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Agilent Technologies

Oil Mist Eliminator for VSPR Series Leak Detectors

FIELD INSTALLATION INSTRUCTIONS

Part Number 699909992
Rev. B
November 2006

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Varian Field Instruction Sheet

Oil Mist Eliminator for VSPR Series Leak Detectors

Preface

Documentation Standards

This manual uses the following documentation standards:

NOTE

Notes contain important information.



CAUTION

Cautions appear before instructions, which if not followed, could cause damage to the equipment or data loss.



WARNING

Warnings appear for a particular procedure or practice which, if not followed correctly, could lead to serious injury or death.



Hazard and Safety Information

The common international symbols used in this manual and on the equipment are defined below.



OFF Supply (Power)



ON Supply (Power)



AC – Alternating Current



Warning, Risk of danger



Frame or chassis Terminal



Earth (Ground) Terminal



Caution, Hot Surface



Caution, Risk of Electrical Shock



Protective Conductor Terminal



Operators and service personnel must be aware of all hazards associated with this equipment. They must know how to recognize hazardous and potentially hazardous conditions, and know how to avoid them. The consequences of unskilled, improper, or careless operation of the equipment can be serious. Every operator or service person must read and thoroughly understand operation/maintenance manuals and any additional information provided by Varian. All warning and cautions must be read carefully and strictly observed. Consult local, state, and national agencies regarding specific requirements and regulations. Address any safety, operation, and/or maintenance questions to your nearest Varian office.

Solvents

WARNING



The mechanical components of leak detectors may be cleaned with one of the recommended solvents. When heated, sprayed, or exposed to high-temperature equipment, these solvents become flammable and explosive, causing serious injury or death. Do not use these solvents near a high-temperature source. Ventilate the working area with a blower and work in a large, well-ventilated room.

Solvents are irritants, narcotics, depressants and/or carcinogens. Their inhalation and/or ingestion may produce serious side effects. Prolonged or continued contact with the skin results in absorption through the skin and moderate toxicity. Always ensure that cleaning operations are carried out in large, well-ventilated rooms, and wear eye shields, gloves, and protective clothing.

Due to the effective cleaning nature of VacuSolv solvent and its residue-free properties, Varian' Component and Spectrometer Cleaning Kit (Part Number 670029096), used in accordance with the kit instructions, is recommended for cleaning spectrometer components. The kit can also be used for fine cleaning of other parts in the leak detector's vacuum system such as valves and fittings. No rinsing steps or high-temperature drying is required following cleaning with VacuSolv. Although appropriate precautions are advised, VacuSolv is compatible with most materials and does not contain toxic chemicals or CFCs (chlorofluorocarbons). Other acceptable solvents are isopropyl alcohol (IPA) or Dow Corning® OS-20.

To clean the leak detector plastic enclosure, the LCD display and Front Panel buttons, use only a soft cloth slightly dampened with water or a mild soap.

Do NOT use excess water or cleaning solvents of any kind.

Avoid splashing any cleaning solvents into the unit through the ventilation openings or Front Panel buttons. Wipe the surface with a dry lint-free cloth.



Vacuum Equipment and Cleanliness

Cleanliness is vital when servicing the leak detector or any vacuum equipment. There are some techniques that are more important in leak detector servicing than in general vacuum work:

CAUTION



Wear non-powdered, ESD-safe Nitride or equivalent gloves to prevent skin oils from getting on spectrometer internal components.

O-ring Care

When removing, checking or replacing O-rings, keep in mind the following:

NOTE



Varian recommends replacing all O-rings during routine maintenance or during any maintenance procedure requiring that O-rings be removed.

CAUTION



Remove O-rings carefully with your fingers. Do not use metal tools for this task; this prevents scratching of any sealing surfaces.

- **Wipe all O-rings clean with a lint-free cloth before installation to ensure that no foreign matter is present to impair the seal.**
- **Do not use grease or any other substance on O-rings that will come in contact with the vacuum surfaces.**
- **Do not use alcohol, methanol or other solvents on O-rings. Doing so causes deterioration and reduces their ability to hold a vacuum.**
- **Varian does not recommend the use of vacuum grease. If applicable, apply a small amount of Apiezon[®] L grease and wipe the O-rings shiny dry.**

Metal Seal Care

CAUTION



Metal Seals must be replaced any time a spectrometer is opened. All fasteners must be installed and torqued per assembly procedure specifications. Remove Metal Seals carefully with your fingers or a soft tool. Metal tools scratch sealing surfaces.

- **Metal Seals are supplied in pre-cleaned condition. No cleaning is required. If necessary, Metal Seals can be cleaned using the recommended solvents. Wipe Metal Seals clean with a lint-free cloth before installation to ensure that no foreign matter impairs the seal.**
- **Do not use grease or any other substance on Metal Seals that will come in contact with the spectrometer.**



Spectrometer

CAUTION



Store the Ion Source/Preamplifier sub-assembly in a cool, dry area in a tightly sealed, ESD protected container. Wear non-powdered, ESD-safe Nitride or equivalent gloves when handling the spectrometer. Wash hands thoroughly after handling the spectrometer filaments and especially before smoking or eating.

