

Medical Systems Division

No. _____

Report Date (M/D/Y):

Name of Institution:

Seal or Signature

Address

Telephone Number

Name of Room

Safety Management Supervisor for Medical Equipment

This is a report on the maintenance procedures, which were completed as

Name of System	System Component Described in the attached System Component List.
Management Registration No.	Installation Date (M/D/Y)
Inspection Date (M/D/Y)	Month of Next Inspection (M/Y)
Maintenance Engineers Name Name	
Maintenance Company	Telephone Number

[Inspection Results]

Inspection Date: (M) (D) (Y) to (M) (D) (Y)

Inspection Reporter:

Work Results:

Replacement Parts:

Part Name	Part No.	Qty	Part Name	Part No.	Qty

Measuring Instruments Used:

Name of Measuring Instrument	Control No.	Name of Measuring Instrument	Control No.

[System Component List]

[illegible]

System Record:

System Inspection Results Overview

<Air-Conditioning in the Examination Room>

Temperature/humidity

: ☐ Abnormal
: ☐ Normal

Special note:

<Air-Conditioning in the Storage Room>

Temperature/humidity

: ☐ Abnormal
: ☐ Normal

Special note:

<I.I. • FPD>

Image : ☐ Abnormal
: ☐ Normal

Special note:

<Collimator>

Operation : ☐ Abnormal
: ☐ Normal

Special note:

<X-ray tube>

Operation : ☐ Abnormal
: ☐ Normal

Special note:

<C-arm>

Operation : ☐ Abnormal
: ☐ Normal

Special note:

<Main panel>

Operation : ☐ Abnormal
: ☐ Normal

Special note:

<Side panel>

Operation : ☐ Abnormal
: ☐ Normal

Special note:

<X-ray control unit>

Operation : ☐ Abnormal
: ☐ Normal

Special note:

<Power supply>

Operation : ☐ Abnormal
: ☐ Normal

Special note:

<Monitor>

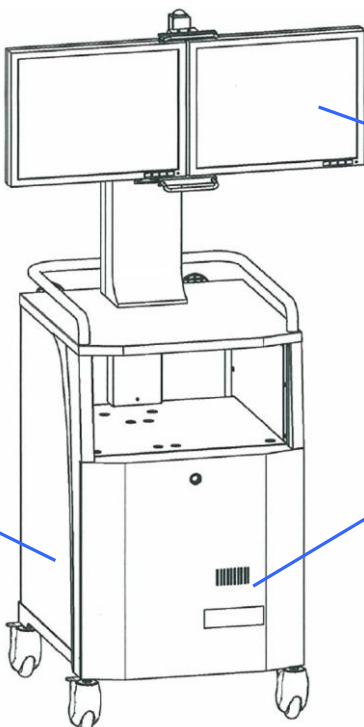
Degree of deterioration : ☐ Abnormal
: ☐ Normal

Special note:

<Image Processing Unit>

Operation : ☐ Abnormal
: ☐ Normal
: ☐ No equipped

Special note:



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No.	Inspection Item	Safety Item	Details				Inspection Result	
3. Main body(C-arm)								
(1)	C-arm slide motion	○	a. Lock check					
			b. Operation, stroke range check (90°/-30°)					
(2)	C-arm rotary motion	○	a. Lock check					
			b. Operation, stroke range check (300°/-120°)					
(3)	C-arm forward/back movement	○	a. Lock check					
			b. Operation, stroke range check (200mm)					
(4)	C-arm lateral swiveling movement	○	a. Operation, Noise, and Lock check					
			b. Operation, stroke range check (+12.5°/-12.5°)					
(5)	C-arm vertical movement	○	a. Lock check					
			b. Operation, stroke range check (450mm)					
			c. Balance check					
(6)	C-arm running operation	○	a. Noise, Vibration check					
			b. Brake check					
			c. Steering wheel maneuverability check					
(7)	Parallel leaf open/close operation	—	Noise, Motion, Amount of movement check					
(8)	Parallel leaf rotation operation	—	Noise, Motion, Amount of movement check					
(9)	Octagonal leaf open/close operation	—	Noise, Motion, Amount of movement check					
(10)	BH filter switching operation	—	Motion, Amount of movement check					
(11)	Camera motion (Only OPESCOPE ACTENO)	—	a. Rotary motion check					
			b. H/V inversion operation check					
(12)	Fluoroscopy field	—	The position of the collimator must be visible on the monitor. Fixed rectangular leaf must not be visible. (FD type should be adjusted with the adjustment tool.)					
(13)	Radiography field	—	The position of the collimator must be visible on the monitor. Fixed rectangular leaf must not be visible. (FD type should be adjusted with the adjustment tool.)					
4. X-ray generator								
(1)	Fluoroscopy operation	—	DC Fluoroscopy 40kV		K		mA	
			DC Fluoroscopy 110kV		V		mA	
(2)	Radiography operation	—	110kV 1.2mAs		K		mA	
			100kV 2mAs		V		mA	
(3)	Radiography time precision	—	Radiography: 100kV 0.5mAs(25ms)		msec			

