

- 3 Do one of the following:
- Press the Confirm key (YES) to start the QC procedure and proceed with step 4.
 - Press the Escape key (NO) to quit.

- 4 Define the tray for printing.

The 'Select tray' screen appears:

```
select tray  [OK]
1.Upper tray
2.Lower tray
```



Note: When controlling the Drystar AXYS via a remote PC, The 'Select input tray' screen is preceded by a screen, which allows you to:

Note: Start the quality control procedure immediately,

Note: Edit additional data for the last quality control measuring.

- 5 Press the Up/Down arrow keys to select the desired tray, followed by the Confirm key.

The following screens appear successively:

```
Queueing file  [OK]
Please wait
```

```
QC Procedure  [OK]
in Progress
Please wait
[Progress Bar]  0%
```

The Drystar AXYS will automatically print the QC mammography test image.

- After the image is printed, the system will display all measured optical density values:

```
QC readings:
Max D:0.0 Hi D:0.0
Mid D:0.0 Lo D:0.0
Base + Fog: 0.0
DD: 1.56
(Densitometer=MB924)
```

The density levels are displayed, e.g:
 Max D: x.x Hi D: 2.23
 Mid D: 1.13 Lo D: 0.4
 Base+Fog: 0.20
 DD: x.xx

The displayed values (that have to be monitored) represent the following steps on the test film:

Operating Level		Value (Macbeth units) (according to NEMA standards XR 23-2006)
Base + Fog	the density value of the Base + Fog step	0.22 ± 0.03
Low density	the density value of the low density step	0.45 ± 0.07
Mid density	the density value of the mid density step	1.20 ± 0.15
High density	the density value of the high density step	2.20 ± 0.15



WARNING: If the mid density value does not meet or exceeds the recommended values, the cause must be found and the problem solved before any further clinical films can be printed.

WARNING: Refer to “Preventive maintenance schedule” on page 121 and “Maintaining image quality and resolving image quality problems” on page 258 (Reference manual), or call your local Agfa service organization.

- Record the density levels on Chart 1 (‘DrystarAXYS Determination of Operating Levels’). Refer to “Charts for mammography QC (optional)” on page 155.
- Press the Confirm key to return to the main menu.
- Repeat steps 1 through 8 once a day for five consecutive days, as indicated on the Drystar AXYS Chart 1.
- Calculate the average value of the densities from the five images. These values represent operating levels or aim values, for each density.

- 11 Record the respective aim (average) values as the ‘Operating levels’ on Charts 2A and 2B (‘Drystar AXYS Daily Density Control Chart’). Refer to “[Charts for mammography QC \(optional\)](#)” on page 155.

The calculated ‘Operating levels’ should be as follows:

Operating Level	Value (Macbeth units) (according to NEMA standards XR 23-2006)
Base + Fog	0.22 ± 0.03
Low density	0.45 ± 0.07
Mid density	1.20 ± 0.15
High density	2.20 ± 0.15

- 12 These charts will be used for the daily quality test. For more information, refer to “[Performing the daily QC test for mammography application \(DT 2 Mammo\) \(optional\)](#)” on page 116.

Establishing the image geometry reference values for mammography application (DT 2 Mammo) (optional)

Procedure

- 1 Print the QC mammography test image or use the previously printed test image. For an example, see “[QC test image for mammography applications \(DT 2 Mammo\) \(optional\)](#)” on page 107.

- 2 To determine the reference values for geometry, measure the distances A and B of the geometric square on the test image.



WARNING: Make sure to measure distance A from the left edge of the left line to the right edge of the right line and distance B from the upper edge of the upper line to the lower edge of the lower line.

WARNING: We strongly recommend using a 30 cm (12-inch) machinist scale with 0.5 mm divisions (1/64 inch).

- 3 Record these values as reference dimensions Aref and Bref on Chart 4 (‘Drystar AXYS Geometric Consistency Control Chart’). Refer to “[Charts for mammography QC \(optional\)](#)” on page 155.

These charts will be used for the annual quality test. For more information, refer to “[Performing the Annual QC tests for mammography application \(DT 2 Mammo\) \(optional\)](#)” on page 120.

- 4 Save this film for future reference.

Verifying Acceptable Spatial Resolution and Artifact Levels and Low Contrast Visibility for mammography application (DT 2 Mammo) (optional)



WARNING: Good viewing conditions are important for the correct interpretation of both diagnostic and test images. Make sure that the light box intensity (luminance) is between 3000 and 6000 cd/m² (4500 and 6500 °K) for mammography. Use a magnifying glass and use shutters to collimate. Make sure the ambient light is low.

Procedure

- 1 Print the QC mammography test image or use the previously printed QC mammography test image used to establish the daily operating density levels.
- 2 Visually check the QC test image for artifacts: no significant disturbing artifacts should be visible.
- 3 Check the spatial resolution in each of the three ovals. Within each oval there are three groups, each having five dots. All five dots of each group must be visible with a magnifying glass. The smallest cluster of 5 dots is only visible if the viewing conditions are good.
- 4 Check the Low Contrast Visibility at both the high (100 / 95%) and low end (0 / 5%) of the density scale. You should be able to see the circle in the square (refer to item 1 on the [“QC test image for mammography applications \(DT 2 Mammo\) \(optional\)”](#) on page 107) and the upper circle (refer to item 2 on the [“QC test image for mammography applications \(DT 2 Mammo\) \(optional\)”](#) on page 107).
- 5 Record these values at the top of Chart 3 (‘Drystar AXYS Artifacts and Spatial Resolution Control Chart’). Refer to [“Charts for mammography QC \(optional\)”](#) on page 155.

- 6 These charts will be used for the weekly quality test. For more information, refer to “[Performing the Weekly QC tests for mammography application \(DT 2 Mammo\) \(optional\)](#)” on page 118.



WARNING: In case of significant artifacts or insufficient spatial resolution, the cause must be found and the problem solved before any further clinical films can be printed.

WARNING: Refer to “[Preventive maintenance schedule](#)” on page 121 and “[Maintaining image quality and resolving image quality problems](#)” on page 258 (Reference manual), or call your local Agfa service organization.

Performing quality control (QC) tests for mammography application (DT 2 Mammo) (optional)

The following procedures must be performed daily, weekly or annually as indicated.

The reason for performing quality control tests is to determine if any significant image quality variation or deterioration has occurred which may require corrective action. Comparing the results of the tests with the reference values previously established does this.

This procedure allows the operator to take the necessary preventive actions before any image quality loss can take place.

