Service Bulletin

Revised version: Previously announced DMC Firmware V11R3b8 is replaced by V11R3b9 due to a software issue in b8.

Solutions for movements caused by disinfection liquids on the collimator hand-grips

Task

	Timing		Category		Scope
◉	**Next service as agreed with customer**	○	**Apply at all sites**	◉	**Problem Record: PRB2000478, PRB2000628**
		◉	**Apply at affected sites as listed below**		
		○	**Optional to improve functionality of product**		

Task Tracking

After completion of your task the following entry in your Service Report is required:	**74741907**	*
* Insert the document number into the field "Comment" (SMS form).		

Purpose of this document:

- This document announces two solutions in case the DX-D 100 starts slow circular movements on its own. This is caused by a short-circuit due to excessive use of disinfection liquids on the collimator hand-grips.

- An adhesive protection film for the hand-grip buttons is available as protection against liquid when the user cleans/disinfects the hand-grip buttons.

- With DMC firmware version V11R3b8 (or later), an improvement is introduced to stop the mobile unit after 8 seconds if the movement has been caused by a short-circuit or by a pressed fine positioning button.

- After publication of DMC firmware V11R3b8 a software issue was detected (PRB2000628) and the firmware removed from the Agfa Medimg Library.
V11R3b**9** is available now and replaces V11R3b8.

Affected sites:
Install the protection film and upgrade the firmware to V11R3b**9** at all DX-D 100 / 100 Wireless units where the issue occurs.

The signatures on the approval page indicate the solutions described in this Service Bulletin have been reviewed and are NOT reportable because no actions are taken to reduce a "Risk to Health" according to our risk assessment process.

Version 2.0
04-2021

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Page 1 of 7

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1   Introduction/purpose

1.1   Self-propelling unit [PRB2000478]

Symptom   The mobile unit starts to move independently in small circles.

Cause   When disinfecting by pouring or spraying liquids on the collimator hand-grips, a short-circuit in the fine positioning controls can occur.

These are the four buttons on the hand-grips, which control the (low speed) motion of each driving wheel forwards or backwards:

RB = Right Back; RF = Right Front
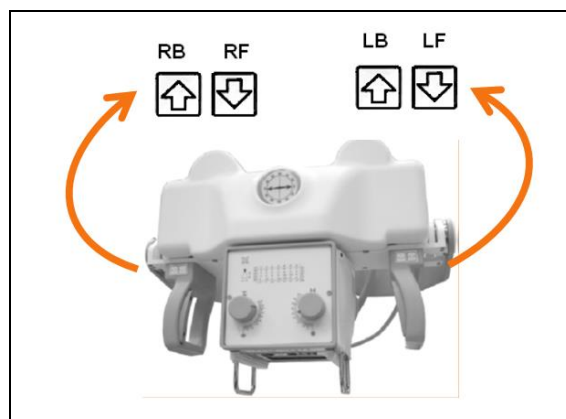
LF = Left Front; LB = Left Back

Figure 1: Fine Positioning Controls

The system is not able to distinguish a button pressed by a user or a short-circuit.

The result is that the unit moves on its own in a very slow motion and normally in circles as if just one button would be pressed. Note that the motion is at very low speed; the motion control does not allow high speeds for these controls.

Solutions   **Solution 1: Protection sticker**

A film (sticker) to cover the four buttons as protection against liquid is available:

- Introduced in production end of January 2021.
- The protection stickers are also available as spare part for field upgrades.

Solution 2: Updated DMC firmware

With DMC firmware version V11R3b8 (or later), an improvement is introduced to stop the mobile unit after 8 seconds. The unit stops regardless of whether the movement has been caused by a mechanical blocked fine postponing button or by a short-circuit.

Install DMC firmware version V11R3b**9**, which is the replacement of V11R3b8 (see section 1.2).

Prerequisites:

DMC firmware version V11R3b**9** requires DMC hardware revision "H" or later and DMC firmware V11R3b5 or later.

Due to instructions in Mandatory Service Bulletins, these prerequisites should be fulfilled at all sites.

NOTE:

Nevertheless, check the version* and in case version is lower, follow the instructions in DX-D 100 Wireless - SB120 - MANDATORY… , Document ID 63468540.

* Refer to *chapter Checking firmware version of the DMC board*, in the latest applicable DX-D 100 or DX-D 100 Wireless - Service Manual.

1.2   [PRB2000628] Error in hand grip keys is not detected at starting up with DMC firmware V11R3b8

Symptom   The system will perform a self-diagnoses during startup, the DMC firmware V11R3b8 introduced an issue in this routine.

It will not detect a potential button (behavior) fault which could result in erroneous movement issues without the user knowing that an error is present.

Cause   Code problem in the DMC b8 firmware.

Solution   Installation of DMC firmware V11R3b**9**.

