



**MARYLAND DEPARTMENT OF THE ENVIRONMENT**  
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**RADIOLOGICAL HEALTH PROGRAM**

**CEPHALOMETRIC/PANORAL DENTAL RADIATION MACHINE PREVENTIVE MAINTENANCE REPORT**

<b>FACILITY NAME:</b>		<b>FACILITY CONTACT NAME:</b>		<b>CONTACT TELEPHONE NO.:</b>	
<b>FACILITY REGISTRATION NO.:</b> □□ - □□□□		<b>Service Provider Meter Manufacturer:</b>		<b>REGISTERED SERVICE PROVIDER NAME:</b>	
<b>MDE MACHINE NO. AND SUFFIX:</b> □□□□□/□		<b>Meter Used – Model:</b>		<b>Service Provider Registration Number:</b>	
<b>Component Use:</b> □□		<b>Model Number:</b>		<b>NAME OF SERVICE PROVIDER:</b>	
<b>Machine Manufacturer:</b>		<b>Calibration Date:</b>		<b>DATE OF SERVICE:</b>	
<b>Facility-Designated Room Number:</b>		<b>Note any corrective services provided:</b>		<b>Does Radiation Machine Meet PM Requirements?</b>	
<b>Tube Serial Number:</b>				<b>Date Facility Owner Made Aware of Service Findings:</b>	
<b>Other information on tube serviced (optional)</b>				<b>Date Corrective Action Taken:</b>	

<b>As Found Settings</b>			<b>Preventive Maintenance Data</b>			
KVP			PM Interval (Months)    6 ___ 12 ___ 24 ___ 36 ___ 48 ___			
mA			Next PM Due (Date)			
Time: _____ mSec _____ Pulses			Notes:			
HVL						
Source to image distance(posted)						
Actual film size	Length	Width				

TESTING			Item	Measured
	KVP	Timer	X-ray field Size	Length _____ inches/cm
Exp 1				Width _____ inches/cm
Exp 2			SID (For Cephalometric Machines)	_____ inches/cm
Exp 3				
Avg				
% Diff				
Mfr. Spec				

X-ray Tube Voltage		Minimum HVL	
Designed Operating Range	Measured Operating Potential	Manuf. Before June 10, 2006	Manuf. After June 10, 2006
<b>Below 51</b>	30	0.3	0.3
	40	0.4	0.4
	50	0.5	0.5
<b>51 to 70</b>	51	1.2	1.3
	60	1.3	1.5
	70	1.5	1.8
	<b>Above 70</b>	71	2.1
	80	2.3	2.9
	90	2.5	3.2
	100	2.7	3.6
	110	3.0	3.9
	120	3.2	4.3
	130	3.5	4.7
	140	3.8	5.0
	150	4.1	5.4

Item	Pass	Fail
KVP		
Timer accuracy		
HVL		
Timer reproducibility		
Source to image distance		
X-ray Field Size		

By physically and/or electronically signing this report, I attest that this radiation machine is operating within the specifications and guidelines provided by the manufacturer's manual and that the registrant has received a copy of this report for their records. Service Provider Initials |                      |

Printed Name	Registrant Signature	Date
Printed Name	Service Provider Signature	Date



**RADIOLOGICAL HEALTH PROGRAM**

**Instructions for Cephalometric/Panoral Dental Preventative Maintenance Report**

**General Information**

COMPLETE ONE FORM MDE RX-35 PER TUBE. Completely and legibly fill out the facility information, machine information and service provider information. Include facility room number or name as designated by the facility.

**As Found Settings**

Record the “as found” setting of the kVp, mA, time, half layer value, source to image distance (for cephalometric machines) and film size used.

**Preventive Maintenance Data**

Record the manufacturer’s recommended preventive maintenance schedule as indicated in the radiation machine manual. If no preventive maintenance schedule exists for the machine, a 12 month maintenance frequency should be used. Record the date of the next scheduled Preventive Maintenance.

**Timer Accuracy**

<b>For Certified Machine Tolerance-</b>	<b>For Uncertified Machine Tolerance (+/- 10%)-</b>
1. Average all exposures.	1. Average all exposures.
2. Use formula- ((Average time measured – “as found” time)/ “as found” time) X 100 = % of deviation [disregard the sign].	2. Multiply the time set by .10 to get the + or – 10% variable.
3. If the % deviation is within the manufacturer’s recommendation, the unit is in compliance.	3. Add the variable to the time set, and then subtract the variable from the time set. The two numbers establish the range.
4. Machine passes or fails with appropriate documentation.	4. If the average time measured falls between the two numbers, the machine is in compliance.

**kVp Accuracy**

<b>For Certified Machine Tolerance-</b>	<b>For Uncertified Machine Tolerance (+/- 10 %)-</b>
1. Average all exposures.	1. Average all exposures.
2. Use formula- ((Average kVp measured – “as found” kVp)/ “as found” kVp) X 100 = % of deviation [disregard the sign].	2. Multiply the kVp set by .10 to get the + or – 10% variable.
3. If the % deviation is within the manufacturer’s recommendation, the unit is in compliance.	3. Add the variable to the kVp set, and then subtract the variable from the kVp set. The two numbers establish the range.
4. Machine passes or fails with appropriate documentation.	4. If the Average kVp measured falls between the two numbers the machine is in compliance.