Performing the daily QC test for mammography application (DT 2 Mammo) (optional)



WARNING: *This test must be performed every day before any clinical film can be processed.*

Procedure

- 1 Turn on the Drystar AXYS and wait at least for 15 minutes. Refer to [“Switching on the Drystar AXYS”](#) on page 48.
- 2 Press the Key-operator key to enter the Key-operator mode.
- 3 Press the down key seven times, followed by the ok key to select ‘QC’.

```

1 Show settings  KO
2 Change settings
3 Print image
4 Save configuration

5 Restore config.
6 Calibration
7 Service Actions
8 Quality Control
9 Installation
  
```

A confirmation screen appears:

```

Start QC          OK
Procedure?
YES(/)           NO(X)
  
```

- 4 Do one of the following:
 - Press the Confirm key (YES) to start the QC procedure and proceed with step 5.
 - Press the Escape key (NO) to quit.

- 5 Define the tray for printing.

The ‘Select tray’ screen appears:

```

select tray      KO
1.Upper tray
2.Lower tray
  
```


- Press the Up/Down arrow keys to select the desired tray, followed by the Confirm key.

The following screens appear successively:

```

Queuing file      [OK]
Please wait
  
```

```

QC Procedure      [OK]
in Progress
Please wait
[Progress bar] 0%
  
```

The Drystar AXYS will automatically print the QC test image.

After the image is printed, the system will display all measured optical density values:

```

QC readings:      [OK]
Max D:0.0 Hi D:0.0
Mid D:0.0 Lo D:0.0
Base + Fog: 0.0
DD: 1.56
(Densitometer=MB924)
  
```

The density levels are displayed, e.g:

```

Max D: x.x Hi D: 2.23
Mid D: 1.13 Lo D: 0.4
Base+Fog: 0.20
DD: x.xx
  
```

- Record the Base + Fog, low, mid and high density values on Charts 2A and 2B ('Drystar AXYS Daily Density Control Chart'). Also record the date and time of the test on the charts and on the QC mammography test images. Refer to "Charts for mammography QC (optional)" on page 155.
- Press the Confirm key to return to the main menu.
- Press the ok key to return to the main menu.



WARNING: In case the measure results are not within the aim values, the reason for the unacceptable density variations must be identified and resolved before any further clinical films can be processed. This may include repeating the film calibration procedure.

WARNING: For possible causes of non-compliance and the respective actions, refer to "Preventive maintenance schedule" on page 121 and "Maintaining image quality and resolving image quality problems" on page 258 (Reference manual).

Performing the Weekly QC tests for mammography application (DT 2 Mammo) (optional)

Spatial Resolution, Artifact Test and Low Contrast Visibility

To identify artifacts and verify spatial resolution you must perform the following test weekly or as needed for troubleshooting image quality problems.



WARNING: Good viewing conditions are important for the correct interpretation of both diagnostic and test images. Make sure that the light box intensity (luminance) is 3000 and 6000 cd/m² (4500 and 6500 °K) for mammography. Use a magnifying glass and use shutters to collimate. Make sure the ambient light is low.

Procedure

1 First, print out the QC mammography test image. Refer to [“Performing the daily QC test for mammography application \(DT 2 Mammo\) \(optional\)”](#) on page 116.

2 Check the QC test image visually for artifacts: no significant disturbing artifacts should be visible.

3 Check the spatial resolution.

The test film also shows three squares which each contains an oval. These 3 ovals contain 3 groups, each having 5 dots. All five dots of each group must be visible with a magnifying glass. The smallest cluster of 5 dots is only visible if the viewing conditions are good.

4 Check the Low Contrast Visibility at both the high (100 / 95%) and low end (0 / 5%) of the density scale. You should be able to see the circle in the square (refer to item 1 on the [“QC test image for mammography applications \(DT 2 Mammo\) \(optional\)”](#) on page 107) and the upper circle (refer to item 2 on the [“QC test image for mammography applications \(DT 2 Mammo\) \(optional\)”](#) on page 107).

- 5 Record these values on Chart 3 ('Drystar AXYS Artifacts and Spatial Resolution Control Chart'). Refer to "[Charts for mammography QC \(optional\)](#)" on page 155.



WARNING: In case of significant artifacts, insufficient spatial resolution or failure of any other recommended QC tests, the cause of the problem must be identified, and corrective action must be taken before the Drystar AXYS can be used for any further clinical imaging.

WARNING: Refer to "[Preventive maintenance schedule](#)" on page 121 and "[Maintaining image quality and resolving image quality problems](#)" on page 258 (Reference manual), or call your local Agfa service organization.

Performing the Annual QC tests for mammography application (DT 2 Mammo) (optional)

Geometric Consistency Test

To be able to notice fluctuations in image size and aspect ratio, you must perform this procedure once a year.

Procedure

- 1 First, perform the daily test.
- 2 Measure the distances A and B of the geometric square on the QC mammography test image. Refer to “[Establishing the image geometry reference values for mammography application \(DT 2 Mammo\) \(optional\)](#)” on page 112.



WARNING: Make sure to measure distance A from the left edge of the left line to the right edge of the right line and distance B from the upper edge of the upper line to the lower edge of the lower line.

WARNING: We strongly recommend using a 30 cm (12-inch) machinist scale with 0.5 mm divisions (1/64 inch).

- 3 Record these values as measured distances A and B on Chart 4 (‘Drystar AXYS Geometric Consistency Control Chart’). Refer to “[Charts for mammography QC \(optional\)](#)” on page 155.
- 4 Compare the measured A and B dimensions with the reference dimension values, Aref and Bref on Chart 4 (‘Drystar AXYS Geometric Consistency Control Chart’). Refer to “[Charts for mammography QC \(optional\)](#)” on page 155.

The differences between the measured dimensions of A and B and the reference values A ref and B ref should be less than or equal to 1.0%.

- 5 Check for image distortion.
- 6 Calculate the aspect ratio by dividing A by B.

The result must be 1 ± 0.01



WARNING: If the image size or distortion values are outside of limits, contact Agfa service to resolve the problem.

Preventive maintenance schedule

The Drystar AXYS is designed for trouble-free operation. Maintenance and cleaning involve only some minor user tasks. Refer to the following pages for the appropriate cleaning procedure.

Interval	What to do?
Ad hoc	“Cleaning the exterior” on page 122
When image quality tends to degrade. An appropriate warning message is displayed.	“Cleaning the print head” on page 123

Safety guidelines



WARNING: To prevent damage to the printer while performing maintenance, observe the following safety precautions:

- Do not lubricate the printer.
- Do not attempt to disassemble the printer.
- Do not touch the resistor line of the print head.
- Always switch off the Drystar AXYS and disconnect the power cord from the outlet before carrying out any maintenance work inside the printer.



Caution: Film jam removal or cleaning the printer head can be done without switching the power off. Nevertheless, care should be taken and the “Safety Directions” on page 43 should be respected.

