

# 保守点検報告書

**2025年 第2回**

顧客名 独立行政法人国立病院機構  
四国がんセンター

装置名 **Ingenia 3.0T**

設置場所 **MRI室**

点検実施日 2026年1月6日

Case番号 0124806052

**株式会社フィリップス・ジャパン**

## 点検項目の説明

### 製品グループ Ingenia 3.0Tシリーズ

#### 検査項目

Chapter: Configuration (All Visits) システム構成(全訪問回)	Chapter: Operator Console & Viewing (All) コンソール機能確認(全訪問回)
Chapter: Visit number (All Visits) 訪問回数(全訪問回)	Chapter: Magnet system (All) 安全性確認(全訪問回)
Chapter: Liquid Cooling LCC2B/2BB (All) 水冷システム点検:LCC2B/2BB(全訪問回)	Chapter: Magnet system (1, 3) ヘリウム排気管排水穴確認(訪問回数1、3)
Chapter: Liquid Cooling LCC2/2A (All) 水冷システム点検:LCC2/2A(全訪問回)	Chapter: Magnet system (2, 4) ヘリウム排気管設置状況確認(訪問回数2、4)
Chapter: Liquid cooling LCC2B/2BB (1, 2, 4) 水冷システム点検:LCC2B/2BB(訪問回数1、2、4)	Chapter: Magnet system (3) ヘリウム排気管取付確認(訪問回数3)
Chapter: Liquid cooling LCC2A (1, 2, 4) 水冷システム点検:LCC2(訪問回数1、2、4)	Chapter: Magnet system (4) 緊急磁場消失ユニット機能確認(訪問回数4)
Chapter: Liquid Cooling LCC2B/2BB (1, 3) 水冷システム点検:LCC2B/2BB(訪問回数1、3)	Chapter: Gradient System 78x / 2118 (1, 3) グラディエントシステム点検:78x / 2118(訪問回数1、3)
Chapter: Liquid Cooling (1) ・不凍液濃度確認 ・ストレーナー清掃	Chapter: Gradient System 78x / 2118 (2, 4) グラディエントシステム点検:78x / 2118(訪問回数2、4)
Chapter: Liquid Cooling LCC2B/2BB (3) 冷却水経路洗浄:LCC2B/2BB(訪問回数3)	Chapter: Operator Console & Viewing (1, 3) 天井取付具点検:Interventionalシステム(訪問回数1、3)
Chapter: Liquid Cooling LCC2A (3) 冷却水経路洗浄:LCC2A(訪問回数3)	Chapter: Gradient System (1, 3) グラディエントシステム点検(訪問回数1、3)
Chapter: Liquid Cooling LCC2 (3) 冷却水経路洗浄:LCC2(訪問回数3)	Chapter: Gradient System (2, 4) グラディエントシステム点検(訪問回数2、4)
Chapter: Cooling System (All) 水冷システム点検(全訪問回)	Chapter: Software (All) ソフトウェア点検(全訪問回)
Chapter: Cooling System (1, 2, 4) 水冷システム点検(訪問回数1、2、4)	Chapter: Software (2,4) ソフトウェア点検(訪問回数2、4)
Chapter: Cooling System (1, 3) 水冷システム点検(訪問回数1、3)	Chapter: Software (2) リモート接続確認(訪問回数2)
Chapter: Cooling System (1) 水冷システム点検(訪問回数1)	Chapter: Workflow (All) 担当者への面談
Chapter: Cooling System (3) 水冷システム点検(訪問回数3)	Chapter: System Level Checks (Visits 1,3) システムレベル点検(訪問回数1、3)

