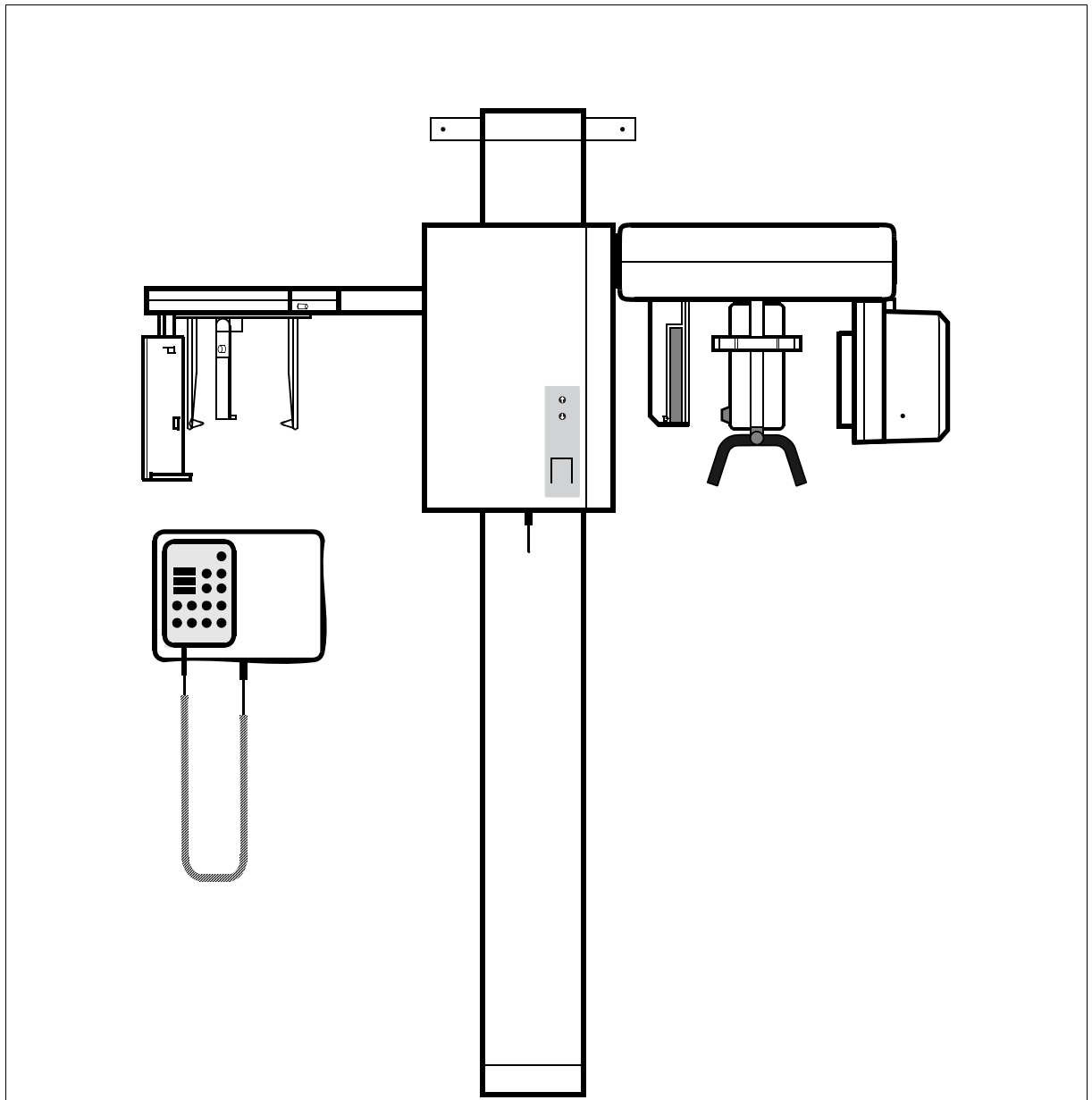


ORTHOPHOS 3 / 3 Ceph ORTHOPHOS 3 DS / 3 Ceph with upgrade Kit

Inspection and maintenance

English



Dear customer

You would like to have and will have many years of satisfaction with your **Sirona** X-ray unit.

Safety and reliability are necessary to ensure this.

Your dental dealership offers you service by specially trained engineers for this purpose.

