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## R-22AHJR batch testing results

1 message

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To: Vasu P Narasimhan <Vasu.Narasimhan@teledyne.com>  
Cc: Kunal Kothari <Kunal.Kothari@teledyne.com>

17 August 2018 at 21:21

Hi Vasu

Sensors delivery lead times have improved, but we have still been experiencing problems due to: **Initial high outputs, rising high outputs (time delayed), gas leakage and sensor output overshoot.** These problems are/have been due to production component/s or process issues.

They are not due to application environment, conditions or equipment. There are too many variables in terms of spread of: customers, equipment, conditions... In any case, many sensors have failed QA and have not reached the end user application.

However, from the brief single batch assessment below, it looks like the situation is improving.

We have tested the latest batch of 311 x R-22AHJR sensors (H8), spreadsheet data is attached.

### 1) QA mV output test

Out of 311 sensors just 3 read high >13.5mV

mV output spread is as follows:

11.2 – 11.9 mV - 94 sensors

12.0 – 12.9 mV - 197 sensors

13.0 – 13.5 mV – 17 sensors

>13.5 mV - 3 sensors

What was the Teledyne production QA acceptance range for this batch of sensors?

I believe that you set the Teledyne QA limits below what our results show. My belief is that lowering the QA range does not resolve the problem, it just masks the issue. Have the outputs increased since your QA testing?

### 2) Sample set - Gas leakage test

30 sensors were tested for gas leakage, just one of these failed (sealing ring backing tape not removed). We should test the whole batch for true stats.

### 3) Sample set - Output overshoot assessment

To detect overshoot issue we tested the same batch of 30 sensors, out this batch, 3 sensors initially failed but recovered within one hour.

### 4) Rising outputs – Short term testing

To try and detect if the rising high outputs are an issue, we tested the majority of the sensors twice with an interval of six days. This looks promising as the sensors passed this initial test. To be absolutely sure we should ideally test again after another 1-2 weeks.

FYI we have a batch of 100 x R-21AV Haik sensors which have been left for a longer period, I'll supply the test results next week.

Regards

Steve

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 **0110361 R-22AHJR H8 QA results 2018-08-17.xlsx**  
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