## 点検項目の説明

### 製品グループ Ingenia 3.0Tシリーズ

#### 検査項目

Chapter: System Level Checks (Visits 2,4) システムレベル点検(訪問回数2、4)	Chapter: One time tasks (all) LEDポアライトへの交換
Chapter: System Level Checks (Visits 2) システムレベル点検(訪問回数2)	Chapter: SAFETY (All) 静電気対策
Chapter: System Level Checks (3) システムレベル点検(訪問回数3)	Chapter: PM end 最終確認
Chapter: 2 System Level Checks (Visits 4) システムレベル点検(訪問回数4)	
Chapter: Earth bonding アース導通測定	
Chapter: Earth bonding Exam Room アース導通測定:検査室	
Chapter: Earth bonding Tech Room アース導通測定:機械室	
Chapter: Earth Leakage Current 漏れ電流測定	
Chapter: Patient support (All) 寝台システム点検(全訪問回)	
Chapter: Patient support (1, 3) 寝台システム点検(訪問回数1、3)	
Chapter: Patient support (1) 寝台システム点検(訪問回数1)	
Chapter: Patient support (3) 寝台システム点検(訪問回数3)	
Chapter: System Meas. & Adjustments (All) システム測定及び調整(全訪問回)	
Chapter: System Meas. & Adjustments (2, 4) システム測定及び調整(訪問回数2、4)	
Chapter: System Meas. & Adjustments (4) スパイクノイズ確認(訪問回数4)	
Chapter: Refrigerator system F-40/F-50 コンプレッサー動作確認:F-40/F-50	

Ship To:

独立行政法人国立病院機構 四国がんセンター  
 南梅本町甲160  
 松山市  
 Japan

## Test and Verification Report

Case Number: 0124806052

Work Order: WO-13973551

### WORK DETAILS

Engineer Name: YUSUKE SADAOKA

Event Type: Predictive / Preventative Maintenance

Device Status: Pass

Service Activity: Visit 2

### EQUIPMENT DETAILS

Product Name: Ingenia 3.0T

Serial Number: 42263

Product Number: 781377

Installed Product: 57986182

UDI:

	Min	Max	UoM	Measurement	Result	Comments
<b>PM section 4. Safety</b>						
<b>4. Safety</b>						
Prevent electro static discharge					PASS	
<b>PM section 6. Workflow</b>						
<b>On-site preparations</b>						
Interview the representative of the site					YES	
<b>PM section 7. System level</b>						
<b>System level</b>						
Do PIQT (Remote / On-site)					PASS	
Check system parts visually					PASS	
Check the safety signs					PASS	
Clean the computers externally					PASS	
Clean the EWS (Extended WorkSpace) internally					Not installed	
Check the dust filter					PASS	
Clean the dust filter					PASS	
Check the dust filter of the patient ventilation					PASS	
PM - Disable alerts					PASS	
Check the RF enclosure					PASS	
Check the shock indicator(s)					PASS	
Check the RF coils for damage					PASS	

Min Max UoM Measurement Result Comments

**PM section 7. System level**

**System level**

Check the strain relief of the anterior coil					PASS
Relative humidity Examination room	40	70	%	41.1	Pass
Relative humidity Technical room	30	70	%	40.9	Pass
Temperature Examination room (R3 or upgraded from R3)	20	24	°C	23.5	Pass
Temperature Technical room	15	24	°C	20.8	Pass
Check the respiratory sensor and hose					PASS
Check the version of the SPT spec file (Remote / On-site)					PASS
Compare and download the SPT spec file					PASS

**PM section 9. Gradient System**

**Gradient System**

Check the torque of the C78x mains connection block	9.49	11.86	Nm	11	Pass
Check the torque of the gradient cables	18.98	22.51	Nm	22	Pass
Check the torque of the C78x output filter	3.8	4.7	Nm	4	Pass
Check the internal hoses of the gradient amplifier					PASS
Check the circuit to detect an overheated gradient coil					PASS

**PM section 10. Liquid Cooling**

**Liquid cooling**

Check the glycol concentration	-42	-26	°C	-40	Pass
Check the flow of the wc RF amplifier (WDH1.5T, AN8137, QLH_128)	16	20	l/minute	20	Pass
Check the filling pressure	1.4	2.4	bar	1.9	Pass
Check the hoses with liquid cooling for leaks					PASS

