

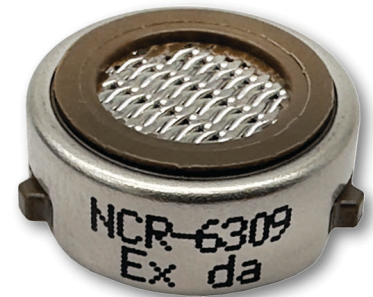
FAQ

April 26, 2023

What does HC GAS LIST LIMITED mean on the GX-3R?

RKI Instruments has a unique and useful LEL catalytic sensor design in the GX-3R and GX-3R Pro. Both instruments use a sensor that contains two filaments: a standard filament and a poison (silicone) resistant filament. When the standard filament finally becomes desensitized over time and gives a reduced output, the GX-3R and GX-3R Pro will give an HC Gas List alarm to alert the user to this condition. Following an HC Gas List alarm, the LEL catalytic sensor relies on the second silicone-resistant filament, allowing for the detection of several combustible compounds.

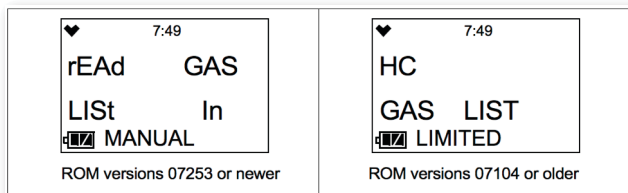
If your application involves detecting some common compounds like methane, isobutane, or hexane, there is no need to replace the sensor.



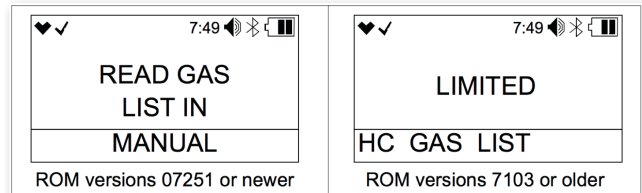
LEL Sensor (NCR-6309)

But, if your application involves detecting compounds like methanol or ethanol or some solvents, then the sensor must be replaced.

The GX-3R and GX-3R Pro operator’s manuals have a list of the compounds that can and cannot be detected during an HC Gas List alarm condition. The message that currently appears on the instrument’s screen will state: “Read Gas List in Manual”. For older instruments, the instrument’s screen will state “HC Gas List Limited” for the GX-3R, or “Limited HC Gas List” for the GX-3R Pro.



GX-3R



GX-3R Pro

The poison (silicone) resistant sensor, though limited in the number of detectable compounds, allows continued and uninterrupted detection for some common compounds. We see this as a distinct advantage compared to the traditional, single element sensor which needs immediate replacement once its sensor filament expires.

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List of gases that are NOT detectable	
Methanol	CH ₃ OH
Ethanol	C ₂ H ₅ OH
Acetone	C ₃ H ₆ O
Benzene	C ₆ H ₆
Toluene	C ₇ H ₈
Xylene	C ₈ H ₁₀
Nonane	n-C ₉ H ₂₀
Ethyl Acetate	EtAc
Isopropyl Alcohol	IPA
Methyl Ethyl Ketone	MEK
Methyl Methacrylate	MMA
Dimethyl Ether	DME
Methyl Isobutyl Ketone	MIBK
Tetrahydrofuran	THF

Resources

HC Gas List Reference Guide
GX-3R Manual
GX-3R Pro Manual