**Timer Reproducibility:** Timer:  $T > 5 (T_{max} - T_{min})$

1. Use the timer data from the reverse of this form (Measured and Average).
2. Subtract the minimum time from the maximum time (Measured values).
3. Multiply the result by the factor of 5 as shown above.
4. Compare to the average of the measured values for time.
5. If the average of the measured values is greater than or equal to the multiplied result, the timer is reproducible. (PASS)

**Field size – If x-ray beam exceeds any side by > 2% fail**

**SID – Measured to be within 2% of Indicated**

**For Dental Preventive Maintenance Use Only**



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**RADIOLOGICAL HEALTH PROGRAM**

**MENU**

<p><b>05. CODE PROFESSION</b></p> <p>10 Hospital            11 Chiropractor            12 Dentist            13 Physician            14 Podiatrist            15 Radiologist            16 Industrial/Field Radiography            17 Veterinarian            18 State/Local Government            19 Education/Research            20 Portable/Mobile X-ray            21 Other</p> <p><b>09. COMPONENT USE CODE</b></p> <p><b>DENTAL</b></p> <p>CBCT Cone Beam Computed Tomography            CD Cephalometric            CP Cephalometric/Intra-oral Comb.            CX Pan/Ceph Combination            HH Hand-held            ID Intra-oral            XD Panorex            TD TMJ Work            OD Other Dental</p> <p><b>CODE VETERINARY</b></p> <p>VP Veterinary Portable            VS Veterinary Stationary            VD Veterinary Dental</p> <p><b>CODE MEDICAL</b></p> <p>AD Angiography/Digital            AN Angiography            BD Bone Densitometry            CA CAT Scanner            CE Ceiling Tube (Leg Studies)            CH Chest, Dedicated            CI Chiropractic            DI Diathermy            GP General Purpose            HN Head and Neck            MA Mammography            MI Magnetic Imaging            OT Other Medical            PD Podiatry            PH Portable Hand Carried            PM Portable Mobile            SR Stereotactic            TO Tomography            UR Urology            US Ultrasound</p>	<p><b>CODE DARKROOM</b></p> <p>AP Automatic Processor            DD Complete Digital Imaging            IP Insta-fix only processing            MP Manual Processing            NP No processing on-site</p> <p><b>CODE MEDICAL THERAPY</b></p> <p>AT Accelerator            CT Contact Therapy            DT Deep X-ray            ST Superficial</p> <p><b>CODE INDUS/EDUC/RESEARCH</b></p> <p>IA Accelerator            IC Cabinet Radiography            IE Electron Microscope            IF Field Radiography            IG Gauge            IN Diffraction            IO Other Indus./Educ./Research            IR Room Radiography            IS Spectrographic</p> <p><b>CODE MEDICAL FLUOROSCOPE</b></p> <p>AF Above Table Tube            BF Below Table Tube            CF C-Arm            MF Mobile Fluoroscope            UF Upright Fluoroscope            OF Other Medical Fluoroscope</p> <p><b>10. CODE MANUFACTURER</b></p> <p>00 Imagic Works            01 AS and E            02 Accuray            06 Accudex            07 Acoma            03 Agfa            08 Air Techniques            14 All Pro            04 Andrex            85 Aribex            05 Asoma            10 Astrophysics            12 Autoclear            16 Aztech            09 Belmont            11 Bennett X-ray            13 Bowie            18 Castle            15 Continental X-ray Corp.            17 Control Screening            19 Coromex            26 de Gotzen            29 Del Medical            22 Dentx</p>	<p><b>10. (continued)</b></p> <p>30 Dynavision            31 E.G. &amp; G.            25 Elekta            20 Faxitron            21 Fischer Imaging Group            34 Fuji            23 Gendex            24 General Electric            35 Glenbrook            37 Global Marine            39 Golden            40 HCMI            41 Heimann            46 Heuft Systems Technik            27 Hewlett-Packard            28 Hitachi            38 Hologic            48 Hope            43 Instrumentarium            55 JEOL            32 J. Morita            33 Kodak            44 Konica            56 LG            47 Lorad            36 Lumix            49 Lunar            50 Midwest/Sybron            57 Min X-ray            61 Niton            42 OEC Diansonics            66 PANalytical            59 Panoramic Corp.            45 Phillips            60 Planmeca            70 Progeny            72 Protec            74 Rapiscan            51 Raytheon            73 Rigaku            52 Ritter            53 S.S. White            54 Sanko            78 Sedecal            79 Seiko            58 Siemens            80 Sirona            64 Soredex            81 Spectro            68 Summit            62 Toshiba            63 Transworld            71 Trophy            65 Universal            67 Varian            82 Vet Ray, Inc.            69 Weber            83 XMA            84 X-Cel            76 Yoshida            77 Other</p>
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