Cleaning the exterior

Procedure

- 1 Switch off the Drystar AXYS by following the procedure as described in [“Switching off the Drystar AXYS”](#) on page 63
- 2 Remove the power plug from the socket.
- 3 Wipe the exterior of the printer with a clean, soft, damp cloth.
Use a mild soap or detergent if required but never use an ammonia-based cleaner. Be careful not to get any liquid in the power cord port.
- 4 Plug in the printer and switch it on by following the procedure as described in [“Switching on the Drystar AXYS”](#) on page 48.

Cleaning the print head



WARNING: Print head cleaning must be done when image quality problems occur.

Procedure

- 1 Press the Key-operator key to enter the key-operator mode.
- 2 On the key-operator main menu, press the Down key five times, followed by the Confirm key to select 'Calibration'.

```

1 Show settings KO
2 Change settings
3 Print image
4 Save configuration

5 Restore config.
6 Calibration
7 Service Actions
8 Quality Control
9 Installation

```

- 3 On the Select calibration menu, press the Down key, followed by the Confirm key to select 'Clean therm. head'.

```

SELECT CA
CALIBRATION
1 Film calibration
2 Clean therm. head

```

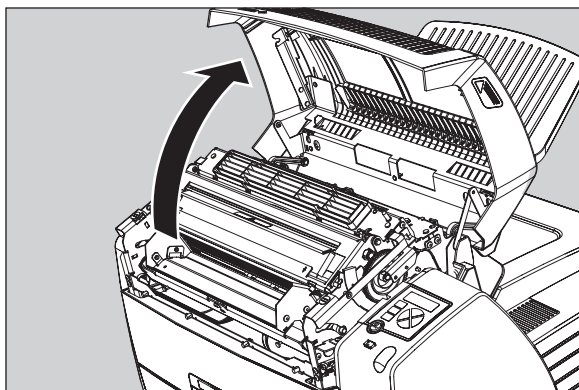
- 4 The 'Thermal head cleaning' screen will give step-by-step instructions on what to do:

```


THERMAL HEAD CA
CLEANING
Open top cover

```

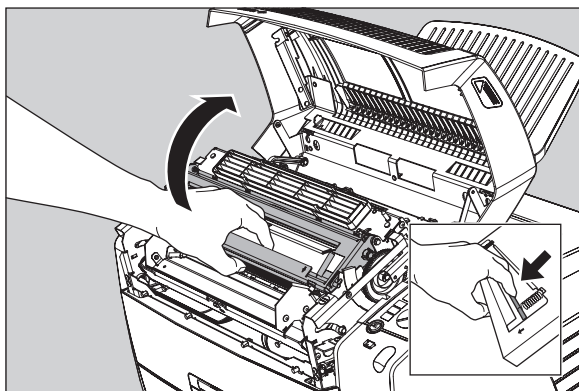
- 5 Open the top cover.



- 6 As soon as the top cover is opened, the 'Thermal head cleaning' screen continues giving the following instructions:

```
THERMAL HEAD   
CLEANING  
Clean thermal head  
Close top cover
```

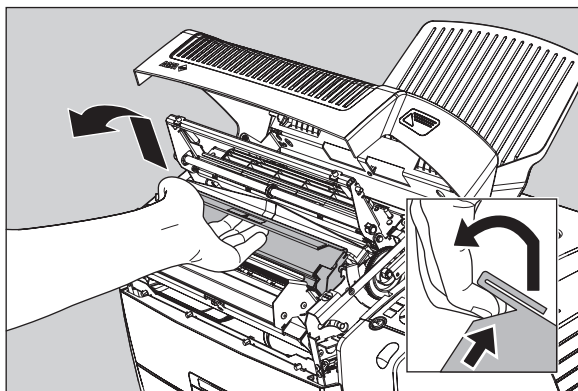
- 7 Open the hold-down bracket.



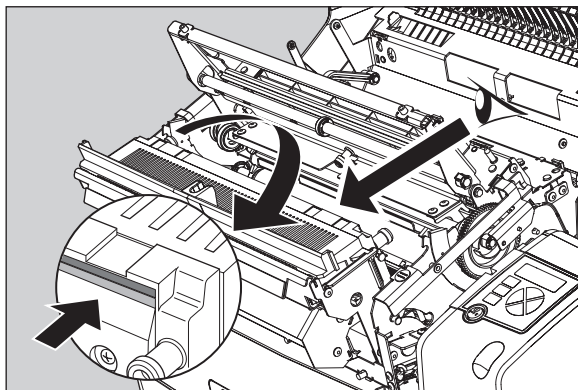
- 8 Open the print head unit.



WARNING: The print head unit can be warm.

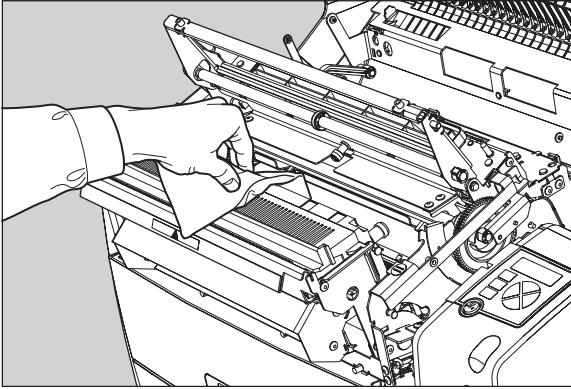


- 9 Locate and check on sight the print head resistor line.



Note: Be careful not to touch the print head resistor line with your fingers.

10 Clean the print head resistor line.



Gently pass over the resistor line a few times with a lint free cloth, slightly moistened with Isopropyl alcohol or Ethanol.

Do this only in one direction, i.e. from left to right, without lifting the cloth.



Note: Do not apply any pressure on the print head because this pressure may cause damage on the interconnections underneath the print head.

11 Close the print head unit, the hold-down bracket and finally the top cover.

After you have cleaned the print head resistor line and you have closed the top cover, you will return automatically to the Select calibration menu (see step 3).



Note: If residue dust is present as part of the cleaning procedure it will disappear after a few prints.

12 Press the Escape key to return to the key-operator main menu.

Troubleshooting checklist

The table below lists some general problems, which can occur when working with the Drystar AXYS.

- The Drystar AXYS does not print.

Action	Refer to the Reference manual
Check the Drystar AXYS	“Checking the status indicator LED” on page 241
	“Checking the connections” on page 242
	“Checking the print queue” on page 244
Remove a jammed film	“Film input tray jams” on page 130 of this manual
	“Film transport jams (clearing from the top)” on page 133 of this manual
	“Unauthorized opening of the printer” on page 136 of this manual
Resolve error messages	“Checking error messages” on page 243
Handle CF-card errors	“Checking CF-card error messages” on page 244
Resolve film identification problems	“No identification code detected” on page 138 of this manual

- The quality of the printed images is bad (printing remains possible).

