



## Corrosive and Dangerous Gas Policy

**This Corrosive and Dangerous Gas Policy is applicable for models: SmartTrak 50, SmartTrak 100 Series, and TopTrak 820 Series capillary products.**

This policy is intended to offer specific information regarding the service and warranty of Sierra's 50, 100, and 800 Series capillary products in applications where the gas to be used can corrode stainless steel. This most often occurs with gases that, in the presence of air, become powerful acids. Usually, the result of removing an instrument from a proper installation. It is rarely the result of "wet" gas at your location or improper handling, though this is always a concern. Instead, it is because of the difficulty encountered in completely purging the reactive gas from the instrument. When such a device is returned to our facility (where humidity is always present), it becomes exposed to moisture. This begins the corrosion process. The simple nature of removing such an instrument and returning it to us can damage the device.

### Return Policy Concerning Scientific Units Exposed to Corrosive and/or Dangerous Gases

Sierra's 50, 100, and 800 Series capillary products are compatible with most gases due to their 316 stainless steel flow bodies and sensors, provided they are used with the recommended elastomeric seal material. However, these gases can often mix with other gases or liquids during use which can alter their chemical properties and create a corrosive or dangerous condition, as noted above.

Because of safety concerns, Sierra has adopted a "Do Not Return" policy for meters and controllers subjected to the following gases:

Gas Name*	Gas Symbol
Boron Trichloride	$\text{BCl}_3$
Chlorine	$\text{Cl}_2$
Ethylene Oxide	$\text{C}_2\text{H}_4\text{O}$
Fluorine	$\text{F}_2$
Hydrogen Chloride	HCL
Hydrogen Fluoride	HF
Hydrogen Sulfide	$\text{H}_2\text{S}$
Nitrogen Dioxide	$\text{NO}_2$
Tetraethyl Orthosilicate	Teos
Tungsten Hexafluoride	$\text{WF}_6$
Sulfur Dioxide	$\text{SO}_2$
Uranium Hexafluoride	$\text{UF}_6$

Note: "The Do Not Return" gas list can change. Please check our [Dangerous and Corrosive Gas Policy web page](#) for the most current list.



## Sierra Policy Summary

1. \*Other gases that are not listed might also be considered corrosive or dangerous. Before attempting to return a device to the Sierra factory for service, please provide Technical Support with a Material Safety Data Sheet (MSDS) for approval before attempting to ship.
2. Devices subjected to listed or non-approved gases are NOT to be returned to the Sierra factory for service or calibration, regardless of purging or cleaning.
3. **The normal 1-year warranty is void once the device is exposed to one of these gases.**
4. If a problem arises, contact Sierra Technical Support for a possible solution or to order a replacement at a discount. Standard lead times apply.
5. If a device has been calibrated for one of the above gases but has not yet been exposed to it, it may be returned for service. A signed Non-Exposure Statement must accompany the shipment. This document is provided on the Sierra Instruments website during the [RMA process](#). If there is any question, please contact [Sierra Technical Support](#) during Pacific Time business hours.
6. **Hazardous Gas Policy:** An Ammonia device or a device using a hazardous gas on the list below may be returned for service through the RMA process, but you must complete the “Declaration of Decontamination Policy and properly purge your units before returning to Sierra.

Note: The list of gases that require a “Declaration of Decontamination” form can change. Please check our [Dangerous and Corrosive Gas Policy](#) web page for the most current list.

Hazardous Gas List		
Ammonia	Dimethylamine	Monomethylamine
Arsine	Ethanol	Nitric Oxide
Boron Trichloride	Ethylene Oxide	Nitrogen Dioxide
Boron Trifluoride	Fluorine	Nitrosyl Chloride
Boron Tribromide	Germane	Perchloryl Fluoride
Bromine	Germanium Tetrachloride	Phosgene
Bromine Pentafluoride	Hydrogen Bromide	Phosphine
Bromine Trifluoride	Hydrogen Chloride	Phosphorous Oxychloride
Carbon Monoxide	Hydrogen Cyanide	Phosphorous Pentafluoride
Carbon Tetrachloride	Hydrogen Fluoride	Phosphorous Trichloride
Carbonyl Fluoride	Hydrogen Iodide	Silicon Tetrachloride
Carbonyl Sulfide	Hydrogen Selenide	Silicon Tetrafluoride
Chlorine	Hydrogen Sulfide	Sulfur Dioxide**
Chlorine Trifluoride	Iodine Pentafluoride	Tetrafluorahydrazine
Chloroform	Methanol	Trichlorosilane
Cyanogen	Methyl Bromide	Trisobutyl Aluminum
Cyanogen Chloride	Methyl Mercaptan	Titanium Tetrachloride
Diborane	Methyl Trichlorosilane	Trimethylamine
Dichloromethylsilane	Molybdenum Hexafluoride	Tungsten Hexafluoride
Dichlorosilane	Monoethylamine	Uranium Hexafluoride



## Sierra Industrial Device Policy Summary

Industrial products such as 620, 640, 780, 240, and 241, if exposed to any of these gases, must be properly cleaned and purged in order to return for service. During the RMA process, a “Declaration of Decontamination” must be completed and signed, and an MSDS document supplied with the shipment.