

General Troubleshooting Guide for DIAMENTOR Systems

WARNING

Improper execution of service tasks.

Hazards to Persons! Equipment Damage!

The following service tasks must only be performed by specially trained staff.

Further service tasks may only be carried out by PTW or by persons authorized by PTW.

CAUTION

This document is a supplement to the DIAMENTOR user manuals. It shall only be used in combination with those manuals.

Follow the General Information and Safety Information given in the DIAMENTOR user manuals.

1 Overview

The core components of a DIAMENTOR system are DIAMENTOR chamber, extension cable (chamber cable) and DIAMENTOR itself. Depending on the system that is used, there might be other components, like a secondary display, a power supply cable etc.

This technical note only deals with general problems concerning the core components and suggests steps to identify the causes. The steps in this guide are applicable to a fair amount of DIAMENTOR systems.

However, there are many different DIAMENTOR systems with a wide variety of designs. Therefore, it is possible that not all of the steps suggested in this guide are applicable to your DIAMENTOR system. If in doubt, please consult the user manual of your DIAMENTOR system to find out if a certain step is applicable to your product.

Please note: if your DIAMENTOR system has two channels, the following steps need to be performed for both channels.

2 Problems

2.1 HV-Error / Chamber Voltage Missing

Problem: the display shows the error message “HV-error”, “HU-error” or “Chamber Voltage Missing”. These error messages occur when the chamber voltage is not within the tolerance limit. This could be due to problems with the DIAMENTOR chamber, the extension cable (chamber cable), or the DIAMENTOR itself. To identify the source of the error, please proceed as follows.

Step 1:

Disconnect the DIAMENTOR chamber and restart the DIAMENTOR. Does the error message still appear?

- If yes, proceed with Step 2.
- If no, please send the DIAMENTOR chamber in for repair / exchange the DIAMENTOR chamber.

Step 2:

Disconnect the extension cable (chamber cable) from the DIAMENTOR and restart the unit. Does the error message still appear?

- If yes, please send the DIAMENTOR in for repair / exchange the DIAMENTOR.
- If no, please send the extension cable (chamber cable) in for repair / exchange the extension cable (chamber cable).

2.2 Leakage / Reading without X-Rays

Problem: the display shows a value although you do not irradiate ("leakage reading").

Step 1:

Check in your DIAMENTOR manual if the unit is able to perform a zero adjustment. If it is, perform a zero adjustment, otherwise, restart the DIAMENTOR. Is there still a leakage reading?

- If yes, proceed with Step 2.
- If no, your problem is solved. Verify that the device is working properly.

Step 2:

Disconnect the DIAMENTOR chamber and restart the DIAMENTOR. Is there still a leakage reading?

- If yes, proceed with Step 3.
- If no, please send the DIAMENTOR chamber in for repair / exchange the DIAMENTOR chamber.

Step 3:

Disconnect the extension cable (chamber cable) from the DIAMENTOR and restart the unit. Is there still a leakage reading?

- If yes, please send the DIAMENTOR in for repair / exchange the DIAMENTOR
- If no, please send the extension cable (chamber cable) in for repair / exchange the extension cable (chamber cable).

2.3 Incorrect or Implausible Readings

Problem: you get incorrect or implausible readings.

- Check / Change the chamber calibration factor saved in the DIAMENTOR unit. Please refer to the calibration certificate of the respective chamber.
- Check the test results generated by pressing the test button (refer to your DIAMENTOR manual to see if your DIAMENTOR system has a test function and to learn how it works).
- Check / Change the calibration of the DIAMENTOR. Please refer to the chapter “Calibration” in the corresponding user manual.

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