



OER-Pro Biomed Print Head  
Unit Replacement  
TRAINING REPAIR MANUAL

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## Equipment, Material and Tool Requirements

**E**

ESD mat  
ESD wrist strap

**N**

No. 1 Phillips screwdriver

No. 1 torque bit

**S**

Sony bond (part# OT-9622)

**T**

Torque driver

## Precautions on Disassembly and Reassembly – OER-Pro [3010G.01]

### 1.0 Chemical handling safety warnings

- 1.1 Select a well-ventilated location when using organic solvents.



- 1.2 Thoroughly rinse any bodily areas that have come into contact with organic solvents as soon as possible.

**Important:** Not doing so may lead to potentially dangerous health risks.



- 1.3 When using organic solvents, handle with caution.

**Important:** These solvents may ignite if exposed to flame.



- 1.4 Always replace the lids back onto organic solvent containers before leaving the workbench.



### 2.0 Sharp edges safety warning

- 2.1 Repair with extreme caution to avoid injury.

**Important:** Take extra caution with metal parts, as the edges may be sharp.



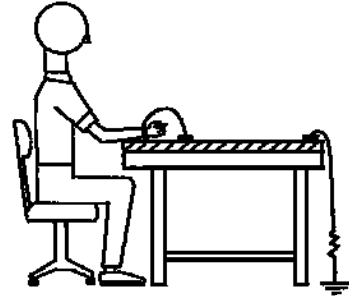
Tools:

ESD mat  
ESD wrist strap

**3.0 Protecting the equipment**

- 3.1 Use ESD safety equipment to protect the product against static electricity.**

**Important: A conductive mat or wristband to discharge static electricity must be used whenever it is necessary to touch the boards or other electrical components.**

**4.0 Precautions for parts handling**

- 4.1 Be aware of all assembly parts and avoid dropping any parts into the chassis.**
- 4.2 Pick up any dropped parts.**

**Important: Take care not to drop the screws, toothed washers, nuts or washers into the chassis. Should any parts be dropped, be sure to pick the parts up.**

- 4.3 Avoid causing damage to the cables or harnesses during disassembly and assembly.
- 4.4 Inspect the connector to verify if a lock is present on the connector.
- 4.5 Release the lock on the connector before pulling the connector harness out.

**Important:**  
 Use extreme care when disconnecting the cable connectors. If a lock is present on the connector, the lock must be released before pulling out the connector.

At the time of reassembly, insert the connectors or flexible cables firmly until the contact points are seated all the way.

Do not forget to fasten the lock.

Do not pinch cable parts when the cover or shield is assembled.

- 4.6 Hold the PC boards carefully to avoid causing damage to the boards.

**Important:**  
 Do not scratch the boards or cables with tools such as screwdriver.

When the board is disassembled, the board must be held properly so that excessive force will not be applied to the board and warping caused by stress will not occur.

5.0 Precautions for handling disinfectant solutions

- 5.1 Preview this manual to determine if draining the LCG is required.

Consider replacing the internal water filter and performing a Water System Piping Disinfection prior to draining LCG.

- 5.2 Read all precautions carefully before handling the disinfectant solution.

- 5.3 Use disinfectant solution only as instructed.

**Important:** It is especially important to know what to do if disinfectant solution comes in contact with skin.

- 5.4 Wear the appropriate personal protective equipment when handling the disinfectant solution.

Refer to the safety information provided by the disinfectant solution manufacturer.

**Important:**

Wearing personal protective equipment will prevent skin contact with disinfectant solution and inhalation of vapors.

To avoid adverse physical effects, be careful not to touch the disinfectant solution directly or inhale vapors.

If any disinfectant solution gets into eyes, rinse immediately with large amounts of fresh water and consult a medical specialist.

Personal protective equipment should fit properly. Chemical resistant gloves must be long enough to ensure there is no exposed skin.

Personal protective equipment must be inspected before use, and replaced periodically before it becomes damaged.

6.0 Electrical shock safety warnings

- 6.1 Turn off the power and unplug the power cord before removing the cover of the unit to avoid electrical shock.
- 6.2 Beware of residual voltages.

**Important:** The unit may contain residual charges in capacitor components. Take care to avoid electric shock when opening the top cover.



- 7.0 Recording the equipment settings
  - 7.1 Connect the software maintenance tool and download all parameters before performing maintenance.
  - 7.2 Document all functional and operational parameters manually if the software maintenance tool is not available.
  - 7.3 Reassemble parts according to the original configuration. This regards the following items especially:

| Parts                             | Special considerations   |
|-----------------------------------|--|
| Insulators                        | Such as insulating tubes and mylar sheets  |
| Cables                            | Which are clamped to avoid coming in contact with heat originating from high voltage parts |
| Cover screws with toothed washers | Which suppress the emitted noise   |
| Binders                           | Which are used for clamping cables or harnesses.   |

Important: Failure to attach parts in the original configurations poses the risk of noise radiation and reduced electrical safety, even if product functions are not impaired.

- 8.0 Other precautions
  - 8.1 Verify only the specified parts are used.
    - Important: The parts and components of this product are designed to operate under certain anticipated vibration, heat, chemical exposure and voltage conditions.
    - Always replace parts with those specified in the parts list.
  - 8.2 Verify only the specified jigs and tools are used.
    - Important: The use of any unspecified jigs or tools may damage the system or the components under repair. This will prevent the product from functioning properly or performing optimally.
  - 8.3 Comply with the torque rated values if they are in the manual.



