

Maintenance Procedures

No.	Inspection Item	Inspection Content	Inspection Method					Safety	Inspection Cycle	
			Operation	Visual Check, etc.	Cleaning	Replacement	Measuring Instrument		First Time	Second Time
4	X-ray generator									
(1)	Starter operation	Check that there are no abnormalities in operation.	○						*	
(2)	Radiography operation	Check that there are no abnormalities in operation.	○					*	*	
(3)	Fluoroscopy operation	Check that there are no abnormalities in operation.	○					*	*	
(4)	Tube voltage precision and reproducibility	Measure the tube voltage. • For details, see 3-2 and 3-3 in the Inspection Data Measurement Procedures.					○		*	
(5)	Tube current precision and reproducibility	Measure the tube current. • For details, see 3-2 and 3-3 in the Inspection Data Measurement Procedures.					○		*	
(6)	Tube current precision and reproducibility	Measure the tube current. • For details, see 3-2 and 3-3 in the Inspection Data Measurement Procedures.					○		*	
(7)	Radiography time precision and reproducibility	Measure the radiography time. • For details, see 3-3 in the Inspection Data Measurement Procedures.					○		*	
(8)	Radiography tube current time product precision and reproducibility	Measure the radiography tube current time product. • For details, see 3-3 in the Inspection Data Measurement Procedures.					○		*	
(9)	High voltage cables and bushing	Remove the bushing, and check for discharge marks and abnormalities in packing, etc. Also, wipe away old grease, replace packing, and apply grease.		○		○			*	
(10)	Control circuit	Measure connectors, control operation, and standard voltage of the CPU board.		○					*	
(11)	Automatic exposure	Check that the densities are constant under the radiography conditions determined at installation.		○				*	*	
(12)	Area dosimeter	Check the area dosimeter.	○				○	*	*	
(13)	Check the contactor cable fastening screw	Check the screws that fasten the cable. (MG-L, MG-RS, MG-C, MG-D, MG-F(option))		○				@	*	

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5	X-ray tube unit									
(1)	X-ray tube unit conditions	Check that there are no abnormalities in the appearance of X-ray tube unit and its rotating sound.		○				@	*	*
(2)	X-ray tube unit attachment	Check that the X-ray tube unit attachments are not loose or wobbly and have no problems.		○					*	*
(3)	High voltage cables and bushing	Remove the bushing, and check for discharge marks and abnormalities in packing, etc. Also, wipe away old grease, replace packing, and apply grease.		○		○				*
6	Collimator									
(1)	Open/close mechanism	Check the operation noise and wire rope conditions.	○	○					*	*
(2)	Effective field of view	Check the field of view.		○				@	*	*
(3)	Main unit fixing	Check tightness of the main unit fixing screws.		○				@		*
(4)	Camera unit fixing (Option)	RC-300 only. Perform the "Camera Calibration" described in the RC-300 Installation Instructions.		○						*

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7	Interlocking equipment									
(1)	Operations	Check that there are no abnormalities in operating noise.	○	○				*	*	
(2)	Stopping accuracy	Check the stopping conditions (positions, etc.).	○				@	*	*	
(3)	Operations of a brake and clutch	Check the conditions of a brake and clutch. Replace them if they are worn out.	○			○	@		*	
(4)	Tension and lubrication of belts	Check the belt conditions and apply grease as needed.	○					*	*	
(5)	Emergency stop switch operation	Check the emergency stop switch operation.		○			@	*	*	
(6)	Tightness of screws for mounting a motor, etc.	Check tightness of the fixing screws.		○			@		*	
8	Tube support (first unit)									
(1)	Column vertical movement	Check vertical movement, noise, and stopping conditions.	○					*	*	
		Check the wire rope conditions.		○			@	*	*	
		Check tightness of screws for mounting each unit of a column.	○				@	*	*	
(2)	Right/left and back/forth movement	Check right and left movement, noise, and stopping conditions.	○					*	*	
		Check the center-finder operation.	○						*	
		Check tightness of screws for mounting rails and bearings.	○				@		*	
(3)	Tube rotation around vertical axis	Check rotation, noise, and stopping conditions.	○					*	*	
		Check the index position.	○						*	
		Check tightness of screws for mounting a tube support.	○				@		*	
(4)	Tube rotation	Check rotation, noise, and stopping conditions.	○					*	*	
		Check the index position.		○					*	
		Check the angle display.	○					*	*	
		Check tightness of screws for mounting a rotating part on a tube.	○				@		*	
(5)	Operation switches and monitor display	Check the switch operation.	○						*	
		Check the contact of terminals and connectors.	○						*	
		Check the monitor display.		○					*	
(6)	Spring balance	Measure the amount of hanging down of the X-ray tube when unlocked from the upper end of the vertical stroke not combined with power assist: 150 mm or less combined with power assist: 60 mm or less	○						*	

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9 Tube support (second unit)										
(1)	Column vertical movement	Check vertical movement, noise, and stopping conditions.	○						*	*
		Check the wire rope conditions.		○				@	*	*
		Check tightness of screws for mounting each unit of a column.	○					@	*	*
(2)	Right/left and back/forth movement	Check right and left movement, noise, and stopping conditions.	○						*	*
		Check the center-finder operation.	○							*
		Check tightness of screws for mounting rails and bearings.	○					@		*
(3)	Tube rotation around vertical axis	Check rotation, noise, and stopping conditions.	○						*	*
		Check the index position.	○							*
		Check tightness of screws for mounting a tube support.	○					@		*
(4)	Tube rotation	Check rotation, noise, and stopping conditions.	○						*	*
		Check the index position.		○						*
		Check the angle display.	○						*	*
		Check tightness of screws for mounting a rotating part on a tube.	○					@		*
(5)	Operation switches and monitor display	Check the switch operation.	○							*
		Check the contact of terminals and connectors.	○							*
		Check the monitor display.		○						*
(6)	Spring balance	Measure the amount of hanging down of the X-ray tube when unlocked from the upper end of the vertical stroke not combined with power assist: 150 mm or less combined with power assist: 60 mm or less	○						*	

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10 Horizontal bucky										
(1)	Tabletop vertical movement	Check vertical movement, noise, and stopping conditions.	○						*	*
		Stopping accuracy	○							*
		Check the belt conditions.		○				@	*	*
		Check the gear (screw rod) conditions and apply grease as needed.		○				@		*
		Check the emergency stop switch operation.	○					@	*	*
(2)	Tabletop slide	Check vertical movement, noise, and stopping conditions.	○							*
		Check tightness of screws for mounting rails and bearings.		○				@		*
(3)	Bucky support	Check vertical movement, noise, and stopping conditions.	○							*
		Check tightness of screws for mounting rails and bearings.		○				@		*
(4)	Bucky unit	Check grid movement, noise, and stopping conditions.	○							*
		Check the grid attachment and removal.	○							*
11 Vertical bucky										
(1)	R/F table slide	Check vertical movement, noise, and stopping conditions.	○						*	*
		Check the wire rope conditions. Replace it if it is damaged.		○				@		*
		Check tightness of screws for mounting rails and bearings.		○				@	*	*
(2)	Bucky unit	Check grid movement, noise, and stopping conditions.	○							*
		Check the grid attachment and removal.	○							*
12 Checking overall system operations										
(1)	Overall operations after inspection	Check the radiography operation.	○						*	*
		Check linked operations with related equipment.	○							*