

Radiology Solutions Services

DX-D 100/100 Wireless

Document ID: 77232061 Overview

This checklist is attached to both, DX-D 100 and DX-D 100 Wireless Service Manual.

DX-D 100/100 Wireless Serial Number:	
DX-D 100/100 Wireless installation date:	
Date of maintenance:	
Maintenance interval:	months or other interval:
Service Engineer name:	

Purpose of this document:

This document provides the reference guide and checklist for the different Preventive Maintenance (PMV) tasks for the complete DX-D 100 or DX-D 100 Wireless System.



IMPORTANT:

Strictly observe the safety advices in the referenced documents.

Perform the PMV tasks as described in the referenced documents. This checklist does only contain a short description of the tasks.

Defect or worn out parts or misaligned components, which are found during the PMV are *not* included in the below stipulated labor time. Parts and labor cost for such replacements or alignments (labor & parts) need to be charged outside of a PMV.

Required time



REQUIRED TIME:

- 12-month Maintenance: Approximately 4h (additionally 30 min. Radiation Leakage check).
- Additional activities after 3 years: Approximately 1h additionally (depending on local requirements)
- Additional activities after 5 years: Two people, 6h

Required Tools

Components and Maintenance interval

#	Component	Maintenance Interval *	**
1.	NX Hardware	12 months	
2.	Mobile X-Ray Unit	12 months	
3.	Collimator	12 months	
4.	IEC 62353 Safety Test as locally required	36 months (3 years)	
5.	Mobile X-Ray Unit	5 years: Replacement of Steel Wire	
	Detector	Preventive Maintenance by	
	Option: DR FLFS mobile (only for DX-D 100 Wireless)	service is not required	-
6.	Completion of Preventive Maintenance	After each PMV	

^{*} Maybe shorter in case of heavy workload.

Required tools

- Standard tool kit
- Vacuum cleaner with a brush attachment
- Digital Multimeter.
- Non-invasive kVp Meter.
- Digital mAs Meter
- Calculator
- USB keyboard and mouse
- Only if Radiation Leakage checks are locally required: Radiation Meter
- Tools for the IEC 62353 test. Refer to Document ID 42283613.
- Tools for Column Steel Wire replacement: As described in the applicable replacement description, Document ID 41600560.

Required cleaning material

- Rags and cleaning tissues
- Isopropylalcohol CM+9999992540

Required lubricants and fluids

- ISOFLEX TOPAS NB 52 Multi-purpose grease CM+9999992470
- Silicone insulating paste HV cables (X-Ray Tube side) CM+6074010
- Silicone oil HV cables (Generator side) SK+01787035

Required spare parts

Note that 5 dischargers (iron wire with ball) are included in the spare part. For each PMV one discharger is required.

Discharger of Arrestor
 SC+19619-02, for version with reinforced frame for Telescopic Column

Discharger of Arrestor SC+27893-01, for version with frames for Standard Column and

with non-reinforced frame for Telescopic Column

^{**} Select the maintenance task you perform during this maintenance intervention. The different maintenance intervals are color-coded.

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12 months 1 NX Hardware

1 N	IX Hardware				
Mai	ntenance	after 🗌 12 months 🔲 other			
Ref	erence	NX/MUSICA Acquisition Workstation - Service Manual, I Chapter: Maintenance	D <u>74737</u>	949	
Тор	pic	Task	N.A.	OK / Done	Comment *
NX Workstation Hardware		See referenced document: Perform the described maintenance checks and fill out the provided checklist. Attach the completed NX checklist to this Checklist.			#
Com	nments for NX				
#	Description				
1			•		

 $^{^{\}star}$ If applicable, fill in a comment number and add the comment description in the comment table.

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12 months

2 Mobile X-Ray Unit

2 Mobile X-Ray Unit				
Maintenance	☐ 12 months ☐ other			
Column Type	Standard Column Telescopic Column			
Reference	DX-D 100 / DX-D 100 Wireless - Mobile X-Ray Unit - Ser Chapter 5 Maintenance	rvice Mar	nual, ID <u>4</u>	11600560
Topic	Task	N.A.	OK / Done	Comment *
Preparations	 Remove external covers. Do not re-install the external covers until the maintenance process has been completed. The batteries must be fully charged before maintenance. 			#
Cleaning	Chapter 5 Maintenance, 2.1 General Cleaning			
External Surfaces Cleaning	As described in the referenced document.			#
Internal Cleaning	As described in the referenced document.			#
Cables	Chapter 5 Maintenance, 2.2 Cable Checks			
Electrical Connectors, Wires and Ground lead interconnections	As described in the referenced document.			#
Rewind Mechanism of the Power Line Cable and Detector Cable	As described in the referenced document.			#
Discharger of Arrestor (iron wire with ball)	Regardless of the condition, replace the Discharger of Arrestor (only iron wire with ball) during every periodic maintenance. Once it is replaced, ensure that the ball makes contact with the floor.			#
HV Transformer	Chapter 5 Maintenance, 2.3 HV Transformer Condition		•	
HV Transformer Condition	As described in the referenced document.			#
X-ray Tube	Chapter 5 Maintenance, 2.4 X-Ray Tube Condition			
X-ray Tube Condition	As described in the referenced document.			#
Batteries	Chapter 5 Maintenance, 2.5 Procedures related with the Batteries and Battery Chargers and Chapter 4 Troubleshooting			
Battery and Charger conditions	As described in the referenced document.			#
Control Console	Chapter 5 Maintenance, 2.6 Control Console Condition			
Control Console Condition	As described in the referenced document.			#
Radiographic Parameters	Chapter 5 Maintenance, 2.7 Radiographic Parameters			
Test for kV Loop	As described in the referenced document.			#
Test for Digital mA Loop Open	As described in the referenced document.			#