Action	Refer to
Resolve film quality problems	“Persistent white dots or lines appear in the transport direction” on page 261
Resolve warning messages	“Warning messages” on page 262
Resolve maintenance messages	“Maintenance messages” on page 263



WARNING: Have electrical or mechanical defects repaired by skilled personnel only!

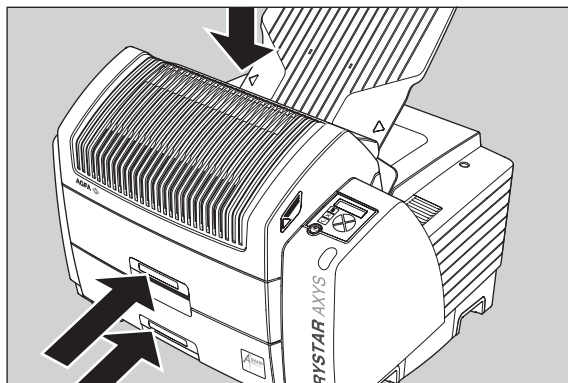
Clearing of film jams

A film jam can be situated either:

- In the input tray section. Refer to “[Film input tray jams](#)” on page 130 .
- In the top section. Refer to “[Film transport jams \(clearing from the top\)](#)” on page 133 .

Jams can be caused by:

- Opening the top cover or input tray while a film is actually being printed. Refer to “[Unauthorized opening of the printer](#)” on page 136 .
- Loading films incorrectly. Refer to “[Film identification problems](#)” on page 137 .



Film transport jams
(clearing from the
top section)

Film feed jams (clearing
from the input tray)



Caution: Film jam removal or cleaning the printer thermal head can be done without switching the power off. Nevertheless, care should be taken and the following instructions should be respected:



WARNING: Never reuse a jammed film. This may cause damage to the thermal head and/or dust problems.

Film input tray jams

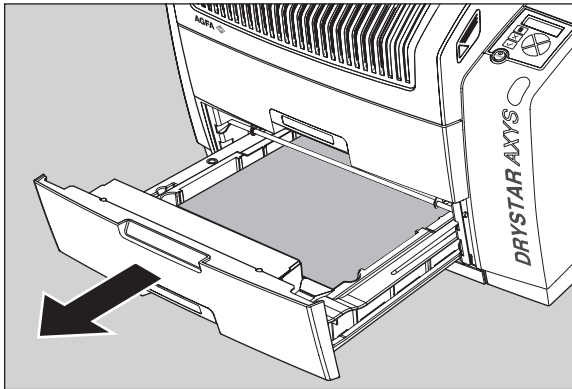
A film jam in the input tray can occur when the Drystar AXYS is opened while a film is currently printed, or when an individual film is incorrectly inserted in the input tray. Refer also to “[Film identification problems](#)” on page 137 .

The following screen indicates that a jam occurred in the input tray.

```
FILM JAM!  
Open LOWER INPUT  
tray and clear  
film path
```

To remove a jammed film in the input tray:

- 1 Open the film input tray.

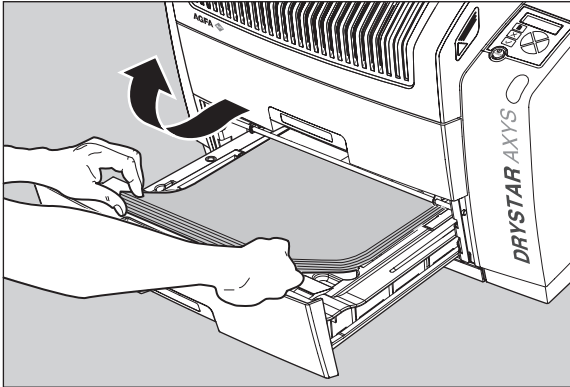


If a film is jammed, gently remove the sheet. Reposition the film stack in the film tray, making sure that all the sheets are kept correctly (refer to “[Loading films](#)” on page 76).

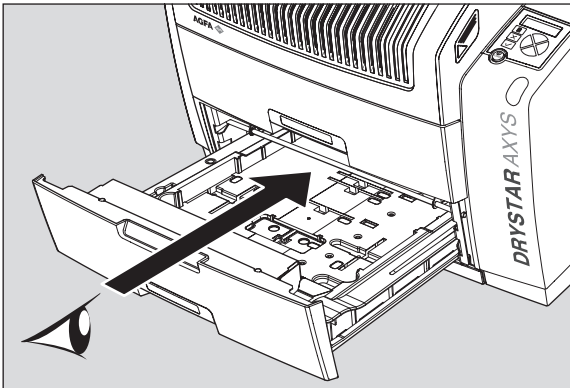


Note: Never use force to clear the jammed film. If it is not possible to gently remove the jammed film, call your local service organization.

- 2 To get a clear view, it may be necessary to remove any remaining film sheets, including the protective (white) sheet.

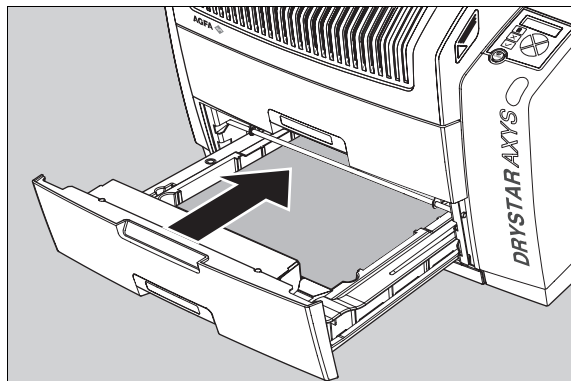


- 3 Check if the film feed section of the input tray is clear.



Reposition the film stack in the film tray, making sure that all the sheets are kept correctly in place (refer to [“Loading films”](#) on page 76).

4 Close the film input tray.



Film transport jams (clearing from the top)

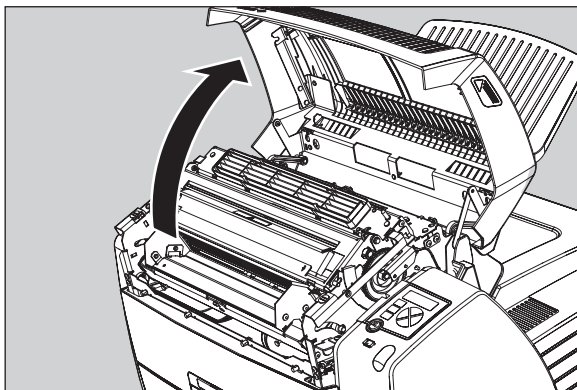
The following screen indicates that a jam occurred in the upper section of the film transport system.



