

SAFETY – IMPLEMENTED DURING NORMAL COURSE  
OF PROVIDING SUPPORT

**x6000-05-S**

# **S E R V I C E N O T E**

Supersedes:  
None

## Medalist x6000 Systems

Serial Numbers: N7280A = ALL

### POSSIBLE X-ray Emission HAZARD

**WARNING**

### **HAZARD CLASS 2**

X-ray emissions above the Agilent specification are possible from an inner barrier that has only 2 screws holding the lead bar onto the drive bar. After 100,000s of cycles the lead bar may crack in half which may cause higher radiation leakage when the left outer barrier is opened.

#### Parts Required:

P/N	Description	Qty.
N7280-88786	Inner barrier replacement kit	1

### ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:		
<b>SAFETY</b>		
ACTION CATEGORY: X AGREEABLE TIME	STANDARDS LABOR: 4.0 Hours	
LOCATION CATEGORY: X ON-SITE	SERVICE INVENTORY: X RETURN	USED PARTS: X RETURN
AVAILABILITY: 31-MAR-2016	NO CHARGE AVAILABLE UNTIL: 31-MAR-2016	
AUTHOR: JPP	PRODUCT LINE: 80	
ADDITIONAL INFORMATION: Reference the service note number in the Activity Description field of the Service Request (SR)		

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PRINTED IN U.S.A.

January 6, 2011

Rev. 19



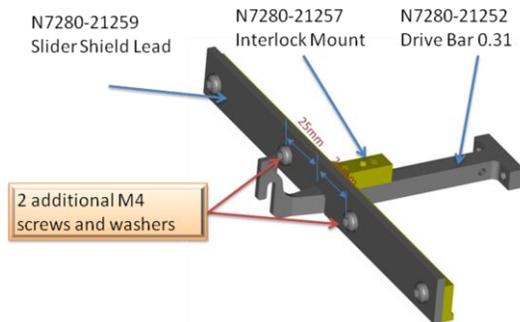
**Situation:**

The original design of the lead bar on the inner barrier did not originally include enough screws in the design to hold the lead in place, such that it will fail after many 100,000s of cycles. As a result the x-ray emissions might be able to go above the Agilent specification once the lead bar fails. The concern for leakage is when the bar has cracked/failed by breaking in half and the left outer barrier is opened.

**Solution/Action:**

Using the replacement part N7280-88786 (inner barrier replacement kit, qty 1) will be required to update the inner barrier drive bar. Please return the used part for refurbishing.

Picture of replacement part N7280-88786:



Some notes before starting. Removing and replacing the little “C-clip” is the hardest part of this procedure. It is best to slide a customer board tray under the inner barrier in case you drop the clip. If you do drop it you may never find the clip again, on that black granite slab, and finding a new “C-clip” that small to replace the one you drop/lost can be a challenge. The outer barrier comes off in less than 10 minutes unless the system is in-line and has a conveyor that needs to be removed. Removing the outer barrier in this procedure is the best way to access in the inner barrier because attempting to do it through the top hatch will require very long arms.

Steps for the removal and replacement:

- 1) Perform a long term shutdown, power off system and compressed air and perform the lock-out-tag-out procedure.
- 2) Remove the left outer barrier.
- 3) Remove C-clip and dowel pin that holds inner barrier to the compressed air piston.
- 4) Remove 2x Torx screws that hold the interlock bracket in place and move the bracket up and out of the way, while keeping the wires attached.
- 5) Slide out the old inner barrier drive bar.
- 6) Verify that the new inner barrier has a small amount of grease in its side tracks.
- 7) Slide in the new inner barrier drive bar.
- 8) Re-install interlock bracket and secure it again with the 2x Torx screws.
- 9) Re-install the C-clip and dowel pin and manually verify that the operation of the inner barrier can smoothly travel in the open and close directions.
- 10) Re-install left outer barrier.
- 11) Remove the lock-out-tag-out and power-on system and compressed air.
- 12) Run startup and verify the inner barrier interlock switch actuation distance/gap spec.
- 13) From Service Menu → Subsystem Status & Control → Panel Handling → open and close the inner barrier and make sure it operates smoothly without binding.
- 14) Perform an x-ray survey according to the x-ray safety test matrix item “Replaced Inner Barrier Test” procedure. The document can be found at <http://www.agilent.com/find/x6000safety>
- 15) From Service Menu → Confirmation, Diagnostics, and Adjust → right-click on Scheduled Tasks and click on “Run Once” → verify that all tests pass.
- 16) Turn system back over to the customer to run production. It might also be best to run “Panel Handling Confirmation”, but for most simply running a few production boards usually is enough to give you the confidence that everything is working alright.