Remarks

【Inspection Report】

No.	Inspection Item	Safety Item	Details	Inspection Result			
1. Checking installation environment							
(1)	Indicator during use	<input type="radio"/>	Lighting of the indicator during use				
(2)	Temperature and humidity	—	Examination Room	Temperature: 10~35°C		deg C	
				Relative humidity: 30~85%		%	
			Machine Room	Temperature: -10~40°C		deg C	
				Relative humidity: 10~90%		%	
(3)	Power supply voltage	—		Power supply voltage $\pm 10\%$		V	
(4)	Grounding wire connection	<input type="radio"/>	Status of the grounding wire				
2. Checking equipment usage status							
(1)	External appearance	—	External appearance, fastening status, and cable connection status of each unit				
(2)	Labels	—	Appearance of caution and warning labels on each unit				
(3)	Instrument cleaning	—	Clean it with a cleaner.				
(4)	Cable connection condition	—	Check the connection of each cable terminal/connector.				
(5)	Checking cable condition	—	Check each cable state (whether rubbing, twisting, pulling, and others exist or not)				
(6)	Checking the cart cable condition	—	Check the connector part of the cart cable.				
(7)	Mechanical parts fixture	<input type="radio"/>	Check the mounting condition of each mechanical part.				
(8)	Power supply voltage(AC)	—	AC input section of DC power supply on C-arm side	220V $\pm 10\%$		V	
(9)	Power supply voltage(DC)	<input type="radio"/>	Power supply section on C-arm side	+5V $\pm 10\%$		V	
				+12V $\pm 10\%$		V	
				-12V $\pm 10\%$		V	
				+24V $\pm 10\%$		V	

Remarks

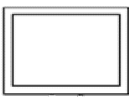

[Explanation about marks used in the Inspection Result column]

- C : Checked** : Visual inspection or operation check has been performed. Measurement values have been confirmed to be within the standards.
- M : Maintenance work performed** : Fixing parts have been re-tightened, lubrication and cleaning have been performed, and parts have been replaced.
- A : Adjusted** : Settings have been changed and adjustment has been performed.
- : Not applicable** : There is no equipment subject to inspection or the item is not applicable.
- N : Special note** : Detailed information is described in the Remarks section.
- NA** : Items not subject to inspection due to the inspection cycle

Safety Item: Inspection items related to safety are marked with a circle.

No.	Inspection Item	Safety Item	Details	Inspection Result
5. System operation				
(1)	DC Fluoroscopy operation	—	Each DC Fluoroscopy operation check	
(2)	Pulse Fluoroscopy operation	—	Each Pulse Fluoroscopy operation check	
(3)	Boost Fluoroscopy operation	—	Boost Fluoroscopy operation check	
(4)	Super Shot operation	—	Super Shot operation check (Only ACTENO without DR option)	
(5)	Radiography operation	—	Radiography operation check (Only ACTENO with DR option and FD type)	
(6)	Fluoroscopy buzzer and timer	—	The buzzer should sound at the set time and fluoroscopy should be interrupted.	
(7)	LIH(Last Image Hold)	—	LIH image check	
(8)	Write/read memory images	—	Memory image read/write check	
(9)	APR function	—	Read-write operation check	
6. Image quality				
(1)	IBS balance	—	Operation check	
(2)	Noise, scratches, stains	—	Image check	
(3)	Fluoroscopy image	—	Brightness, luminance irregularity, distortion, defects, resolution(Only ACTENO)	
(4)	Radiography image	—	Image check(Only ACTENO with DR option)	
(5)	<I.I> Uneven brightness, scratches, stains, and pressure resistance	—	Image check(Only ACTENO)	
(6)	<I.I.> Relative luminance (Only ACTENO)	—	Iris value at installation	
			Installation	Current
			(Installation FkV)-(Current FkV)	
			9" kV	kV
(7)	Maximum Fluoroscopic Dose Measurement	○	Maximum dose does not exceed the regulation value of your area.	
(8)	Calculated dose indication	—	Error must be within the standard	

Remarks

No.	Inspection Item	Safety Item	Details	Inspection Result
7. Peripherals (Option)				
(1)	Thermal printer	—	Operation check	
(2)	Laser pointer	—	Operation check	
(3)	Doctor handle	—	Operation check	
(4)	Hand switch	—	Operation check	
(5)	Wireless foot switch	—	Operation check	
(6)	Wireless hand switch	—	Operation check	
(7)	Area dosimeter	—	Measurement accuracy check	
(8)	Wireless LAN	—	Operation check	
(9)	Long cable foot switch	—	Operation check	
(10)	Router	—	Operation check	
(11)	External video output	—	Operation check	
8. Monitors				
(1)	LIVE monitor 	—	a. Check the contact of connectors and clean the monitor.	
			b. Check the grayscale.	
			c. Check the artifact and the brightness.	
(2)	REFERENCE monitor 	—	a. Check the contact of connectors and clean the monitor.	
			b. Check the grayscale.	
			c. Check the artifact and the brightness.	
9. System overall operation				
(1)	Overall operation after inspection	—	a. Fluoroscopy / Radiography operation	
			b. Display image	
			c. Interlocking operation with related equipment	

Remarks