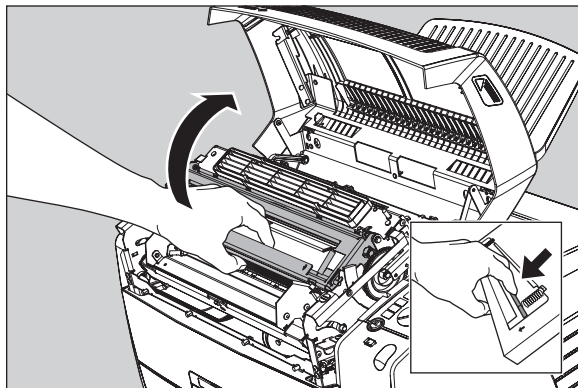
Note: Please note that instructions for removing a film jam in the transport section are present on a sticker at the inside of the top cover.

To remove a jammed film in the transport system:

- 1 Open the top cover.



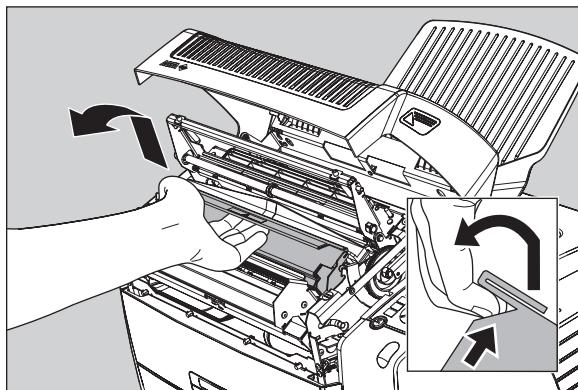
2 Open the hold-down bracket.



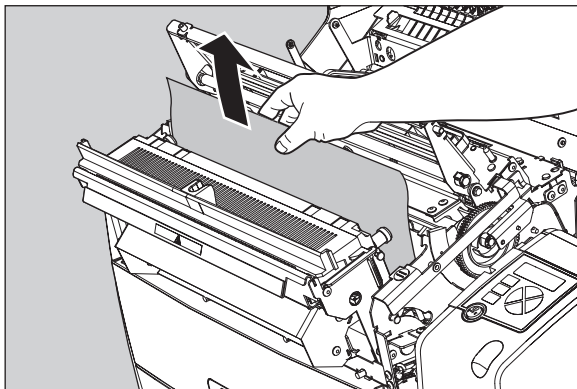
3 Open the print head unit.



WARNING: The print head unit can be warm.



- 4 Gently remove the film sheet(s).



Note: Never use force to clear the jammed film. If it is not possible to gently remove the jammed film by pressing the transport buttons, proceed with the procedure as follows.

Note: Verify that no film sheets remain in the print head compartment.

- 5 If the film jam has been cleared, close the printer. You can resume work.



WARNING: Never reuse a jammed film. This may cause damage to the thermal head and/or dust problems.



Note: If the jam is still not cleared, call your local service organization.

Unauthorized opening of the printer

A jam can be caused by opening the printer covers or one of the input trays while a film is actually being printed.

The following screen indicates that a jam has occurred:

```
A FILM JAM was
caused due to
opening of the
Printer during
printing. Next time
wait until printer
is in "Ready"
condition. _ _ _ _ )
```

- 1 Remove the jammed sheet.
Refer to [“Clearing of film jams”](#) on page 129 .
- 2 Press the Confirm key to continue.
- 3 Make sure to follow carefully the procedures as described in this manual before attempting to open the printer.

Refer to [“Switching off the Drystar AXYS”](#) on page 63 .

Refer to [“Switching off the Drystar AXYS”](#) on page 63 .

Film identification problems

When you load a new film pack, the new Film Identification tag is read and the tray film format and type are set based upon the info in the Film Identification tag (RF-tag).

This tag is only readable when the film pack is inserted in the correct way.

There are three possible error messages regarding film identification:

- [“No identification code detected” on page 138](#)
- [“Invalid content of Film Identification tag” on page 141](#)
- [“Invalid content of Film Identification tag” on page 141](#)

The following sections describe the solution for each of these problems in more detail.

No identification code detected

This error message appears when the Film Identification tag is not readable.

There are two possible solutions for this problem:

- Reload the current film pack or load another film pack
- Overrule the Film Identification tag of the film pack

To reload the current or another film pack

- 1 In case the Drystar AXYS does not start printing after re-inserting a film pack, first check if this film pack is inserted correctly.

If the Drystar AXYS still does not resume printing, the following message will appear:

```
UPPER INPUT TRAY:  
NO IDENTIFICATION  
CODE DETECTED for  
current film pack.  
  
Remove and re-insert  
film pack -including  
protective sheet-  
properly, follow  
loading instructions
```

- 2 Open the input tray and check again if the film pack is inserted correctly. If you re-insert the film pack, the Drystar AXYS will perform the same check sequence until printing is resumed.

To overrule the Film Identification tag of the film pack

If the “Overrule RF-tag Reading” setting is active, you can overrule the Film Identification tag setting of the current film pack. In this case you can continue printing using a limited Maximum Density.



Note: Only your local service organization has the possibility to enable the “Overrule RF-tag Reading” setting!

- 1 In case the Drystar AXYS does not start printing after inserting a new film pack, check if this film pack is inserted correctly.

If the film pack is inserted correctly and the Drystar AXYS does not resume printing, the following message will appear:

```
UPPER INPUT TRAY:
NO IDENTIFICATION
CODE DETECTED for
current film Pack.

Remove and re-insert
film pack -including
protective sheet-
properly. follow
loading instructions
```

- 2 To continue with the current (unidentified) film pack, press the Continue button.

The following message is displayed:

```
UPPER INPUT TRAY:
NO IDENTIFICATION
CODE DETECTED or
READ ERROR in tray.

Please INSERT
CURRENT FILM PACK or
call service.
```

If you wish, you can try again to re-insert the current or an other film pack. Open the input tray to initiate the loading sequence. If you re-insert a film pack, the Drystar AXYS will perform the check sequence.

3 Press the Confirm button.

- If the “Overrule RF-tag Reading” Setting is active, the following message is displayed:

```
OVERRULE  
IDENTIFICATION CODE  
IS ACTIVE  
Dmax is limited due  
(to safety reasons)
```

- If the “Overrule RF-tag Reading” Setting is not activated, the following message will be displayed:

```
UPPER INPUT TRAY:  
NO IDENTIFICATION  
CODE DETECTED.  
Printing is disabled  
  
Re-enable printing  
by inserting correct  
film media pack.
```



Note: In this case, press the Confirm key to initiate the loading procedure again or call your local service organization to enable the “Overrule RF-tag Reading” Setting.

