Replacement of AS110 Cooling add-on Board

The quality department of the manufacturer of the AS 110 send us a notice that they observed recently that an electronic part (MOSFET) got unusual hot. The MOSFET is part of the small PCB (Printed Circuit Board) which is mounted on the main PCB of the AS110. The small PCB mentioned is the circuitry that controls the Peltier cooling device of the autosampler.

Further investigations by the manufacturer showed that the small PCB is correctly manufactured (soldered) and that the component itself is correctly used, meaning that the design of the cooling circuitry is within the component's specification. The problem was caused by the fact that the specific MOSFET did not meet its specifications. The suspected component is part of a specific batch from which more units were found to be out of spec.

The failing component could cause the cooling of the autosampler to go out of specification or fail the cooling operation. Although there are only a few failures recorded, and the likelihood is low, we believe it is better to preventively replace any 'add-on print that contains a Mosfet out of this batch. We therefore send you a replacement print for your AS 110.

This preventive action affects all manufactured AS 110 units with serial number < 19100007.

For correct replacement, please follow the instructions in this document carefully.

Safety practices

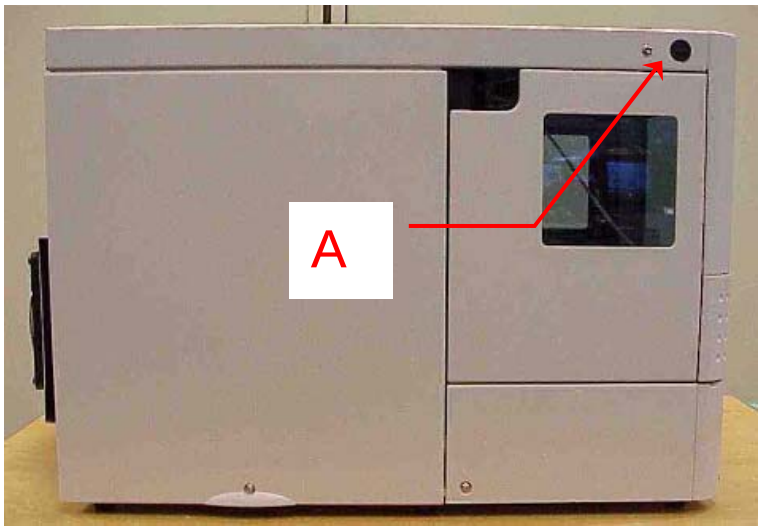
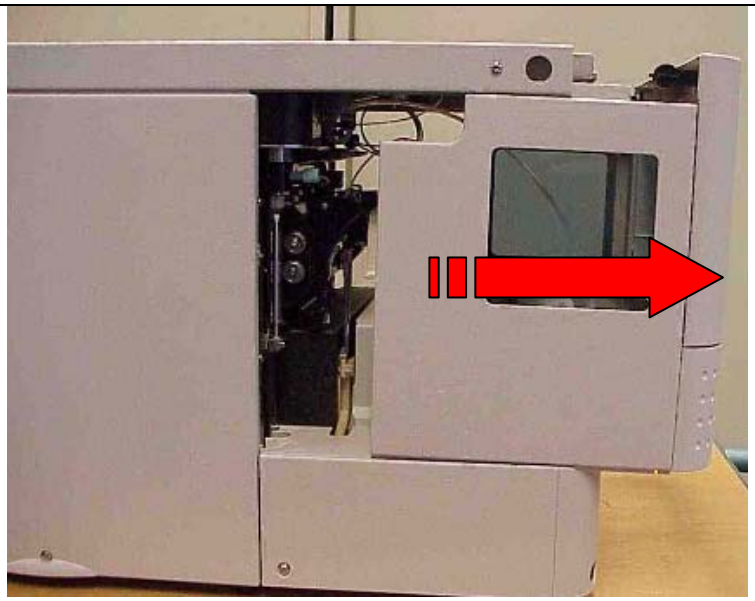
The following safety practices will ensure safe operation of the auto sampler. Service should only be executed by authorized personnel:

RISK OF ELECTRIC SHOCK

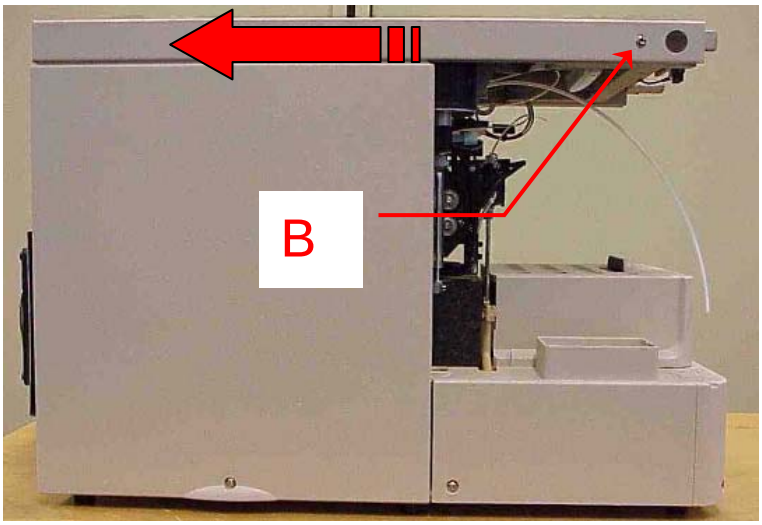
Removal of instrument panels exposes potentially dangerous voltages. Disconnect the instrument from all AC power sources before removing protective panels.

Remove top cover

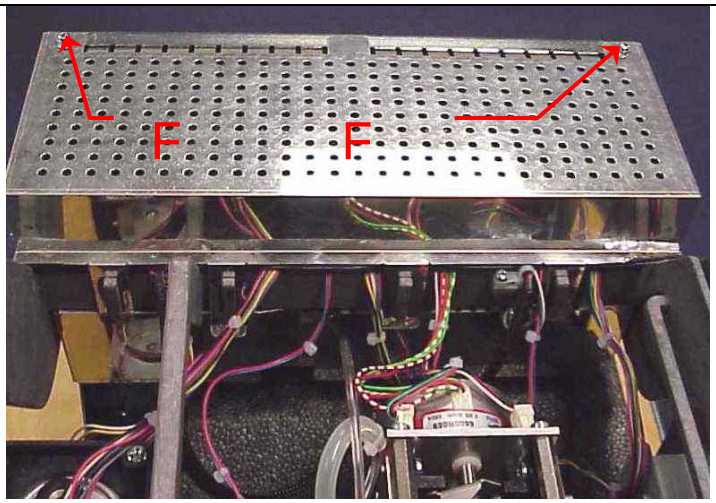
To get access to the main board the top cover needs to be removed. To remove the top cover, proceed as follows:

Remove the front cover, by pressing on both sides the black notches, marked A and sliding simultaneously the front cover forwards.	 *Figure 1: Removing the front cover*
Slide the front cover forwards out of the Autosampler and place it on a safe place	 *Figure 2: Front cover removing*

Remove top cover

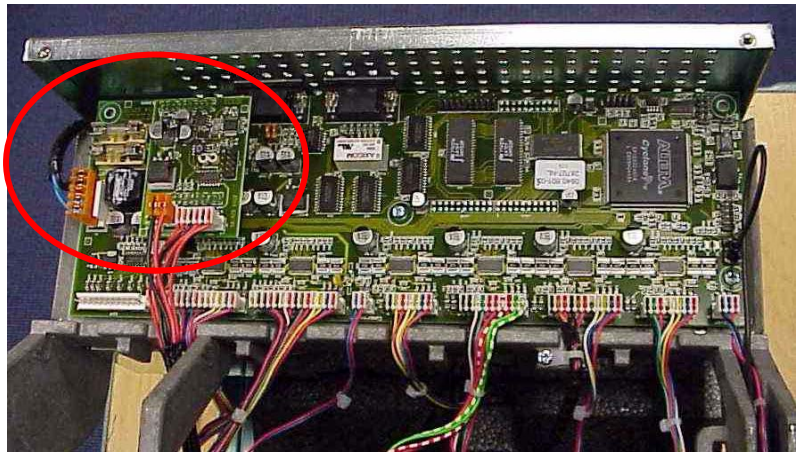
Undo the 2 screws from the top cover, marked B, and slide the top cover backwards for at least 2cm and lift it up for further removing.	 *Figure 3: Removing cooling top cover*

Remove shielding cover

Top view of Autosampler with shielding cover at main board Remove the 2 marked screws E for removing the shielding cover.	 *Figure 4: Removing the shielding cover*

Replace Cooling add-on board

- Remove both connectors from Cooling board (encircled in red).
- Replace Cooling board with replacement board.
- Reconnect connectors.

Top view of mainboard with additional cooling board.	 *Figure 5: Replacement of Cooling add-on board*

Reinstall covers

Reinstall the metal shielding cover and all panels back on the unit to complete the update.

Test

- Connect mains and switch the unit on. Check if the unit initialises properly (Green LED on the front panel should lit). If this is not the case recheck the connection of the cooling board and the wiring.
- Connect RS232 cable and open the Alias/AS110 service manager (ASM) software. Set the cooling to 4°C and check if the cooling units operates properly (so check if set temperature can be reached and maintained). See service manual (191.0020) for information about the Alias service manager.

Please return the old cooling add-on board to Antec Leyden by normal mail and inform us by e-mail at the moment that you have performed the update: support@antecleyden.com