## Inverter fault

### 1°) Points to check.

Check the leds on PSM05 and the corresponding meaning. Perform this check after the Xray unit is ON and after screening.



E.06	Inverter Fault	Inverter blockage signal present during X-ray emission.
To che	ck the following cond	ditions:
PSM05	Ld2 red -	OFF
	$\triangle$	ON = Difference between kV+ and kV- higher to allowed limit.
		DISTURBANCE ON H.T. CIRCUIT
PSM05	Ld3 red -	OFF
	$\triangle$	ON = kV Feedback upper to 110% of kV max. DISTURBANCE ON H.T. CIRCUIT
		· · · · · · · · · · · · · · · · · · ·
PSM05	Ld4 red -	OFF
		ON = kV Feedback not present

	ON = KV Feedback not present	
	DISTURBANCE ON H.T. CIRCUIT	
PSM05 LLd5 rod	I OCE	

PSM05	Ld5 red -	OFF
		ON = Inverter primary current upper to allowed limit
		OVERLOAD ON H.T. CIRCUIT

Refer to the procedure "<u>How to know if the Monobloc of Sonolith I-sys is in</u> good condition" to work out if you need to replace or not the monobloc.

#### **Inverter fault**

E.06	Inverter Fault	Inverter blockage signal present at the switch on of the unit.	
PSM05	Ld4 red -	OFF	
	$\triangle$	ON = To check electrical connection of the of the feedback signal between the monobloc and the PSM05- CP3 board	

In all cases, it is worth checking if the 80 A fuse at the bottom of the Xray rack is still all right and while the Xray unit has been OFF for a while.



# <u>2°) How to replace the monobloc.</u>

Once you are sure the problem comes from the Xray monobloc, you have to remove the defective one.

Make sure the Isys is OFF, and the Xray cable which is powering the Xray rack is disconnected from the wall socket.

Remove the collimator, which is held in place with three socket set screws you can find at its base.

Then, (a) disconnect the cables on top of the monobloc and labled them if necessary (Specially the ones ending with a ring and which are fixed with a nut). Put something under the monobloc to hold it, while you remove its four fixing screws (b).



Move the defective monobloc out of the way, and bring the new one. Proceed in a reverse way to fix the new one to the frame of the Carm.

# <u>3°) Alignment of the monobloc:</u>

You need the brass alignment tool which has been supplied with the equipment. You install it at the output of the Xray monobloc in place of the brass cone.



Then, materialize on the Xray monitor the center of the Xray image with a sticker. The Xray cross can not be taken as a reference, since it is not always placed in the center of the Xray image.

Screen while the brass alignment tool is on top of the monobloc. A little bright dot will appear on the Xray image.



It has to match with the center of the Xray image. If not, play with the tilting of the monobloc by screwing / unscrewing screws circled on the image below.



Once you are happy with the position of the monobloc, tight properly the locking screws, replace the brass cone, the collimator and align the latter one. You start by aligning the blade plate and then the Iris, which is placed on top of the blades part.



Untight the hexagonal column to adjust the position of the blade plate (upside down

When the alignment of the blades is done, you should get a white band well centered on the Xray image. It does not imply that it is well centered around the Xray cross since the latter one is not always in the center of the Xray image.



The same applies for the collimator.



# 4°) Calibration of the Xray curves and the collimator

Go in the Xray software subprogram to calibrate the Xray curves, and the collimator opening which varies according to the field used.

Refer to the Xray curve calibration document and the Collimator plus blades calibration document.

For the calibration of the Xray doses displayed, refer to the document "Dose calculated calibration".