

The information in this report is required by 14 CFR 108.17 & 129.26. Failure to report may result in a civil penalty not to exceed \$1000.00 for each such violation. (Federal Aviation Act of 1958, Section 901)

Department of Transportation Federal Aviation Administration		X-RAY SYSTEM RADIATION LEAKAGE REPORT (BAGGAGE INSPECTION) <i>(Require by 14 CFR 108.17, 14 CFR 129.26)</i>		FIELD TEST SERIAL NO. 11-7 T	Form Approved OMB No. 2120-0098	
AA	1.1 Name and Address of Facility	Portland Intl Airport OR		RR	7000 NE Airport Way	
CC	City (10.79)	Portland		State Code	OR	
DD	and Specific Location of X-ray System	Room No. or Other Location of System (10.32)	FIS Lane 4		Zip Code	
	Certification Label Present	Instrument	Inclusion		Model: 457P Serial No. 498	
01	1.2 Manufacture And Product ID	A. Manufacturing (Responsible Firm)	Rapiscom		B. OHN 46	
		C. System Model No. and/or Name	TRX 520B			
		D. Unique I.D.	15 VAE 60Hz		E. System Serial No. 7012803	
	F. Date of Manufacture	Mo. 7 Yr. 2001	1.4 Operator Instructions Available	yes	1.5 Maintenance Schedule Available	
	2.0 Warning Labels	2.1 Warning Label Present at Controls Stating: "Caution: X-Rays Produced When Energized" <i>yes</i>	2.2 Warning Labels Present at Ports Stating: "Caution: Do Not Insert Any Part of the Body When System is Energized, X-Ray Hazard" <i>yes</i>	2.3 Two Indicators Labeled "X-Ray On" Present at Controls (One May Be Labeled "mA Meter") <i>yes</i>		
02	Indicators	2.4 At Least One Indicator, X-Ray Marked "X-Ray On", Visible from Each Port, Door, And Access Panel	<i>yes</i>		3.0 Interlocks	
		3.1 "Captured Key" Control	<i>yes</i>			
	3.2 Door Safety Inter-Locks	A. Minimum Number of Interlocks Visible At Any One Door	<i>n/a</i>		A. All Doors and Access Panels That Were Tested Prevent Generation of X-Radiation	
		B. At Least One Interlock Dependent on No Moving Part Except Door	<i>n/a</i>		B. Use of X-Ray Control Necessary to Resume Operation Following Interruption	
4.0 Ports and/or Apertures	4.1 Some Part of the Body Can Be Inserted Through a Port Into The Primary Beam	<i>no</i>		4.2 Some Part of the Body Can Be Inserted into the Aperture		
6.0 Baggage Inspection Systems	6.1 Means Provided to Ensure Operator Presence at the Control Area	<i>yes</i>		6.2 Means Provided to Operator for Terminating Exposures of Greater than One-Half Second and Preventing		
03	7.0 Leakage Radiation	Specific Test Procedure Used	<i>04</i>		7.1 Scatter Block Description	
	7.2 Technical Factors	<i>140</i> kVp		<i>.700</i> mA		
05	7.3 Location Exposure Levels	Non-Continuously Activated Systems Only Number of Exposures Initiated		06	Location Exposure Levels	
		<i>.119</i> mR/hr	Exp		<i>.092</i> mR/hr	exp
		<i>.109</i> mR/hr	Exp		<i>.086</i> mR/hr	exp
		<i>.106</i> mR/hr	exp		<i>.071</i> mR/hr	exp
		<i>.105</i> mR/hr	exp		<i>.069</i> mR/hr	exp
07	Reasonable Number of Exposures That May Be Initiated in One Hour	OR		Duty Cycle of System Indicated As a Percentage of One Hour	<i>100%</i>	
08	8.0 Additional Information	8.1 Dosage for inspection = 218 mR				
09	8.2					
10	8.3					
11	8.4					
12	8.5					
13	Surveyor Information	[Redacted]		Date of Survey	<i>3/11/11</i>	
Remarks:						

WO 3728406
EQ 51575
Semi PM
PDX

Cabinet X-Ray Unit Radiation Survey Form

WO#: 3728406

Location: DX FIS L2444

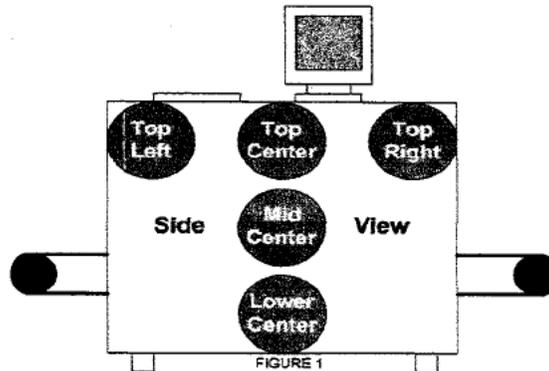
Background Reading: .003 μ R/hr

Date: 3/11/11

1. Identify Cabinet X-ray Unit and X-ray Generator information:
 - a. Check appropriate Make/Model box below (if "Other", record Make and Model on the line provided);
 - b. Record the X-ray Unit's serial number next to the Make/Model;
 - c. With the X-rays turned "ON", record the X-ray Generator Voltage (kV) and Anode Current (μ A) Readings;
 - d. Convert Anode Current readings from μ A to mA by dividing the μ A value by 1000 (example: 100 μ A = 0.100 mA);
 - e. Transfer the **Observed Voltage and Converted Anode Current** readings to **Box 05, Section 7.2** (Technical Factures) of DOE0-0014 FAA Form 165-17.