4 Press the Confirm key again to resume printing using a limited Maximum Density.

Invalid content of Film Identification tag

When you insert a new film pack with invalid content in the Film Identification tag, the following message is displayed:

```
UPPER INPUT TRAY:  
INVALID CONTENT in  
IDENTIFICATION CODE.  
Please call service.
```

Try loading another film pack, or call your local service organization to resolve this problem.

Film overrun from current pack

The following message is presented when more than 110 copies are printed from the current film pack:

```
UPPER INPUT TRAY:  
FILM OVERRUN,  
MORE THAN ALLOWED  
FILMS PRINTED FROM  
  
|THIS PACK, please  
insert other film  
pack.  
|_ _ _ _ _|
```

Reload a new film pack to resolve this problem.


A Equipment information sheet


This appendix covers the following sections:

- [Specifications](#)
- [Viewing the system info area on a film](#)

Specifications

Product description	
Type of product	Printer
Commercial name	Drystar AXYS
Original seller/manufacturer	Agfa-Gevaert N.V.
Labelling	
TÜV-, cULus-Certification Mark, CE-marking	
CCC Mark	
Dimensions	
Dimensions (approx. values in cm)	Unpacked: width 72.8, length 71.5, height 67.6 Packed: width 89, length 100, height 80
Weight	Unpacked: approx. 90 kg Packed: approx. 128 kg
RAM memory	512 Mb
Internal mass storage media	Hard Disk
External mass storage media	Compact Flash Type II
Electrical connection	
Operating voltage	100-120 V; 220-240 V AC
No external main fuses	
Mains frequency	50/60 Hz

Network connectivity	
Ethernet / connectors	RJ45 twisted pair for 10/100Base-TX; Serial RS232 connection
Network protocols (TCP/IP services)	FTP, Telnet, HTTP
Image formats	DICOM (Default) TIFF
Postscript	Not available
Power consumption - heat dissipation	
During operation	250 W - 900 kJ/h
In stand-by	70 W - 252 kJ/h
Peak power (absolute max. rating)	530 W - 1908 kJ/h
Protection against	
Electrical shocks	Class 1 (grounded)
Ingress of water	IPXØ
Environmental conditions (operation)	
Room temperature	Between +15°C and +30°C
Relative humidity	Between 20% and 75% Note: Films may not become wet!
Atmospheric pressure	70 kPa - 106 kPa
Environmental storage conditions	
	<i>Note: Climate conditions for storage are in accordance with EN60721-3-1-class 1K4.</i>
Room temperature	Between -25°C and 55°C (storage)
Relative humidity	Between 10% and 100%
Absolute humidity	Between 0.1 g/m3 and 35 g/m3
Rate of change of temperature	1°C/min
Atmospheric pressure	70 kPa - 106 kPa

Environmental transport conditions	
	<i>Note: Climate conditions for transport are in accordance with EN60721-3-2-class 2K4.</i>
Temperature	Between -40°C and 70°C (transport)
Relative humidity not combined with rapid temperature changes	95% at +45°C
Noise emission (method of measurement in accordance with DIN 45635 part 19)	
During operation	Max. 64 dBA
In stand-by	Max. 54 dBA
Total acoustic A-weighted noise power	
During operation	62 dB (= 6.4Bel = 6.4B)
In stand-by	53 dB (= 5.3Bel = 5.3B)
Consumables	
Drystar DT 2B and Drystar DT 2C	8x10", 10x12", 11x14", 14x14" and 14x17" film sizes
Drystar DT 2 Mammo (optional)	8x10", 10x12" and 11x14" film sizes
Print technology	
Direct thermal printing	
Reliability	
Estimated product life (if regularly serviced and maintained according to Agfa instructions)	> 5 years
Service interventions	Max. 2 interventions / 3 years
Earthquake (standard)	Meets the CA requirements

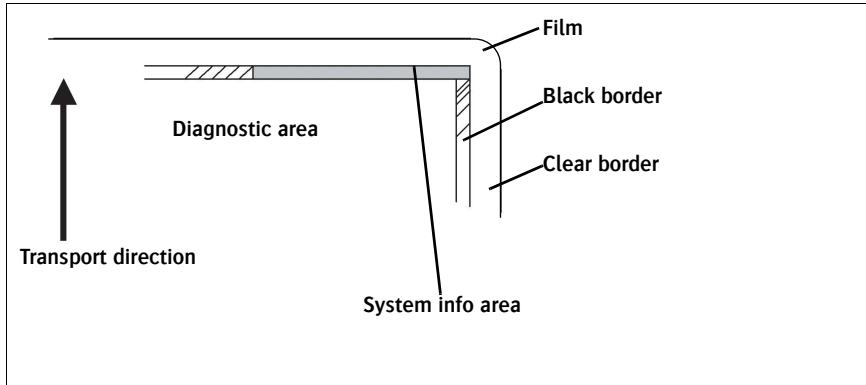
Imaging Array - Diagnostic area - General radiography				
8x10"	8" dimensions		10" dimensions	
	pixels	mm	pixels	mm
	3852	192,6	4880	244

Imaging Array - Diagnostic area - General radiography				
10x12"	10" dimensions		12" dimensions	
	pixels	mm	pixels	mm
	4880	244	5860	293
11x14"	11" dimensions		14" dimensions	
	pixels	mm	pixels	mm
	5376	268,8	6922	346,1
14x14"	14" dimensions		14" dimensions	
	pixels	mm	pixels	mm
	6882	344,1	6882	344,1
14x17"	14" dimensions		17" dimensions	
	pixels	mm	pixels	mm
	6922	346,1	8368	418,4

Imaging Array - Diagnostic area - Mammography (optional)				
8x10"	8" dimensions		10" dimensions	
	pixels	mm	pixels	mm
	3828	191,4	4958	247,9
10x12"	10" dimensions		12" dimensions	
	pixels	mm	pixels	mm
	4892	244,6	5810	290,5
11x14"	11" dimensions		14" dimensions	
	pixels	mm	pixels	mm
	5376	268,8	6922	346,1

Viewing the system info area on a film

On the top right corner of each film, a “System info” area will be printed. This info can only be read using a magnifying glass.



The System info area contains info about:

- Printer: (serial number, densitometer info, film counts, software version, etc.),
- Controller (image source, date, time, etc.).

For more detailed information, refer to the Drystar AXYS Service documentation.