The maintenance should ensure that your product is permanently safe and operational. All components subject to normal wear and tear are checked and, if necessary, replaced. Maintenance work may be performed by the operator only if this is described on the part of Sirona Dental Systems GmbH, otherwise only authorized service engineers of Sirona Dental Systems GmbH or its authorized dealers may be entrusted with the work.

In case you have not concluded a maintenance contract, please contact the customer service department of your dental dealership.

The performed maintenance must be documented in this document, which must be kept with the unit.

We wish you much success and pleasure with your quality product
from **SIRONA Dental Systems**.

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1 Yearly inspection by the system owner

Inspection and maintenance must be performed at predetermined intervals to guarantee the health and safety of all patients, users and third parties.

In order to guarantee the operational safety and reliability of your product, you as the **system owner should check your unit through at least once a year** or commission your dental depot to do so.

In addition, your dental depot offers you maintenance of the system by specially trained engineers; see **Chapter 2 “Maintenance by the service engineer”**.

All inspection and maintenance work performed by the system owner and/or service engineer must be recorded in this document and kept near the unit!












If one or more checks to be performed do not lead to satisfactory results, please contact your dental depot.

1.1 Technical documents

Technical documents	Answer questions with yes (✓) or no (-)											
Date (please enter month/year)												
Operating Instructions available?												
Installation Instructions available?												
On-site installation, dimensions, technical data available?												
Installation Report / Warranty Passport available?												
Declaration of Conformity by system integrator available?												
X-ray System Logbook available (for Germany only)?												

If no ⇒ Order missing documents from your dental depot.

1.2 System accessories

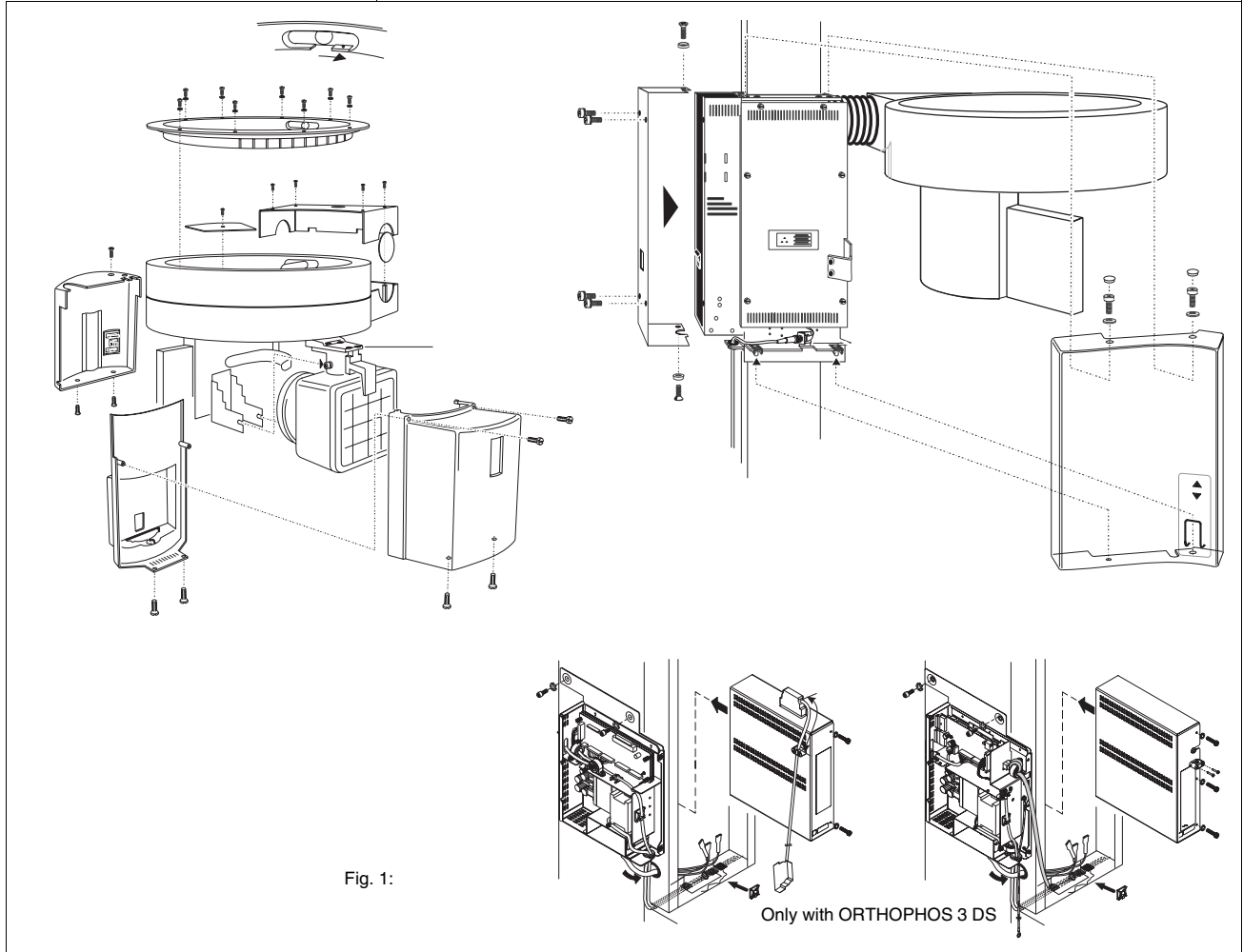
System accessories (see Operating Instructions) Not all accessories listed here may be included in the scope of supply.		Answer questions with yes (✓) or no (-)											
Date (please enter month/year)													
	Needle phantom available?												
	Test phantom available?												
													
