Gmail Ryan Swaine <viamed.ryan.swaine@gmail.com>

Fwd: Gas Leaks on Sensor

1 message

Kothari, Kunal <Kunal.Kothari@teledyne.com> 12 January 2018 at 01:41
To: "ryan.swaine@viamed.co.uk" <ryan.swaine@viamed.co.uk>

Dear Ryan

See below

We saw 1 sensor out of 200 pcs failing

Regds

Kunal
Sent from my iPhone

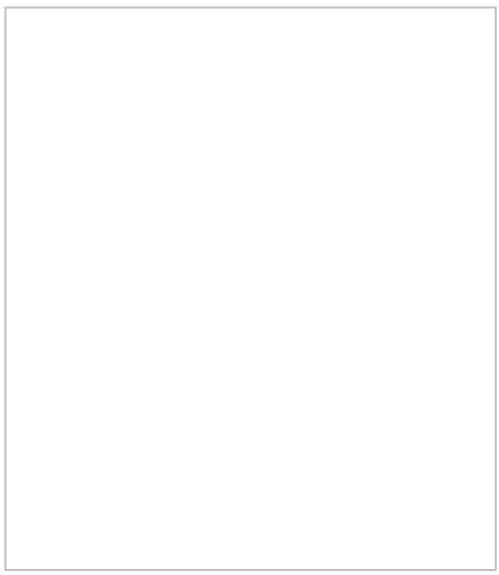
Begin forwarded message:

From: "Lugue, Nino" <Nino.Lugue@Teledyne.com>
Date: January 12, 2018 at 1:28:52 AM GMT+8
To: "Narasimhan, Vasu P" <Vasu.Narasimhan@Teledyne.com>, "Kothari, Kunal" <Kunal.Kothari@Teledyne.com>, "Starlin, Roger J" <Roger.Starlin@Teledyne.com>
Subject: RE: Gas Leaks on Sensor

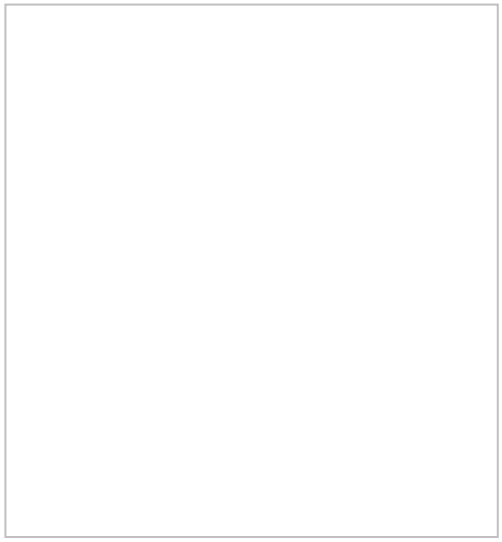
Gentlemen,

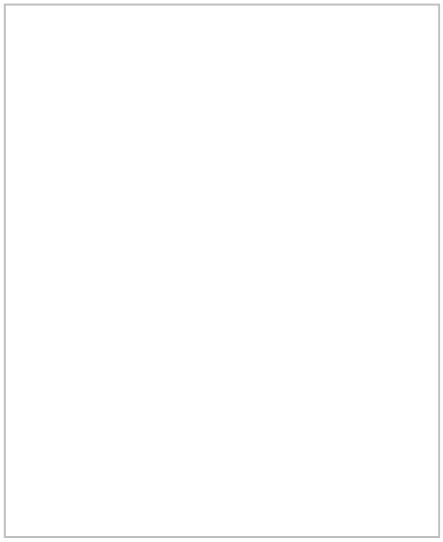
I have investigated the root cause of gas leak for the R series sensors. I ran pneumatic leak test for 200pcs of R22A and 1/200 failed vacuum test without any change in our process. Please see below images.

Notice the adhesive tape is located on the diverter cap with o-ring side of the sensor, the pressure is being applied on the tip of the diverter cap which is unreliable to make an even press.



We changed the base as shown on the images below, it makes the sensor sit on the surface where the double sided adhesive tape is located. The pressure is now being applied directly on the adhesive side surface of the cap rather than the tip of the cap which makes better and more even press that should eliminate gas leaks .





We continued to perform vacuum test for another 200 sensors and so far zero have failed test.

Regards,

Nino Lugue

Nino.Lugue@Teledyne.com

QA Analyst

Ext: 1659

Description: teledynelogo2

From: Narasimhan, Vasu P
Sent: Monday, January 08, 2018 2:17 PM

To: Kothari, Kunal; Starlin, Roger J
Cc: Lugue, Nino
Subject: RE: Gas Leaks on Sensor

This has been elevated to Zhehne, but he has been out on long vacation and is not expected back until end of next week. In my previous discussions with Zhenhe, he was opposed to subjecting our sensors to pressure tests to find out if leaks exist. Will pursue this once Zhenhe is back.

Best,

Vasu

From: Kothari, Kunal
Sent: Monday, January 8, 2018 1:50 PM
To: Narasimhan, Vasu P <Vasu.Narasimhan@Teledyne.com>; Starlin, Roger J <Roger.Starlin@Teledyne.com>
Subject: Fwd: Gas Leaks on Sensor

Pls send them our official response

Regds

Kunal

Sent from my iPhone

Begin forwarded message:

> **From:** Ryan Swaine <ryan.swaine@viamed.co.uk>
> **Date:** January 8, 2018 at 8:17:53 PM GMT+8
> **To:** "Kothari, Kunal" <Kunal.Kothari@teledyne.com>
> **Subject: Re: Gas Leaks on Sensor**
>
> Hi Kunal
>
> All the very best for the new year.
>
> Please can you let me know if you have had any response from your QA department regarding the gas leaks?
>
> I am under pressure with our customer to come to a solution.
>
> Best regards
>
> Ryan

Ryan Swaine
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Mobile: +44 (0) 7803 907117

On 12 December 2017 at 17:53, Kothari, Kunal <Kunal.Kothari@teledyne.com> wrote:

> Dear Ryan
>
> Have asked QA to look into this
>
> Regds
>
> kunal
>
> **From:** viamed.ryan.swaine@gmail.com [mailto:viamed.ryan.swaine@gmail.com] **On Behalf Of** Ryan Swaine
> **Sent:** Tuesday, December 12, 2017 9:50 AM
> **To:** Kothari, Kunal <Kunal.Kothari@Teledyne.com>
> **Subject:** Gas Leaks on Sensor
>
> Hi Kunal
>
> I have two separate customers using the automotive sensors, both reporting that gas can leak through the body of the sensor and in turn cause some erroneous readings.

I very briefly tested the theory myself and found that gas can leak through the sensor, although I do not know at this stage what effect it may have on the accuracy. I tried it on 2 l/min and 7l/min, it happened in both cases, but more dramatic on the higher flow:

https://www.dropbox.com/s/qwny5qnct7le2nl/7-8%20l-min.mp4?dl=0

I understand that the sensors have a sticky foam seal between the casing and the internal wet component, but it appears that this is not efficient at sealing the sensor in some cases. Please can you let me know your thoughts on this and what sort of response I should give to my customers?

Best regards

Ryan

Ryan Swaine
International Sales Manager
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4 attachments

image003.jpg
12K

image005.jpg
12K

image007.jpg
11K

TELEDYNE
ANALYTICAL INSTRUMENTS
A Teledyne Technologies Company

image010.gif
7K