Make / Model	Serial Number	Observed Voltage and Anode Current		Convert Anode Current to mA for FAA form (divide μ A by 1000)
<input type="checkbox"/> Smiths Heimann 5030s	s/n _____	+ _____ kV, - _____ kV,	_____ μ A	_____ mA
<input type="checkbox"/> Smiths Heimann 6040i	s/n _____	+ _____ kV, - _____ kV,	_____ μ A	_____ mA
<input type="checkbox"/> Smiths Heimann 7555i	s/n _____	+ _____ kV, - _____ kV,	_____ μ A	_____ mA
<input type="checkbox"/> Rapiscan 519	s/n _____	_____ kV, _____ μ A	_____ μ A	_____ mA
<input checked="" type="checkbox"/> Rapiscan 520B	s/n <u>7012803</u>	<u>140</u> kV, <u>700</u> μ A	<u>700</u> μ A	<u>.700</u> mA
<input type="checkbox"/> Rapiscan 522B	s/n _____	_____ kV, _____ μ A	_____ μ A	_____ mA
<input type="checkbox"/> Other _____	s/n _____	_____ kV, _____ μ A	_____ μ A	_____ mA

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2. While holding the meter 5 centimeters (about 2 inches) from the surface, take readings in the area of the circles shown (Figure 1 above) on **BOTH** sides (Left and Right) of the X-ray machine (total of 10 readings):

Note: The Invision 451P Radiation Meter has a default range setting of μ R/hr. Meter readings in μ R/hr must be converted to mR/hr for this form and DOE0-0014 FAA Form 165-17.

Conversion: 100 μ R/hr = 0.100 mR/hr.

FRONT		BACK	
TOP LEFT	<u>.013</u> mR/hr	TOP LEFT	<u>.008</u> mR/hr
TOP CENTER	<u>.028</u> mR/hr	TOP CENTER	<u>.014</u> mR/hr
TOP RIGHT	<u>.012</u> mR/hr	TOP RIGHT	<u>.010</u> mR/hr
MID CENTER	<u>.012</u> mR/hr	MID CENTER	<u>.017</u> mR/hr
LOWER CENTER	<u>.003</u> mR/hr	LOWER CENTER	<u>.005</u> mR/hr

WO#: 3728406
X-Ray Serial #: 7012803

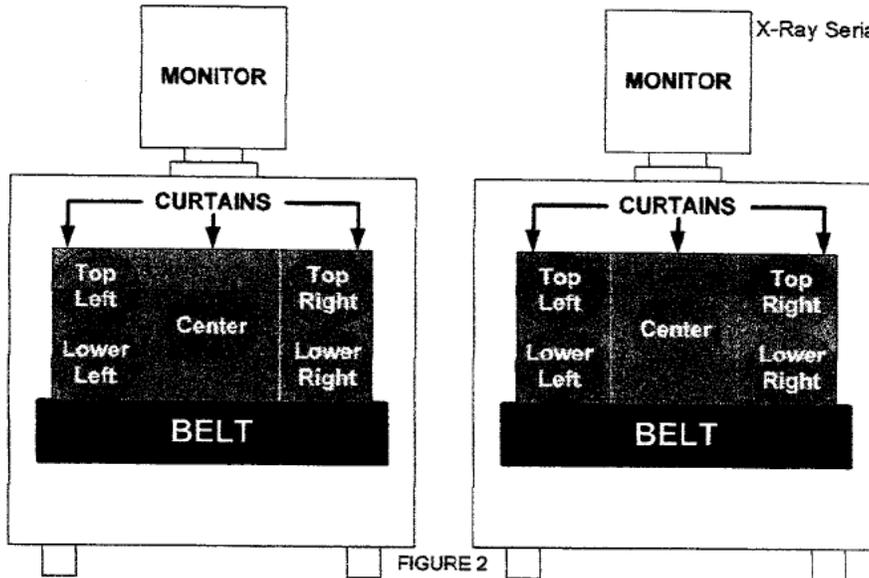


FIGURE 2

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3. While holding the meter 5 centimeters (about 2 inches) from the surface, take readings in the area of the circles shown (Figure 2 above) on **BOTH** sides (ENTRANCE and EXIT) of the X-ray machine (total of 10 readings):

<u>ENTRANCE</u>		<u>EXIT</u>	
TOP LEFT	<u>.119</u> mR/hr	TOP LEFT	<u>.071</u> mR/hr
TOP RIGHT	<u>.109</u> mR/hr	TOP RIGHT	<u>.105</u> mR/hr
LOWER LEFT	<u>.069</u> mR/hr	LOWER LEFT	<u>.086</u> mR/hr
LOWER RIGHT	<u>.092</u> mR/hr	LOWER RIGHT	<u>.050</u> mR/hr
CENTER	<u>.106</u> mR/hr	CENTER	<u>.48</u> mR/hr

4. Transfer the **8 highest** readings (out of all 20 readings) to **Box 05, Section 7.3** (Exposure Levels) of DOE0-0014 FAA Form 165-17. Be sure to enter values in mR/hr!! (100 µR/hr = 0.100 mR/hr).

Note: On all X-Ray equipment, any reading of 0.5 mR/h (= 500 µR/h) or higher is considered a failure of the Radiation Leak Survey.

5. Perform **Cumulative Exposure Test:**
- Push the MODE button once on the Inovision 451P;
 - Verify that the meter's scale changes from µR/h to µR (Cumulative Mode);
 - Place the meter on the belt and run through the X-Ray beam 10 times in Cumulative Mode. Record total here: 2.18 mR
 - Divide the cumulative exposure value by 10 to obtain the **Dosage per Inspection**;
 - Record this result in Section 8.1 (Additional Measurements) of DOE0-0014 FAA Form 165-17.

Survey Performed by: [Redacted]
Signature: [Redacted] Date: 3/11/11