	Special wrench available?												
	Adjusting tool available?												
	Bite block, yellow available?												
	Contact segment, yellow available?												
	Localizer available?												
	Ear holders available?												
	FH-positioner available?												
	Contact support piece available?												

If no ⇒ Order missing accessories from your dental depot.

1.3 Surfaces of the unit

Cover parts	Answer questions with yes (✓) or no (-)											
Date (please enter month/year)												
All cover parts attached at X-ray unit (Fig. 1)?												
All screws on unit housing available?												
No cover parts damaged (no surface damages, e.g. scratches)?												
All cover parts in clean condition? Clean X-ray unit with the recommended cleaning agents (see Operating Instructions).												

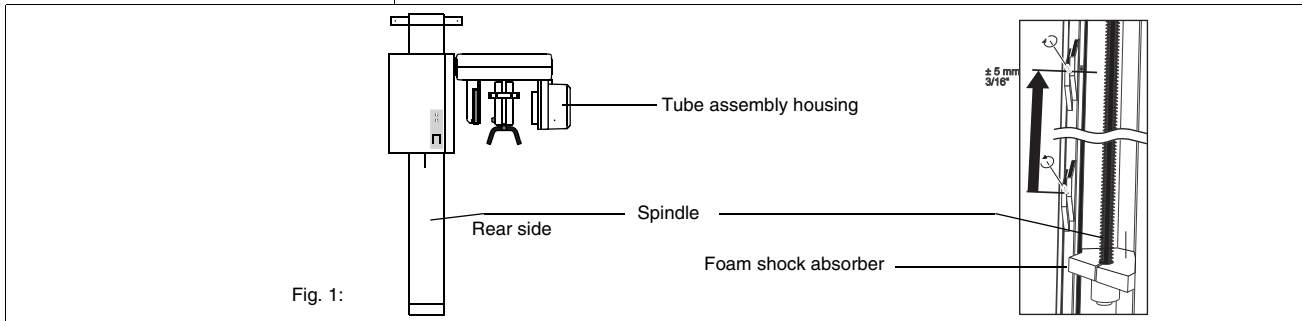
If no ⇒ Inform your dental depot.



1.4 X-ray unit

X-ray tube assembly and stand condition	Answer questions with yes (✓) or no (-)										
Date (please enter month/year)											
Tube assembly housing palpably/visibly oil-free (Fig. 1)?											
Drive spindle free from foreign objects and lubricated (Fig 1)?											
Foam shock absorber available (Fig 1)?											