**Liquid cooling [LCC2BB] [LCC2B]**

Fill the gradient amp (if < 1.4 bar)	1.4	2.4	bar	2.2	Pass
Check the flow in the gradient coil circuit	18	22	l/minute	22	Pass
Check the flow in the gradient amplifier (C78X)	30	45	l/minute	35	Pass

**PM section 11. Refrigerator system**

**Refrigerator system**

Check the compressor pressure F50 (dynamic)	1.9	2.2	MPa	2.2	Pass
Check the water flow					PASS
Check the cryogenic performance					PASS

Min	Max	UoM	Measurement	Result	Comments
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**PM section 12. Magnet system**

**Magnet system**

Check the labels and covers of the ERDU buttons				PASS	
Check the outlet of the helium venting system				PASS	
Check the turret side of the magnet for corrosion				PASS	
Check the position of the yellow helium vent tube				PASS	
Check the service history of the coldhead [4K]				< 36 Months	
Record the last date coldhead service was done				Jul 29, 2020	
Record the compressor type				F50	
Record the Coldhead generation and wattage				RDK-408C2 Gen 2 1.0W	
Record the Coldhead serial number				AJC09144	
Check Differential Pressure Switch (DPS)				PASS	

**PM section 13. Patient support**

**Patient support [IMT]**

Check the patient alarm				PASS	
Check the patient comfort lights				PASS	
Clean the DCI RF coil sockets and connector				PASS	
Check the DCI covers				PASS	
Clean the PSU				PASS	

**PM section 14. System Meas. & Adjustments**

**System Meas. & Adjustments**

Check the body coil transmit characteristics				PASS	
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**Run the software tests for PM**

PFEI peripheral test				PASS	
Patup self test				PASS	
PSU2 selftest (PSU(2) fan speed test)				PASS	
TX att. calibration				PASS	
Max kW calibration body coil				PASS	
RF amp TX1 PMU test body coil				PASS	
RF amp TX2 PMU test body coil				PASS	
RF amp controlloop calibration				PASS	
F0 determination				PASS	
RF power ref. cal. body coil				PASS	
Pickup coil tripl.cal.body coil				PASS	
Multitransmit RF calibration				PASS	

	Min	Max	UoM	Measurement	Result	Comments
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**PM section 14. System Meas. & Adjustments**

System measurements and adjustments

Check the VSWR (3.0T multi-transmit TX1)		5		3.31	Pass	
Check the VSWR (3.0T multi-transmit TX2)		5		3.28	Pass	
Use the analyzer					PASS	
Run the RF spurious test					PASS	
Run the spurious noise test batch					PASS	
Analyze the result of the spurious noise test batch					PASS	

PIQT

Do PIQT					PASS	
Generate a report with PIQT results					PASS	

**PM section 15. Operator Console & Viewing**

Operator Console & Viewing (All)

Clean the mouse, keyboard, monitor of host (and ISP/EWS)					PASS	
Check the audio communications					PASS	

**PM section 16. Software**

Software

Check and update the EAS software (e-Alert): check the version of the software on the system				> R2.7.1.25		
Find the latest version of the EAS software (e-Alert) on InCenter				<a href="https://philips.mizecx.com/knowledgeDocument.html?17eaa963b1881a0c0354f5a426d4f93">https://philips.mizecx.com/knowledgeDocument.html?17eaa963b1881a0c0354f5a426d4f93</a>		
Make sure the latest version has been installed on the system					PASSED	
Clean up disks					PASS	
Defragment the hard disks [Windows XP]					Not Applicable (Not Windows XP)	
Do the PRS related checks					PASS	
Make a system back-up					PASS	
Export the configuration					PASS	

**PM section 17. FCOs and corrective maintenance**

FCOs and corrective maintenance

Implement FCOs and corrective maintenance					N/A	
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**PM section 19. PM end**

19. PM end

PM - Enable alerts					PASS	
Handover					PASS	

Min	Max	UoM	Measurement	Result	Comments
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PM section 19. PM end

19. PM end

Administration

PASS

Philips Representative Signature:



Engineer Name: YUSUKE SADAOKA

Date: Jan 6, 2026