DOCUMENT CONTROL NOTE:

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12 months

2 Mobile X-Ray Unit

Topic	Topic Task		OK / Done	Comment *
Mechanical checks	Chapter 5 Maintenance, 2.8 Mechanical checks			
Column/Telescopic Column	As described in the referenced document.			#
Telescopic Arm	As described in the referenced document.			#
Tube-Collimator support assemblies	As described in topic 3 Collimator within this document.			#
Column Steel Cables	As described in the referenced document. (Change them every 5 years.)			#
Motion Assemblies	As described in the referenced document.			#
Chapter 5 Maintenance, 3 Other maintenance procedures				
Leakage Current and Insulation Resistance Test	As described in topic 4 IEC 62353 Safety test within this document.			#
Radiation Leakage	The check is not required during regular maintenance. However local Authorities may be requesting the check of radiation leakage. But this check can also be performed by the local physicist during annual testing. If locally required, perform the check as described in the referenced document.			#

Comments for Mobile X-Ray Unit

#	Description
1	
2	
3	
4	
5	
6	
7	

^{*} If applicable, fill in a comment number and add the comment description in the comment table.

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12 months 3 Collimator

3 C	ollimator				
Mai	ntenance	after ☐ 12 months ☐ other			
Ref	erence	Collimator Ralco R221/A - Service Manual - DX-D 100 / ID 43902618, Chapter: Maintenance	DX-D 10) Wireles	SS,
Тор	pic	Task (short instruction – for the detailed description refer to the referenced document)	N.A.	OK / Done	Comment *
Cle	aning				
Col	limator Housing	Observe description in section Cleaning Recommendations.			#
Мо	unting points				
Fix	ation	Check if screws and tabs that secure the collimator to the flange/tube adapter are correctly tightened. Observe the tightening force mentioned in the referenced document.			#
Con	nments for Collimator				
#	Description				
1					
2					
					·



IMPORTANT:

After finishing the 12-month Maintenance, complete it as described in topic 6 Completion of the Preventive Maintenance.

^{*} If applicable, fill in a comment number and add the comment description in the comment table.

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3 years

4 IEC 62353 Safety Test

4 IEC 62353 Safety Test (a	s required)			
Maintenance	after 36 months (3 years) other			
Reference	DX-D 100 / DX-D 100 Wireless - Electrical Test according	IEC 62	353, ID <u>4</u>	2283613
Topic	Task	N.A.	OK / Done	Comment *
Electrical Tests	Referenced document: Perform the described tasks and fill out the form. Attach the completed form to this Checklist.			#
Comments for Safety Test				
# Description				
1				



IMPORTANT:

After finishing the 3-years Maintenance, complete it as described in topic 6 Completion of the Preventive Maintenance.

^{*} If applicable, fill in a comment number and add the comment description in the comment table.

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5 years

5 Replacements at Mobile X-Ray Unit

5 Replacements at Mobile	X-Ray Unit				
Maintenance	after 5 years	other			
Column Type	Standard Column	Telescopic Column			
Reference	DX-D 100 / DX-D 100 Wir Chapter 4 Troubleshootin	reless - Mobile X-Ray Unit - Ser g	vice Mar	nual, ID <u>4</u>	1600560
Topic	Task		N.A.	OK / Done	Comment *
Column					
Preparations	Collimator Assembly.	for this task. t of equal weight of the Tube- eshooting, section 3 Column			#
Steel Wire	Change steel wire. Refer to chapter 4 Trouble and Arm	eshooting, section 3 Column			#
Comments for Replacemen	ts				
# Description					
1					
2					

)

IMPORTANT:

After finishing the 5-years Maintenance, complete it as described in topic 6 Completion of the Preventive Maintenance.

^{*} If applicable, fill in a comment number and add the comment description in the comment table.

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After each Maintenance

6 Completion of the Preventive Maintenance

6 Completion of the Preve	6 Completion of the Preventive Maintenance				
Topic	Task	N.A.	OK / Done		
Results	Explain results to customer.			#	
Checklist	 Archive the maintenance work according to your local regulations. For example attach the completed checklist to ASSM PMV Workorder. Hand out this checklist to the customer as needed. 			#	

Comments for Completion of Preventive Maintenance

#	Description
1	
2	

 $^{^{\}star}$ If applicable, fill in a comment number and add the comment description in the comment table.