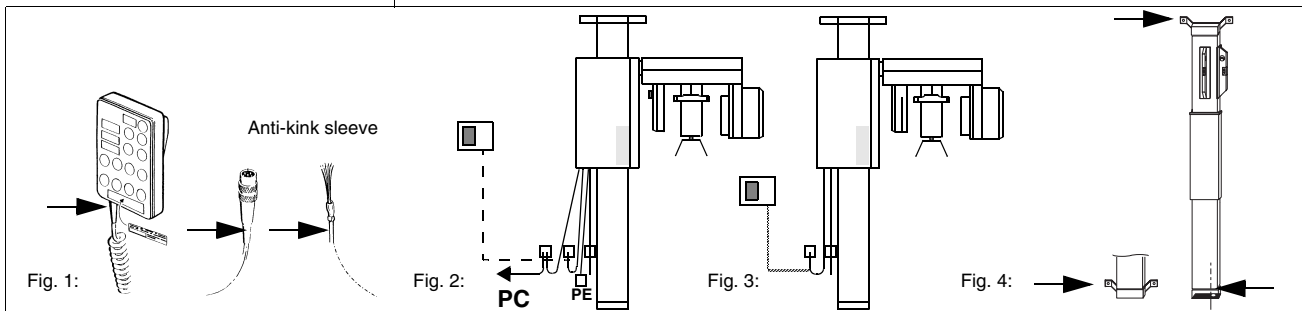
If no ⇒ Inform your dental depot.



1.5 System safety

Safety	Answer questions with yes (✓) or no (-)										
Date (please enter month/year)											
Coiled cable with strain relief and anti-kink sleeve OK (Fig. 1)?											
Power cable free of damage (Fig. 2)?											
Control cable free of damage (Fig. 3)?											
All screws used for attaching the X-ray unit to the wall and floor tight (Fig. 4)?											
For Japan only: Is the unit immediately switched off when the emergency shutdown switch is activated?											

If no ⇒ Immediately order repair by a service engineer.



1.6 Exposure safety

Exposure safety	Answer questions with yes (✓) or no (-)											
Date (please enter month/year)												
No repeated occurrence of a certain error message (Fig. 1)?												
Optical and acoustic signal present when radiation is released (Fig. 2)?												
Exposure is immediately interrupted when radiation button is released prematurely, X-RAY display no longer lights up(Fig. 3)?												

If no ⇨ Inform your dental depot.

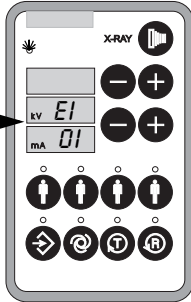


Fig. 1:

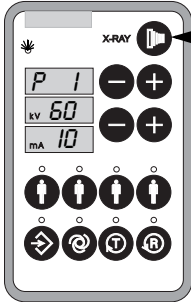


Fig. 2:

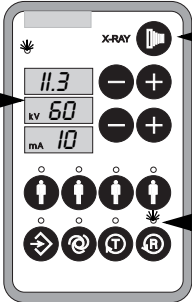


Fig. 3:

Labels for Fig. 1: Error message

Labels for Fig. 2: X-RAY lights up

Labels for Fig. 3: Exposure time is indicated, kV/ma lights up, X-RAY no longer lights up, Acoustic signal no longer sounding, LED above Return key lights up.

1.7 Key functionality

Key functionality	Answer questions with yes (✓) or no (-)											
Date (please enter month/year)												
Membrane foil of the height adjustment buttons and multimer keys without cracks or holes (Fig. 1)?												
All numbers and letters on the multimer show up completely?												

If no ⇨ Inform your dental depot.

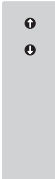
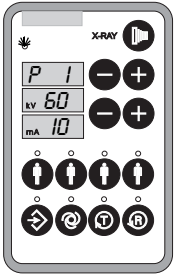


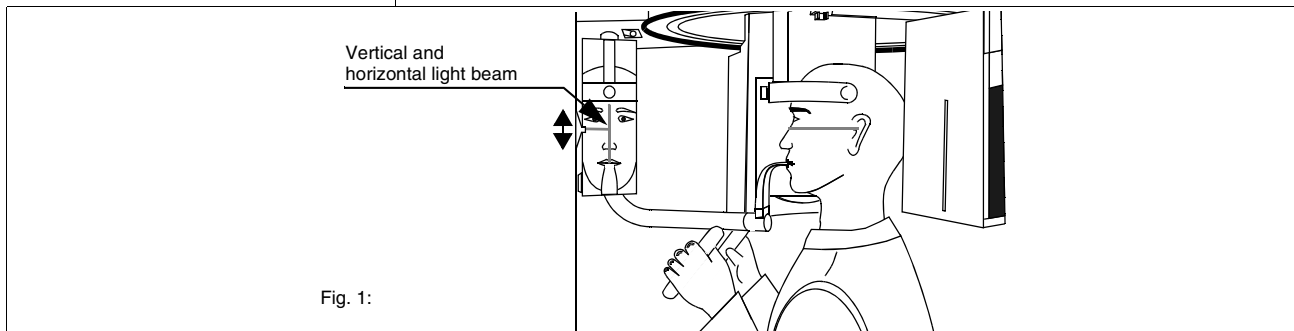
Fig. 1:



1.8 Light localizer functionality (if present)

Light localizer	Answer questions with yes (✓) or no (-)												
Date (please enter month/year)													
Vertical and horizontal light beam visible (Fig. 1)?													
Position of the horizontal light beam can be adjusted?													

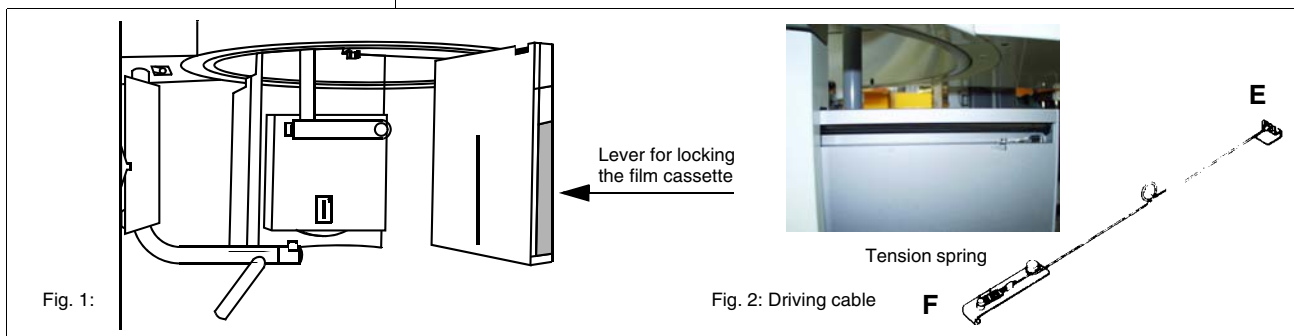
If no ⇒ Inform your dental depot.



1.9 Film cassette holder functionality

Film cassette holder	Answer questions with yes (✓) or no (-)												
Date (please enter month/year)													
Lever locks when film cassette is inserted (Fig. 1)?													
Cassette holder driving cable free of damage and not spliced (Fig. 2)?													

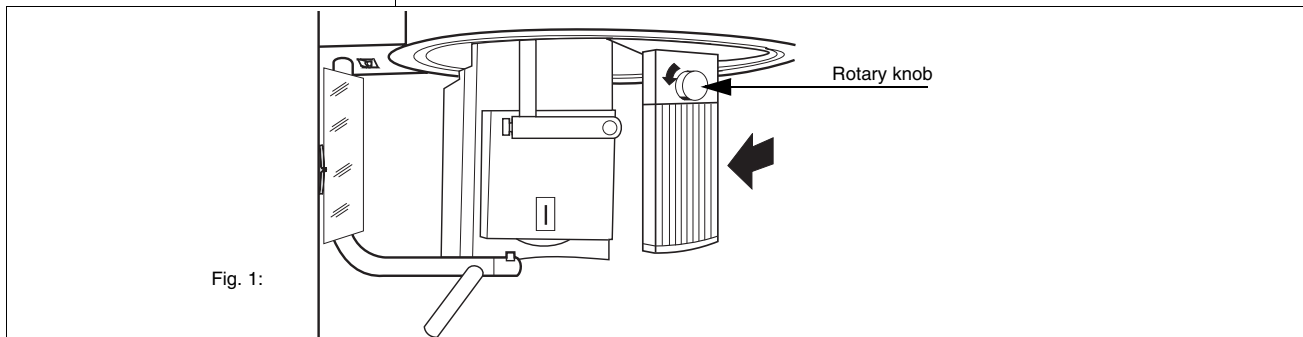
If no ⇒ Inform your dental depot.



1.10 Image receptor functionality

Image receptor	Answer questions with yes (✓) or no (-)												
Date (please enter month/year)													
Image receptor can be removed and turned in easily (Fig. 1)?													
Image receptor fits snugly in the guide?													

If no ⇒ Inform your dental depot.