The spectrometer and PCB's are static sensitive devices. Wear a grounding strap when performing any maintenance on these units and especially when performing maintenance of static sensitive parts.

CAUTION



The spectrometer operates at a very high vacuum produced by the high vacuum turbomolecular pump. Service of the spectrometer requires that this vacuum be vented to the atmosphere.

Installation Instructions

Equipment required:

- Oil Mist Eliminator Kit
- Adjustable Wrench
- Extended Length M5 Allen Wrench
- Adjustable Pliers

To install the unit:

1. Unplug the unit from the power source.
2. Using an extended length M5 Allen wrench remove the four screws holding the rear plastic cover.
3. Detach the rear plastic cover from the unit.
4. Disconnect the hose clamp and remove the hose from the barbed fitting.

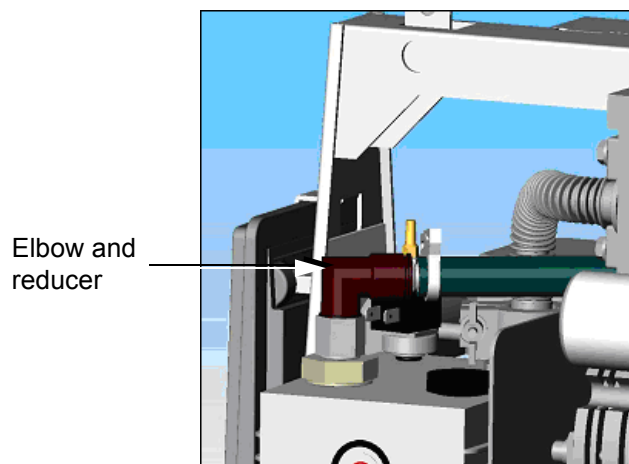


Figure 1: Unit Before Install

5. Remove the elbow and reducer using an adjustable wrench (Figure 1: Unit Before Install).
6. Clean any particles that may be present at the pump exhaust port opening.

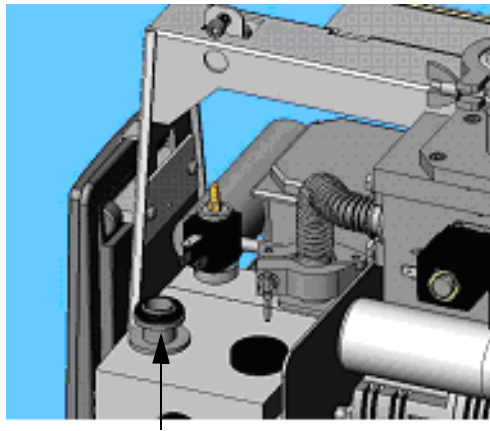


Figure 2: KF-16 Flange Adapter w/Centering Ring

7. Install the KF-16 flange adapter provided with the leak detector using adjustable pliers (Figure 2: KF-16 Flange Adapter w/Centering Ring).
8. Install KF-16 centering ring, the oil mist eliminator, and the KF-16 quick clamp by tightening up the wing nut.
9. Ensure the orientation of the barbed fitting as shown in Figure 2: KF-16 Flange Adapter w/Centering Ring.

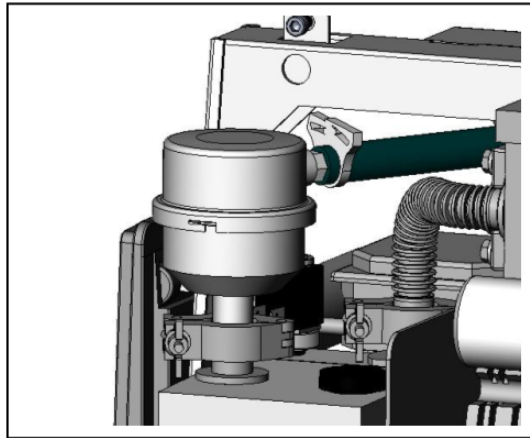


Figure 3: Oil Mist Eliminator After Install

10. Reconnect the hose to the barbed fitting and secure using a hose clamp. The unit appears as in Figure 3: Oil Mist Eliminator After Install.
11. Attach the rear plastic cover and secure to the unit using existing hardware.
12. Connect the power cord and power up the unit.
13. Watch the home screen to verify the *Spectube Pressure Wait* message progresses to *Stabilization Wait* and *System Ready* within ten minutes. Refer to the operator's manual if the system fails to reach the System Ready mode.
14. Varian recommends a full calibration of the unit prior to leak test operations.

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