B Quality Control Charts

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This appendix covers the following topics:

- [Charts for general radiography QC](#)
- [Charts for mammography QC \(optional\)](#)

Charts for general radiography QC

Quality Control for General radiography applications

Chart 1

Drystar AXYS : Determination of Operating Levels

Imager Type: _____ Serial #: _____ Date _____
 Film Type: _____ Emulsion #: _____ Input Tray _____
 Densitometer: _____ (default selection)

Step 1: Print QC Test images on five consecutive days. Record the optical densities measurements in the tables below. After five days, average the values to determine the operating (aim) levels for each of the parameters.

	Day 1	Day 2	Day 3	Day 4	Day 5
Month					
Day					
Initials					

Low Density					
<i>Average of 5 Values = calculated reference "Low Density" level</i>					

Mid Density					
<i>Average of 5 Values = calculated reference "Mid Density" level</i>					

High Density					
<i>Average of 5 Values = calculated reference "High Density" level</i>					

Step 2: Copy the calculated reference levels to Charts 2A/B ("Daily Density Control Chart")

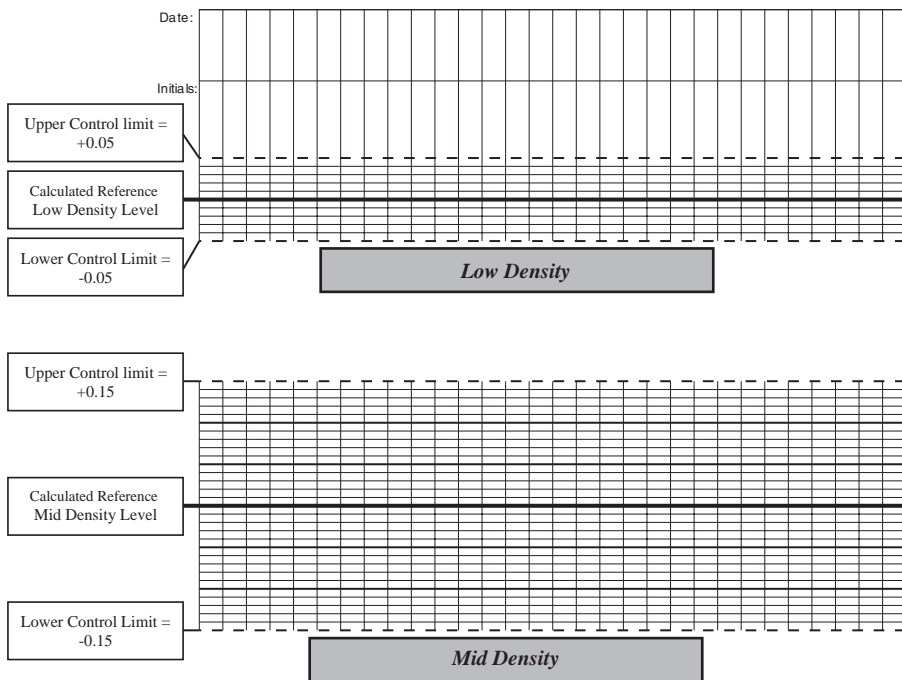
Quality Control for General radiography applications

Chart 2A

Drystar AXYS Daily Density Control Chart

Imager Type: _____ Serial #: _____ Film Type: _____ Emul #: _____

Densitometer: _____ (default selection) Input Tray: _____



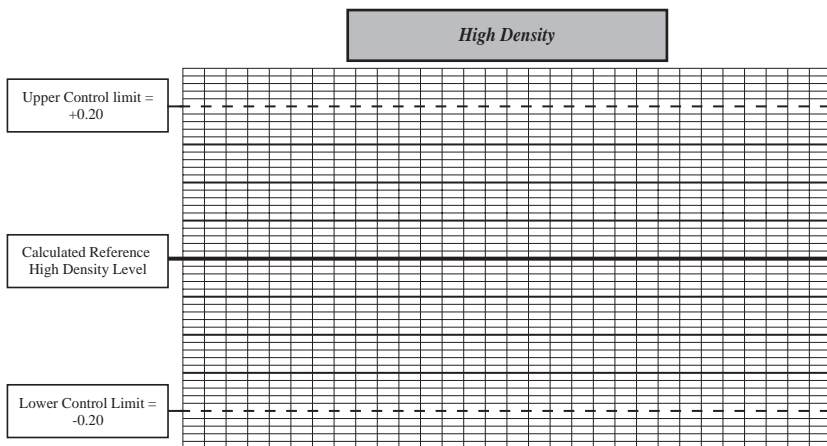
Quality Control for General radiography applications

Chart 2B

Drystar AXYS Daily Density Control Chart

Imager Type: _____ Serial #: _____ Film Type: _____ Emul #: _____

Densitometer: _____ (default selection) Input Tray: _____



Quality Control for

Chart 3

General radiography applications

Drystar AXYS Artifacts and Spatial Resolution Control Chart

Test Frequency: Weekly

Drystar AXYS Serial # _____

Input Tray: _____

Initial Reference Test Date	
Initial Reference Artifacts	
Initial Reference Dot Visibility	
Initial Reference Low Contrast	

Month					
Day					
Artifacts					
Visibility of all Dots					
Low Contrast Visibility					

Month					
Day					
Artifacts					
Visibility of all Dots					
Low Contrast Visibility					

Month					
Day					
Artifacts					
Visibility of all Dots					
Low Contrast Visibility					

Month					
Day					
Artifacts					
Visibility of all Dots					
Low Contrast Visibility					

Month					
Day					
Artifacts					
Visibility of all Dots					
Low Contrast Visibility					

Quality Control for
General radiography applications

Drystar AXYS Geometric Consistency
 Control Chart

Test Frequency: Annually or as required

Drystar AXYS Serial # _____

Input Tray: _____

Reference Dimensions		Measured Dimensions		Consistency		Aspect Ratio	
Date:		Date:					
A_{ref}		A:		A/A_{ref}		A/B	
B_{ref}		B:		B/B_{ref}			

Reference Dimensions		Measured Dimensions		Consistency		Aspect Ratio	
Date:		Date:					
A_{ref}		A:		A/A_{ref}		A/B	
B_{ref}		B:		B/B_{ref}			

Charts for mammography QC (optional)

Quality Control for

Chart 1

Mammography applications

Drystar AXYS : Determination of Operating Levels

Imager Type: _____ Serial #: _____ Date _____
 Film Type: _____ Emulsion #: _____ Input Tray: _____
 Densitometer: _____ (default selection)

Step 1: Print QC Test images on five consecutive days. Record the optical densities measurements in the tables below. After five days, average the values to determine the reference levels for each of the parameters.