1.11 Image quality

Image quality	Answer questions with yes (✓) or no (-)												
Date (please enter month/year)													
Typical exposure parameters are not adjusted in order to achieve a constant image quality?													

If no ⇒ Inform your dental depot.

1.12 Height adjustment functionality

Height adjustment	Answer questions with yes (✓) or no (-)											
Date (please enter month/year)												
Acoustic signal sounds when height is adjusted?												
Height adjustment works without jolting and without atypical running noises (e.g. clacking, scuffing)?												

If no ⇒ Inform your dental depot.

1.13 Documenting your yearly inspection

The undersigned confirms that he/she has checked the unit for the above criteria and that he/she has informed the competent dental depot in case of any defects.

Year	Inspection date:	Name:	Signature:
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			

2 Maintenance by the service engineer

General information for the service engineer

For performing maintenance work, the **ORTHOPHOS 3 / 3 Ceph / DS Service Manual** (Order No. 58 35 744) is indispensable. All measures which are required for maintenance are described there in Chapter "Maintenance" on page 1.

Furthermore, the Operating Instructions which have been supplied together with the unit are required.



NOTE

In addition to the yearly inspection by the system owner or persons authorized by him/her, preventive maintenance has to be performed after 4, 7, 10 years and afterwards every two years.

Should it be necessary to replace defective components along with parts subject to wear, this must be agreed previously with the customer or dental practice staff.

If components bearing a serial number are replaced, the new serial number must be recorded in the table in Chapter 2.4, "Serial numbers of the system".

Discontinuation of spare part deliveries:

For each system, the spare part deliveries are discontinued after a certain period of time. The system owner will be responsible for safety-relevant failures of systems which continue in operation after that time and can no longer be serviced due to missing spare parts.

2.1 Customer data

Customer	
Last name:	
First name:	
Street:	
Post code / city:	
Phone:	

2.2 Checking the records

Checking the records of the yearly inspection by the system owner	Answer questions with yes (✓) or no (-)									
Maintenance interval (after years)	4	7	10	12	14					
Date (enter month/year)										
Yearly inspection by the system owner has been performed (see Chapter 1)?										
Records are complete?										
All questions answered with yes ?										
All work which has led to a negative result during the checks have been performed?										

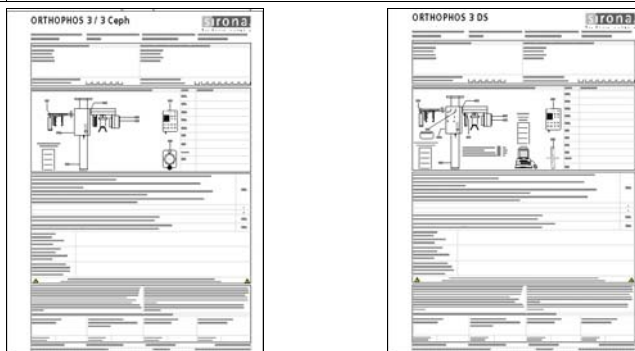
If no ⇨ Perform yearly inspection prior to maintenance.

2.3 Labels on the system

Comparing labels on the system with Installation Report / Warranty Passport	Answer questions with yes (✓) or no (-)									
Maintenance interval (after years)	4	7	10	12	14					
Date (enter month/year)										
All labels according to Installation Report / Warranty Passport affixed (Fig. 1)?										
All labels legible?										

If no ⇨ Replace missing and/or illegible labels.

Fig. 1:



2.4 Serial numbers of the system

Please enter new Serial No. here when replacing a component:			
X-ray unit		Date	Signature
Serial No. (at initial start-up)			
Serial No.			
Serial No.			
X-ray tube assembly		Date	Signature
Serial No. (at initial start-up)			
Serial No.			
Serial No.			
Serial No.			
Serial No.			
Tube		Date	Signature
Serial No. (at initial start-up)			
Serial No.			
Serial No.			
Serial No.			
Serial No.			
Multitimer		Date	Signature
Serial No. (at initial start-up)			
Serial No.			
Serial No.			
Serial No.			
Ceph		Date	Signature
Serial No. (at initial start-up)			
Serial No.			
Serial No.			
Image receptor		Date	Signature
Serial No. (at initial start-up)			
Serial No.			
Serial No.			
Test phantom		Date	Signature
Serial No. (at initial start-up)			
Serial No.			
Serial No.			

