

SOMATOM Definition AS
Maintenance Report
Preventive maintenance

Customer 1	BRIGHAM AND WOMENS HOSPITAL
Customer 2	
Address	75 FRANCIS STREET
Postcode + City	02115 MA:BOSTON
Report Status	Completed
Department	
Room	L1-CT2
Material No.	8098027
Serial No.	64081
Order No.	400301683484
System ID	400-289785
System Name	SOMATOM Definition AS
Functional Location	

System Condition

- The system has no deficiencies.
- The system has minor deficiencies that have no effect on continued system operation. The deficiencies should be corrected preventively.
- The system has deficiencies that must be corrected before the system may be operated again.

- **Siemens Healthineers**

Signature 

Date 05-Mar-2024

Name Adnan Islam

- **Customer Representative**

Signature

Date 05-Mar-2024

Name N.A.

Remarks

- **Remarks**

Service Provider

Name	Siemens Medical Solutions USA, Inc.
Address	40 Liberty Boulevard
Postcode + City	Malvern, PA 19355

Abbreviations

S	Safety
Q	Quality
P	Software
T	Time/Duration
(-)	Standard

2 Partial Maintenance (every 6 Months)

2.2 System: Evaluating the System Status & Logbook

- System status checked (6M)

2.3 PDC-A: Checking the Fans at the DC_link Unit

- Functionality of DC_link fans checked (6M)

2.4 PDC-A: Checking the Fans at the INV Unit (Inverter)

- Functionality of inverter fans checked (6M)

2.5 PDC-A: Checking the Fans at the MVT Unit

- Functionality of MVT fans checked (6M)

2.6 PDC-A: Checking the Fan(s) at the XGS_Control Unit

- Functionality of XGS_Control fan(s) checked (6M)

2.7 PDC-A: Checking the Overvoltage Protection

- Overvoltage protection device checked (6M)

2.8 PDC-A: Checking the UPS Battery Condition

- UPS battery condition checked (6M)

2.9 IES: Checking the UPS Battery Condition

- UPS battery condition checked (6M)

2.12 PDC-A: Checking/Cleaning the Air Filter

- Air filter checked (6M)
- Air filter cleaned (6M)

2.13 ICS: Cleaning the Air Inlet

- Air inlets cleaned (6M)

2.14 IES: Cleaning the Air Inlet

- Air inlets cleaned (6M)

2.15 IRS: Checking/Cleaning the Air Filter

- Air filter checked (6M)

2.18 Cleaning the CT Gantry Slip Ring Compartment

- Slip ring compartment cleaned (6M)

2.19 Gantry (SAF slip ring): Checking/Replacing the Brushes

2.19.1 SAF slip ring (part no. 101 87 169):

- | | | | |
|--------------------------------|----------------------------------|-----------------------|----------------------------------|
| - Brush block cleaned (6M) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - Power brushes checked (6M) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - Power brushes replaced (6M) | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |
| - Signal brushes checked (6M) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - Signal brushes replaced (6M) | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |

2.19.2 SAF MCI slip ring (part no. 105 89 680)

- | | | | |
|-------------------------------|-----------------------|-----------------------|----------------------------------|
| - Brush block cleaned (6M) | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |
| - Power brushes checked (6M) | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |
| - Power brushes replaced (6M) | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |

2.20 Gantry (CPT slip ring, no CAN over IP): Replacing the Brush Block Board

- | | | | |
|-----------------------------------|-----------------------|-----------------------|----------------------------------|
| - Brush block board replaced (6M) | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |
|-----------------------------------|-----------------------|-----------------------|----------------------------------|

2.21 Gantry: Checking/Cleaning the Detector Window

- | | | | |
|--|----------------------------------|-----------------------|-----------------------|
| - Detector window checked and cleaned (6M) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|--|----------------------------------|-----------------------|-----------------------|

2.22 Gantry (with CUA): Replacing the Filter in the Cooling Unit Air (option)

- | | | | |
|--|-----------------------|-----------------------|----------------------------------|
| - Filter of cooling unit air / CUA replaced (6M) | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |
|--|-----------------------|-----------------------|----------------------------------|

2.23 Sliding Gantry (option): Checking the Rail Cover Strips

- | | | | |
|-----------------------------|-----------------------|-----------------------|----------------------------------|
| - Cover strips checked (6M) | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |
|-----------------------------|-----------------------|-----------------------|----------------------------------|

