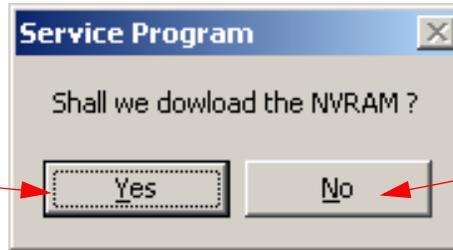


4. Click on **Ok** to accept the license agreement.



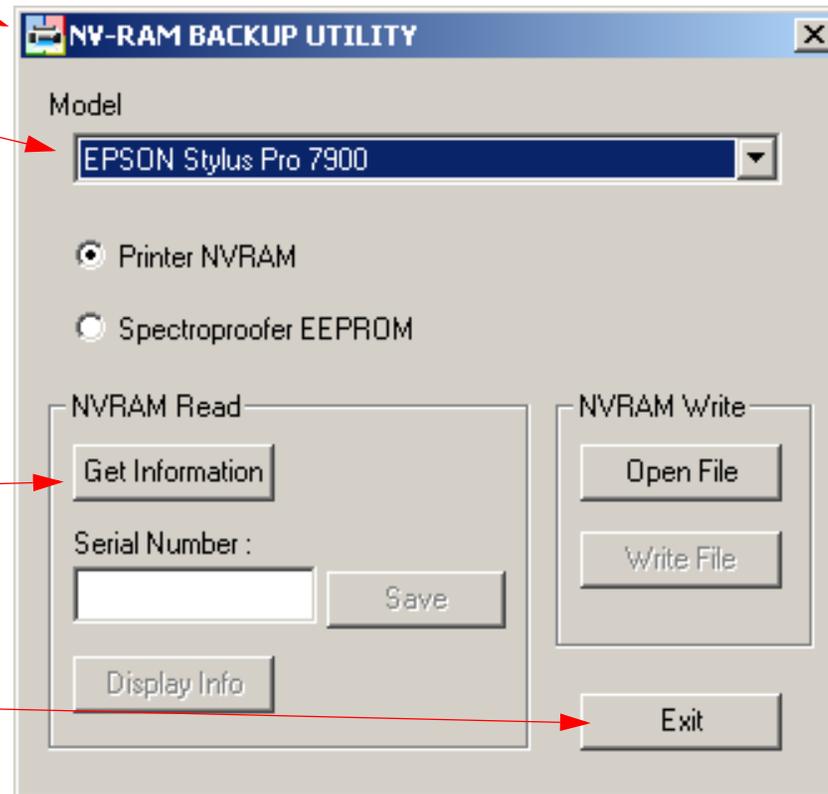
5. (Optional but recommended) Click on **Yes** to download the **Printers** NVRAM data.

1. Click on **Yes** to open the **NVRAM BACKUP UTILITY**.



Click on **No** to open **Servprog.exe**.
(See the next page).

2. Select the correct **Printer**.



3. Click on **Get Information** to download the Printer's NVRAM data.

4. Click on **Exit** to open the Adjustment Utility.

6. Servprog.exe main menu.

Opens the **NVRAM Backup Utility**.

Opens the individual adjustment

Opens a firmware update menu.

Opens a menu for sending a PRN print job to the Printer.

Opens the counter reset menu.