2.5 Functional test

Prior to starting with maintenance work, a functional test must always be performed.

In doing so, it is helpful to read out the error messages, if present.

Refer to Chapter 5.1, "Selecting Service routines".

Inform the customer or dental practice staff about any defects you have detected.

Checking the system functions (observe Operating Instructions)	Answer questions with yes (✓) or no (-)									
Maintenance interval (after years)	4	7	10	12	14					
Date (enter month/year)										
No atypical running noises audible? See chapter 7.1										
Drive spindle free from foreign objects, drive spindle lubricated, foam shock absorber attached? See chapter 7.1										
Jolt-free fine positioning possible?										
Correction switch for height adjustment functioning?										
Acoustic signals audible?										
Forehead support mounted vertically? See chapter 7.2										
Temple supports can be adjusted easily and symmetrically? See chapter 7.2										
With Ceph only Diaphragm wheel can be rotated and engages perceptibly? See chapter 7.3										
Film cassette Cassette holder engages securely in both end positions? See chapter 7.4										
Cassette holder driving cable is free of damage?										
Image receptor Image receptor can be screwed in and out easily and fits snugly in its guide? See chapter 7.5										
Light localizer adjustable? See chapter 7.6										
Cephalometer, conventional Head support can be rotated? See chapter 7.7										
	If no ⇒ Correct fault.									

2.6 Assessing X-ray exposures

Ask to be shown the most recent X-ray exposures taken by the dentist (film or digital).

Assessing X-ray exposures	Answer questions with yes (✓) or no (-)									
Maintenance interval (after years)	4	7	10	12	14					
Date (enter month/year)										
Unexposed surrounding border present? See chapter 7.8										
Exposure sharp (in case of films, observe processing conditions)?										
Density of X-ray image OK (observe position of density switch; in case of film, observe processing conditions)?										
	If no ⇒ Correct fault.									

2.7 Checking the tube data

Checking the tube data	Answer questions with yes (✓) or no (-)									
Maintenance interval (after years)	4	7	10	12	14					
Date (enter month/year)										
Actual kV/mA values and preheating OK? See chapter 7.9										
	If no ⇒ Correct fault.									

2.8 Diaphragm check

Perform diaphragm check also with Cephalometer, if present.

Performing diaphragm check		Answer questions with yes (✓) or no (-)								
Maintenance interval (after years)	4	7	10	12	14					
Date (enter month/year)										
ORTHOPHOS 3/3 Ceph Test phantom exposure/needle phantom exposure correct? See chapter 7.10										
ORTHOPHOS 3 DS/ 3 Ceph with upgrade Kit Test phantom exposure/needle phantom exposure correct? See chapter 7.11										
		If no ⇒ Correct fault.								

2.9 Checking the cables for damage

Checking the cables		Answer questions with yes (✓) or no (-)								
Maintenance interval (after years)	4	7	10	12	14					
Date (enter month/year)										
Power cable OK? See chapter 7.12										
Protective ground wire OK?										
Control cable OK?										
Data transfer cable OK?										
		If no ⇒ Correct fault.								

2.10 Safety checks

Move unit to working height. Switch power OFF at the main switch for the building installation or disconnect the power plug. Remove covers from the unit.

Performing safety checks		Answer questions with yes (✓) or no (-)								
Maintenance interval (after years)	4	7	10	12	14					
Date (enter month/year)										
Grounding straps have complete and firm contact? See chapter 7.13										
Cable shielding OK? See chapter 7.14										
Light barrier housing properly attached and free of damage? See chapter 7.15										
Ring cable free of damage or signs of wear? See chapter 7.15										
Prestress of flat belt on rotation motor M1 sufficient? See chapter 7.16										
Counterbalancing disk on rotation motor M1 properly attached?										
Protective ground wire resistance complies with specifications? See chapter 7.17										
Protective ground wire connections properly attached?										
Unit's leakage current complies with specifications? See chapter 7.17										
		If no ⇒ Correct fault.								

Space for remarks

We reserve the right to make any alterations which may be required due to technical improvements.

© Sirona Dental Systems GmbH 2000
D 3285.105.01.02.02 11.2005

Sprache: englisch
Ä.-Nr.: 106 899

Printed in Germany
Imprimé en Allemagne

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Order No **60 82 346 D 3285**