2.24 Sliding Gantry (option): Checking the Switch Rail Function

- | | | | |
|-------------------------------------|-----------------------|-----------------------|----------------------------------|
| - Switch rail function checked (6M) | <input type="radio"/> | <input type="radio"/> | <input checked="" type="radio"/> |
|-------------------------------------|-----------------------|-----------------------|----------------------------------|

2.25 Monitor Ceiling System (option): Functional checks

- | | | | |
|-----------------------------------|----------------------------------|-----------------------|-----------------------|
| - Functional checks executed (6M) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------------------|----------------------------------|-----------------------|-----------------------|

2.26 WCS-w-a-split (option): Checking the Water Pressure of the Water Circuits

- | | | | |
|--|----------------------------------|-----------------------|-----------------------|
| - Water pressure of primary water circuit checked (6M) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| - Water pressure of secondary water circuit checked (6M) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |

2.29 Quality Assurance Test

- | | | | |
|---|----------------------------------|-----------------------|-----------------------|
| - Quality Assurance Test performed (6M) | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|---|----------------------------------|-----------------------|-----------------------|

3 Full Maintenance (every 12 Months)

3.2 System: Evaluating the System Status & Logbook

- System status checked (6M)

3.3 System: Visual Inspection of Component Housing

- S Component housing inspected (12M)

3.4 System: Visual Inspection of Cables & Routing

- S Cables & routing inspected (12M)

3.5 System: Visual Inspection of the Phantoms

- S Phantoms and phantom holder inspected (12M)

3.6 System: Visual Inspection of the Accessories

- S Accessories inspected (12M)

3.7 System: Visual Inspection of the Labels

- S Labels inspected (12M)

3.8 Monitor Ceiling System/Monitor Cart (option): Visual Inspection of Component Housing

- S Component housing inspected (12M)

3.9 Monitor Ceiling System/Monitor Cart (option): Visual Inspection of Cables & Routing

- S Cables and routing inspected (12M)

3.10 Sliding Gantry (option): Visual Inspection of Component Housing

- S Component housing inspected (12M)

3.11 PDC-A: Checking the Fans at the DC_link Unit

- Functionality of DC_link fans checked (6M)

3.12 PDC-A: Checking the Fans at the INV Unit (Inverter)

- Functionality of inverter fans checked (6M)

3.13 PDC-A: Checking the Fans at the MVT Unit

- Functionality of MVT fans checked (6M)

3.14 PDC-A: Checking the Fan(s) at the XGS_Control Unit

- Functionality of XGS_Control fan(s) checked (6M)

3.15 PDC-A: Checking the Overvoltage Protection

- Overvoltage protection device checked (6M)

3.16 PDC-A: Checking the UPS Battery Condition

- UPS battery condition checked (6M)

3.17 IES: Checking the UPS Battery Condition

- UPS battery condition checked (6M)

3.18 PHS-1B: Checking the Vertical drive brakes

- Brake of vertical drive checked (12M)

3.20 PDC-A: Function Test of the Protection Function

- S Protection function tested (12M)

3.23 PDC-A: Replacing the Air Filter

- Air filter replaced (12M)

3.24 Mobile CT (optional): Checking the PDC

- S PDC and subcomponents checked (12M)

3.25 ICS: Cleaning the Air Inlet

- Air inlets cleaned (6M)

3.26 IES: Cleaning the Air Inlet

- Air inlets cleaned (6M)

3.27 IRS: Replacing the Air Filter

- Air filter replaced (12M)

3.28 Mobile CT (optional): Checking the IRS Hard Disks

- S IRS hard disks checked (12M)

3.31 Cleaning the CT Gantry Slip Ring Compartment

- Slip ring compartment cleaned (6M)

3.32 Gantry (SAF slip ring): Checking/Replacing the Brushes**3.32.1 SAF slip ring (part no. 101 87 169):**

- Brush block cleaned (6M)

- Power brushes checked (6M)