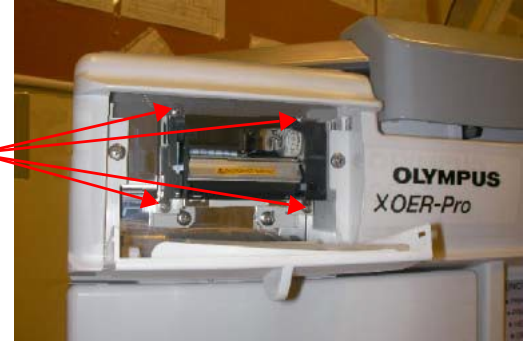
## Printer Unit Removal – OER-Pro [3011J.01]

Tools:

No. 1 Phillips screwdriver

- 1.0 Removing the printer unit
  - 1.1 Turn off the power.
  - 1.2 Remove the paper role with the paper role holder.
  - 1.3 Remove 4 screws holding the printer unit.

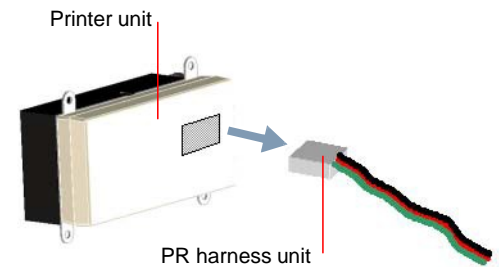
Remove screws



Tools:

Screwdriver, flat-head

- 1.4 Pull printer unit out.
- 1.5 Remove the Sony bond on the printer connector.
- 1.6 Disconnect PR harness unit from printer connector.



## Printer Unit Installation – OER-Pro [3011J.03]

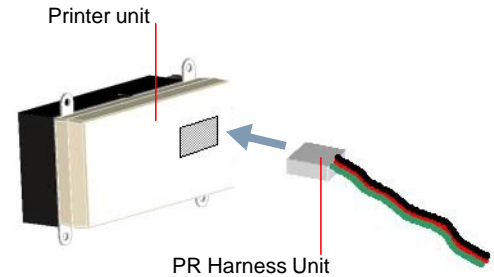
Tools:

Sony bond  
(part# OT-9622)

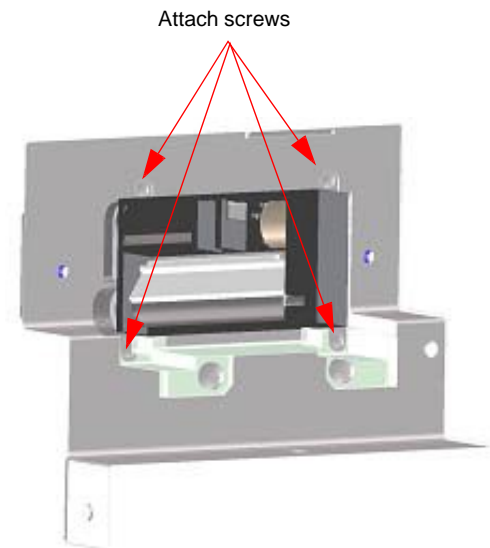
Tools:

No. 1 Phillips  
screwdriver  
Torque driver  
No. 1 torque bit

- 1.0 Installing the printer unit
  - 1.1 Insert the PR harness unit into the connector part of the printer unit.
  - 1.2 Apply Sony bonding glue around and underneath the PR harness unit.



- 1.3 Secure the 4 screws (CUKSB2x6UO) holding the printer unit at 0.08 +0.01 Nm torque.



- 1.4 Mount the paper role to the printer unit.
- 1.5 Mount the paper holder to the printer unit.
- 1.6 Verify that the release lever is in the down position.
- 1.7 Turn on the power.
- 1.8 Test the print function.

## Final Functional Inspection – OER-Pro [3010G.03]

- 1.0 Verify that the drain hose is securely attached to the facility drain.
- 2.0 Start a performance test cycle.
- 3.0 Perform final inspection while the test cycle runs.

***Important: For final inspection details, refer to chapter 6 of the OER-Pro Biomed Service Manual.***

- 4.0 Verify that there are no fluid leaks.
- 5.0 Verify that the cycle has completed without errors.
- 6.0 Verify the disinfectant concentration, if program B was used during maintenance.
- 7.0 Verify that the original settings have not changed.
  - LCG usage setting
  - Program2
  - Program3
  - Leak test setting
  - Date and time

## Electrical Safety Test – OER-Pro [3010H.05]

Tools:

1.0 Performing the electrical safety test

1.1 Perform the electrical safety test.

*Important: For final inspection details,  
refer to chapter 6 of the OER-Pro Biomed  
Service Manual.*

## Inspection Results Reporting – OER-Pro [3010H.06]

### 1.0 Reporting the inspection results *(Used only by Olympus FSEs)*

#### 1.1 Report the inspection results via mobile tech link.

**Important: Report any parts of the inspection that failed.**

## Revision History

| R | CN      | Description   | Author              | Reviewer       | Date     | Approver   | Date     |
|---|---------|---|---------------------|----------------|----------|------------|----------|
| 1 | 1000380 | Initial Document Creation OERPro Print Head Replace 17FS030 | David Moriyama (CB) | William Arroyo | 12/18/09 | Joel Munar | 01/19/10 |
| 2 | 1000680 | Revise OERPro Octennial PM Updates 17FS021                  | David Moriyama (CB) | William Arroyo | 04/30/10 | Joel Munar | 05/13/10 |
| 3 | 1001103 | OT Mod 142p2032 OESPro Artwork Screw Torque 17FS020         | David Moriyama (GK) | William Arroyo | 09/23/10 | Joel Munar | 09/28/10 |