



Upgrading SpectrAA 110/220 Series Instruments from Automatic to Programmable Gas Control

Part number 9910092800 SpectrAA 110/220 AGCU/PGCU gas control

These instructions explain how to install a programmable gas control unit, using computer-controlled Hammer flow control valves, in an instrument fitted with an automatic gas control unit, fitted with manually-adjusted needle valves.

Parts List

- SpectrAA 110/220 AGCU/PGCU gas control, part number 9910092800
- PGCU gas control unit spare, part number 0110604790
- Installation instructions, part number 8510158800

Installation Instructions

SpectrAA 110/220 AGCU/PGCU Gas Control

- 1 Unpack the contents of the kit, part number 9910092800.
- 2 Unplug the SpectrAA 110/220 instrument and disconnect gas hoses.

WARNING



Electrical Shock Hazard

The instrument contains electrical circuits, devices and components that operate at dangerous voltages. Contact with these circuits, devices or components can cause death, serious injury or painful electric shock.

Turn off the main power switch and disconnect the power supply cord before removing or replacing any instrument cover, panel or sub-assembly. If any adjustment is to be done with the instrument switched on, avoid contact with the high voltage components.

- 3 Unscrew and remove the AGCU gas control unit as described in the AA 50/55/110/220 Service Manual.
- 4 Fit the replacement PGCU gas control unit.
- 5 Re-connect the gas hoses and power the instrument
- 6 You can either re-install the SpectrAA software as described in the AA 50/55/110/220 Service Manual, and choose **Programmable Hammer** from the 'Gasbox type' drop-down list on the 'Instrument Configuration' window, or run 'IHELPER.EXE' from the \Run directory of the SpectrAA installation. IHELPER will bring up the 'Instrument Configuration' window.



- 7 You should leak-test the new gas control unit as described in the AA 50/55/110/220 Service Manual.

Testing the Installation

- 1 Light an air/acetylene flame.
- 2 If ignition is successful, extinguish the flame, remove the burner, press the flame ignition button and check that a “9911 No burner fitted” error message appears.
- 3 Fit a nitrous oxide/acetylene burner. Select a nitrous oxide flame and check that the gasbox changes over from air to nitrous oxide after ignition. These steps indicate that the software is properly recognizing the new gasbox.
- 4 Run three calibration standards for copper (one of which should be 5 ppm, which can be used as a sample also). Check the calibration graph for linearity.
- 5 Run the analytical performance test as described in the AA Service Manual. Ten replicates of the 5 ppm Cu sample must deliver >0.55 Abs for air/acetylene with no paddle fitted, >0.4 Abs and %RSD <0.5 with paddle fitted, and >0.3 Abs for N₂O/acetylene with paddle fitted. These results indicate that the new gas control unit is delivering properly regulated gas flows.
- 6 If you have any reason to doubt the analytical performance of the newly-installed gas control unit, perform a gas calibration as described in the AA 50/55/110/220 Service Manual.
- 7 Replace all safety covers.

You have finished installing this kit.

This information is subject to change without notice.



8510158800

Part Number: 8510158800

Edition 04/12

Issue 4

© Agilent Technologies, Inc. 1997, 1999,
2010 and 2012

Agilent Technologies
679 Springvale Road
Mulgrave, VIC 3170