Preventive maintenance	Serial No. 64081	Date 2024-03-06	OK	Not OK	n.a.
- Power brushes replaced (6M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
- Signal brushes checked (6M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
- Signal brushes replaced (6M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.32.2 SAF MCI slip ring (part no. 105 89 680)					
- Brush block cleaned (6M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
- Power brushes checked (6M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
- Power brushes replaced (6M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.33 Gantry (CPT slip ring, no CAN over IP): Replacing the Brush Block Board					
- Brush block board replaced (6M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.34 Gantry (CPT slip ring, CAN over IP): Replacing the Brush Block Board					
- Brush block board replaced			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.35 Gantry: Checking/Cleaning the Detector Window					
- Detector window checked and cleaned (6M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.36 Gantry: Visual Inspection of the Tube Cooling Hoses					
S Tube cooling hoses inspected (12M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.37 Gantry (with CUA): Replacing the Filter in the Cooling Unit Air (option)					
- Filter of cooling unit air / CUA replaced (6M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.38 Gantry: Lubricating the Main Bearing					
- Main bearing lubricated (12M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.39 Mobile CT (optional): Checking Attachment of the Gantry to the Floor					
S Attachment of gantry to floor checked (12M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.40 Mobile CT (optional): Inspecting the Gantry for Damage and Loose Parts					
S Gantry inspected for damage and loose parts (12M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.41 Mobile CT (optional): Lubricating the Transport Lock for Tilt					
S Transportation lock for tilt lubricated (12M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.42 Mobile CT (optional): Checking the Transport Lock for Tilt					
S Transportation lock for tilt checked (12M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3.43 Sliding Gantry (option): Checking the Rail Cover Strips					
- Cover strips checked (6M)			<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

3.44 Sliding Gantry (option): Lubricating the rail system

- Felt strips in the carriages lubricated (12M)

3.45 Sliding gantry (option): Lubricating the switch rail pins

- Switch rail pins lubricated (12M)

3.46 Sliding Gantry (option): Checking the Switch Rail Function

- Switch rail function checked (6M)

3.47 MPT-3 (Sliding Gantry option): Checking the bearing bolts

- S Bearing bolts checked (12M)

3.48 MPT-3: (Sliding Gantry option): Lubricating the patient table

- Tabletop guide carriages lubricated (12M)
- Vertical guide carriages lubricated (12M)
- Spindle of the vertical drive lubricated (12M)

3.49 PHS-1B: Lubricating the Patient Table

- Tabletop guide carriages lubricated (12M)
- Vertical drive lubricated (12M)

3.50 PHS-2 / PHS-3 / PHS-4: Checking the bearing bolts

- S Scissors bearing bolts checked (12M)

3.51 PHS-2 / PHS-3 / PHS-4: Lubricating the Patient Table

- Tabletop guide carriages lubricated (12M)
- Top support guide carriages lubricated (12M)
- Vertical guide carriages lubricated (12M)
- Vertical drive spindle lubricated (12M)

3.52 MPT / MPT-2 (option): Checking the bearing bolts

- S Scissors bearing bolts checked (12M)

3.53 MPT / MPT-2 (option): Lubricating the Multi-Purpose-Table

- Tabletop guide carriages lubricated (12M)
- Top support guide carriages lubricated (12M)
- Vertical guide carriages lubricated (12M)
- Spindle of the vertical drive lubricated (12M)

3.54 PHS/MPT: Function Test of Attachable Positioning Aids

- S Attachable patient positioning aids checked (12M)

3.55 Monitor Ceiling System (option): Functional checks

- Functional checks executed (6M)

3.56 WCS-w-a-split (optional): Cleaning the Fan Cooler of the Outdoor Unit

- Fan cooler of the outdoor unit cleaned (12M)

3.57 WCS-w-a-split (option): Checking the Water Pressure of the Water Circuits

- Water pressure of primary water circuit checked (6M)
- Water pressure of secondary water circuit checked (6M)

3.59 System: Measuring the Protective Conductor Resistance

3.59.3 SOMATOM Definition AS

3.59.3.1 Standard components

- S Measured protective conductor resistance of Gantry
Protective conductor resistance: $\leq 300 \text{ m}\Omega$
Value
- S Measured protective conductor resistance of Patient Table (PHS)
Protective conductor resistance: $\leq 300 \text{ m}\Omega$
Value
- S Measured protective conductor resistance of PDC
Protective conductor resistance: $\leq 100 \text{ m}\Omega$
Value
- S Measured protective conductor resistance of ICS Tower PC
Protective conductor resistance: $\leq 300 \text{ m}\Omega$
Value
- S Measured protective conductor resistance of IRS Tower PC
Protective conductor resistance: $\leq 300 \text{ m}\Omega$
Value
- S Measured protective conductor resistance of IES Tower PC
Protective conductor resistance: $\leq 300 \text{ m}\Omega$
Value
- S Measured protective conductor resistance of ICS monitor
Protective conductor resistance: $\leq 300 \text{ m}\Omega$
Value
- S Measured protective conductor resistance of IES monitor
Protective conductor resistance: $\leq 300 \text{ m}\Omega$
Value

S	Measured protective conductor resistance of UPS for IES	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Protective conductor resistance: $\leq 100 \text{ m}\Omega$			
	Value	N.A.		

