

Crowcon Technical Note

Page 1 of 1

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Subject: Reason for Sensor Replacement with a New PCB



When a new sensor is fitted into a Crowcon instrument, the initial calibration data is saved twice – once as the **“Prod Cal”** (*initial “Production Calibration” of a new sensor*) and also as the **“Field Cal”** (*the most recent/current calibration*).

The **“Prod Cal”** must be within a certain ‘window’, which is preset for the correct response from a new sensor.

Every subsequent calibration of the sensor is checked against the **“Prod Cal”**, and when the amount of adjustment required is too far from the original gain setting, this means that the sensor has worn to a point where it may become unreliable, and needs to be replaced – this is where a **“Gain Error”** is raised from the calibration.

When a PCB is replaced (or firmware updated) without previously retrieving the configuration data from the instrument/detector, all of the initial **“Prod Cal”** sensor calibration data is lost. Therefore, any sensors fitted have to be treated as **“new”** sensors.

A worn sensor will not be able to pass a **“Prod Cal”** due to the difference in response from when it was new, and therefore, if the sensor is more than 6 months old, it cannot be treated as a new sensor (*because it will not pass a “Prod Cal”*) and has to be replaced.

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