2   Prerequisites

SOFTWARE:

Download the following software from the Agfa Medimg Library:

- DX-D 100/100 Wireless - Software - DMC Board Firmware V11R3b9, Document ID 74760426

SPARE PARTS:

Order only in case the cable to load firmware is not available:

- SC+A7130-02   DMC PCB programing Cable

The protection stickers are available as spare part:
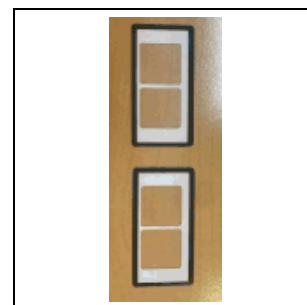
- SC+P04271   Protection stickers kit (2 stickers)

Figure 2

REFERENCED DOCUMENTS:

- DX-D 100 Wireless V11 - Service Manual, Document ID 66210593
- DX-D 100 V11 - Service Manual, Document ID 66209499
- DX-D 100 Wireless - SB120 - MANDATORY - Mandatory check of activities triggered by previous MSBs, Document ID 63468540
- DX-D 100 / DX-D 100 Wireless - Mobile X-Ray Unit - Service Manual, Document ID 41600560

IMPORTANT:

The installation and service of the product(s) described herein is to be performed by qualified personnel who are employed by Agfa NV or one of its affiliates or who are otherwise authorized by Agfa NV or one of its affiliates to provide such services.

IMPORTANT:

Strictly observe all safety directions within the "Generic Safety Directions", Document ID 11849633.

3   Instructions

REQUIRED TIME:

10 minutes for Mounting the protection stickers

60 minutes for firmware upgrade and customer information

3.1   Mounting the protection stickers

(1)   Make sure that the surface of Collimator hand-grip buttons and the area around is clean and dry.

(2)   Stick a self-adhesive sticker over the two hand-grip buttons as shown in the figure.

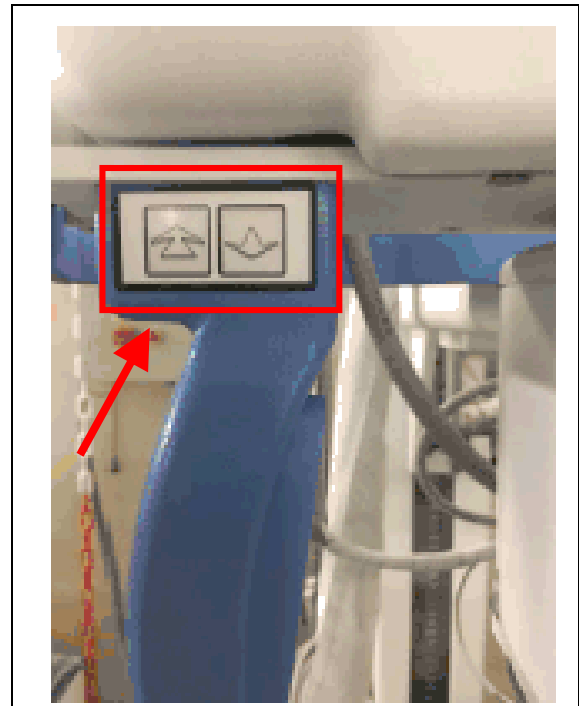(3)   Make sure that the four buttons are completely covered and the film sticks well.

Figure 3

3.2   Firmware upgrade

(1)   Make sure that DMC hardware revision "H" or later and DMC firmware V11R3b5 or later is installed.

(2)   Upgrade the DMC firmware:
  o   Only in case the cable to load firmware on the board is *not* present: Order the cable (see section 0).
  o   Download firmware V11R3b9 from the Agfa Medimg Library.
  o   The firmware upgrade is described in:
       DX-D 100 / DX-D 100 Wireless - Mobile X-Ray Unit - Service Manual, chapter *Troubleshootin*g, section 6.8.6 *Updating the Microcontroller*, Document ID 41600560.

3.2.1   Customer information

(1)   Inform the customer about the new behavior of the fine positioning controls (the four buttons on the hand-grips):

Once any of these buttons is pressed, the unit will start moving, but it will stop movement after 8 seconds, and it will be necessary to release and press again the button if the user wants to resume the displacement.

4   Verification

Verification of firmware upgrade:

(1)   Follow the instructions in:
       DX-D 100 / DX-D 100 Wireless - Mobile X-Ray Unit - Service Manual, chapter *Troubleshootin*g, section 6.8.6 *Updating the Microcontroller*, Document ID 41600560.

(2)   Press a fine positioning button to check that the movement stops after 8 seconds. Release and press again the button to check if the movement resumes.

(3)   Also check that all the buttons covered by the protective stickers are working properly.

5   Keywords

fw, rev H, Digital Motion Control Board, fine movement keys, handgrip key, handlebar,
covering foil

6   Version history

Version	Change	Date
1.0	Initial Version	01-2021
2.0	Previously announced DMC Firmware V11R3b8 is replaced by V11R3b**9** due to a software issue in b8. Problem Record added for the software issue.	04-2021

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