3.59.3.2 Optional components

S	Measured protective conductor resistance of WCS-split Indoor Unit (option)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Protective conductor resistance: $\leq 100 \text{ m}\Omega$			
	Value	N.A.		
S	Measured protective conductor resistance of WCS-split Outdoor Unit (option)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Protective conductor resistance: $\leq 300 \text{ m}\Omega$			
	Value	N.A.		
S	Measured protective conductor resistance of WCS-splitFlow Heater (option)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Protective conductor resistance: $\leq 100 \text{ m}\Omega$			
	Value	N.A.		
S	Measured protective conductor resistance of Monitor Ceiling System (option)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Protective conductor resistance: $\leq 300 \text{ m}\Omega$			
	Value	N.A.		
S	Measured protective conductor resistance of Monitor Cart (option)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Protective conductor resistance: $\leq 300 \text{ m}\Omega$			
	Value	N.A.		
S	Measured protective conductor resistance of Monitor 1 of MCS or MC (option)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Protective conductor resistance: $\leq 300 \text{ m}\Omega$			
	Value	N.A.		
S	Measured protective conductor resistance of Monitor 2 of MCS or MC (option)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Protective conductor resistance: $\leq 300 \text{ m}\Omega$			
	Value	N.A.		

3.61 PHS: Measuring the Leakage Current

3.61.1 PHS Tabletop

S	Leakage Current (Tabletop plate to PE terminal) measured	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Leakage Current: $\leq 100 \mu\text{A}$ [AC]			
	Value	N.A.		
S	Leakage Current (Tabletop plate to PE terminal) measured	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Leakage Current: $\leq 10 \mu\text{A}$ [DC]			
	Value	N.A.		

3.61.2 PMM (option)

S	Measured leakage current (ECG leads to PE terminal)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Leakage Current: $\leq 100 \mu\text{A}$ [AC]			
	Value	N.A.		
S	Measured leakage current (ECG leads to PE terminal)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
	Leakage Current: $\leq 10 \mu\text{A}$ [DC]			
	Value	N.A.		

S	Measured leakage current (ECG leads to Tabletop plate) Leakage Current: $\leq 100 \mu\text{A}$ [AC] Value N.A.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
S	Measured leakage current (ECG leads to Tabletop plate) Leakage Current: $\leq 10 \mu\text{A}$ [DC] Value N.A.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

3.63 PHS/MPT: Function Test of the Release Switches

S	Function of the Tabletop release switches tested (12M)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
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3.64 System: Function Test of the Door Switch

S	Door switch checked (12M)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
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3.65 System: Function Test of Radiation Preparation Indicators

S	Radiation preparation indicators checked (12M)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
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3.66 System: Function Test of the Radiation Indicators

S	Radiation indicators checked (12M)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
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3.67 System: Function Test of the Radiation Monitor (108%)

S	Xray timeout test (Radiation Monitor) executed for Topogram Mode (12M) Radiation monitor: $\leq 108 \%$ Value N.A.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
S	Xray timeout test (Radiation Monitor) executed for Sequence Mode (12M) Radiation monitor: $\leq 108 \%$ Value N.A.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
S	Xray timeout test (Radiation Monitor) executed for Spiral Mode (12M) Radiation monitor: $\leq 108 \%$ Value N.A.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

3.68 System: Function Test of the Emergency STOP Circuit

S	Emergency STOP circuit checked (12M)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
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3.69 Quality Assurance Test

-	Quality Assurance Test performed (6M)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
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4 Preventive Parts Replacement

4.1 PDC-A: Replacing the UPS battery packs

-	Battery packs of UPS replaced (24M) Date	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
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4.2 IES: Replacing the Complete UPS

- Complete UPS replaced (24M)

Date

[Redacted Date Field]

4.3 IVM (optional): Replacing the Batteries in the IVP

- IVP batteries replaced (24M)

Date

[Redacted Date Field]