	Day 1	Day 2	Day 3	Day 4	Day 5
Month					
Date					
Initials					

Base + Fog					
Average of 5 values = calculated reference "Base + Fog" level					

Low Density					
Average of 5 values = calculated reference "Low Density" level					

Mid Density					
Average of 5 values = calculated reference "Mid Density" level					

High Density					
Average of 5 values = calculated reference "High Density" level					

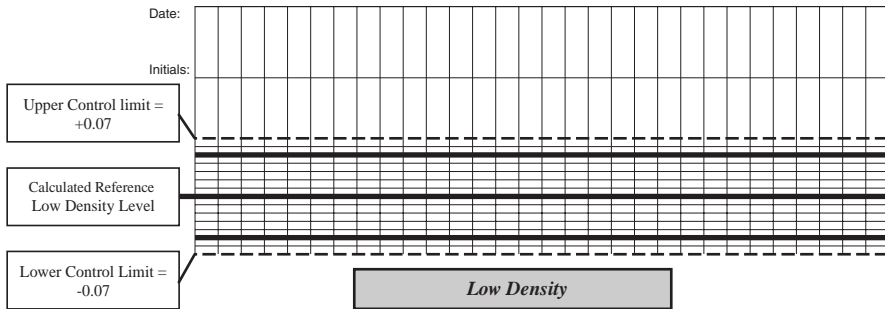
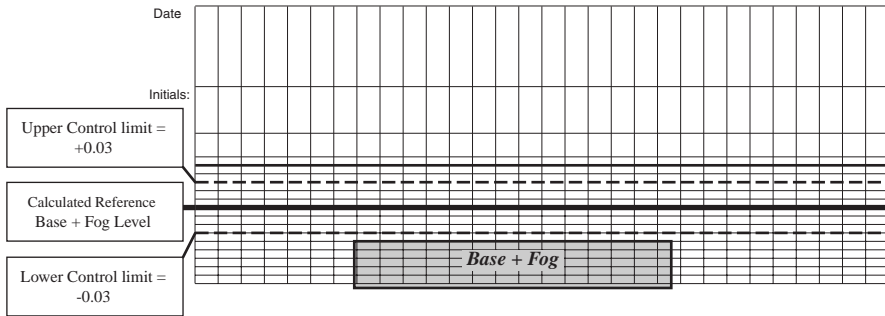
Step 2: Copy the calculated reference levels to Charts 2A/B ('Daily Density Control Chart')

Quality Control for Mammography applications

Chart 2A

Drystar AXYS Daily Density Control Chart

Imager Type: _____ Serial #: _____ Film Type: _____ Emul #: _____
Densitometer: _____ (default selection) Input Tray: _____



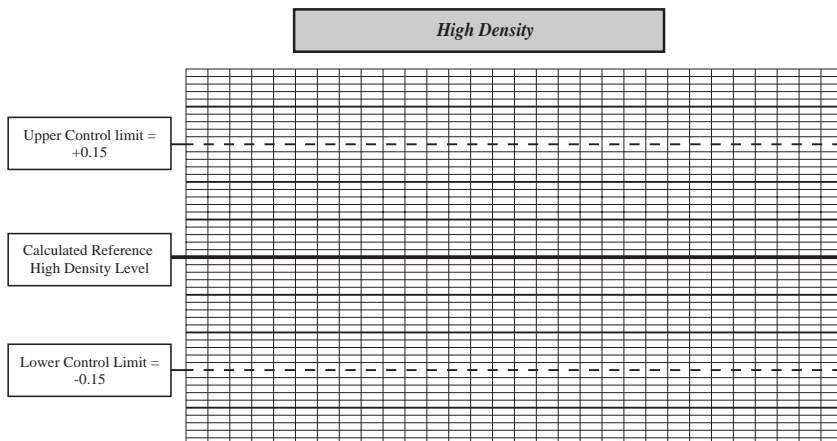
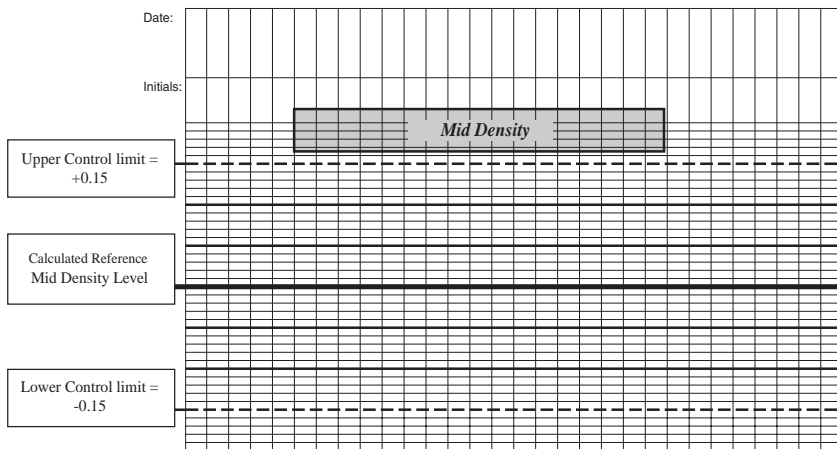
Quality Control for Mammography applications

Chart 2B

Drystar AXYS Daily Density Control Chart

Imager Type: _____ Serial #: _____ Film Type: _____ Emul #: _____

Densitometer: _____ (default selection) Input Tray: _____



Quality Control for Mammography applications

Drystar AXYS Artifacts and Spatial Resolution Control Chart

Test Frequency: Weekly Drystar AXYS Serial # _____

Input Tray: _____

Initial Reference Test Date	
Initial Reference Artifacts	
Initial Reference Dot Visibility	
Initial Reference Low Contrast	

Month					
Day					
Artifacts					
Visibility of all Dots					
Low Contrast Visibility					

Month					
Day					
Artifacts					
Visibility of all Dots					
Low Contrast Visibility					

Month					
Day					
Artifacts					
Visibility of all Dots					
Low Contrast Visibility					

Month					
Day					
Artifacts					
Visibility of all Dots					
Low Contrast Visibility					

Month					
Day					
Artifacts					
Visibility of all Dots					
Low Contrast Visibility					

Quality Control for

Chart 4

Mammography applications

Drystar AXYS Geometric Consistency Control Chart

Test Frequency: Annually or as required

Drystar AXYS Serial # _____

Input Tray: _____

Reference Dimensions Date:		Measured Dimensions Date:		Consistency		Aspect Ratio	
A_{ref}		A:		A/A_{ref}		A/B	
B_{ref}		B:		B/B_{ref}			

Reference Dimensions Date:		Measured Dimensions Date:		Consistency		Aspect Ratio	
A_{ref}		A:		A/A_{ref}		A/B	
B_{ref}		B:		B/B_{ref}			

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