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Vaillant 090686

Vaillant 090686 VK11-93E Monitoring Electrode Instruction Manual

Model: 090686 | Brand: Vaillant

PRODUCT OVERVIEW

The Vaillant 090686 Monitoring Electrode is a crucial component designed for use in various Vaillant heating systems. This electrode plays a vital role in the safe and efficient operation of your appliance by monitoring the flame. It is compatible with a wide range of Vaillant VKC, VKS, and VKU series boilers.



Image: Vaillant 090686 Monitoring Electrode. This image shows the compact design of the electrode, typically a metallic rod with a ceramic insulator, designed for flame detection in heating systems.

Compatible Models:

- VKC 11/1 E - VKC 23/1 XE
- VKC 11/2 E - VKC 21/2 XE
- VKC 17/1 XE, VKC 23/1 XE
- VKC D 11 E - VKC D 23 E
- VKC D 17 XE, VKC C D 23 XE
- VKS 11/2 E - VKS 26/2 E
- VKS 12/3 E - VKS 20/3 E

- VKS 31/2 E - VKS 42/2 E
- VKS 47/2 E
- VKS 58/1 E - VKS 93/1 E
- VKS D 11 E - VKS D 23 E
- VKS D 23 E, VKS KS D 17. E, VKS D 23 E, VKS D 29 E - VKS D 41 E, VKS D 48 E
- VKU 11/1 E - VKU 23/1 XE
- VKU 11/2 E - VKU 21/2 E
- VKU 17/1 XE, VKU 23/1 XE
- VKU D 11/2 E, VKU 17/1 XE
- VKU D 11. 1 E - VKU D 23 E
- VKU D 17 XE, VKU D 23 XE

SETUP AND INSTALLATION

Installation of the Vaillant 090686 Monitoring Electrode should only be performed by a qualified and certified technician. Incorrect installation can lead to system malfunction, property damage, or personal injury. Always refer to the specific boiler's service manual for detailed, model-specific installation instructions.

1. **Safety First:** Ensure the heating system is completely powered off and isolated from the main electricity supply. Close all gas and water supply valves.
2. **Access the Combustion Chamber:** Carefully open the boiler casing and locate the combustion chamber. The exact procedure varies by boiler model.
3. **Locate the Old Electrode:** Identify the existing monitoring electrode. It is typically positioned near the burner.
4. **Remove the Old Electrode:** Disconnect any wiring attached to the electrode. Carefully unfasten the mounting screws or clips holding the electrode in place and remove it. Note its orientation for correct replacement.
5. **Install the New Electrode:** Insert the new Vaillant 090686 Monitoring Electrode into the designated position. Ensure it is correctly seated and secured with the mounting screws or clips.
6. **Connect Wiring:** Reconnect the electrical wiring to the new electrode. Ensure connections are secure and correctly polarized if applicable.
7. **Reassemble and Test:** Close the combustion chamber and boiler casing. Restore gas, water, and electrical supplies. Perform a functional test of the heating system according to the boiler's service manual to confirm proper operation and flame detection.

Warning: Do not attempt installation if you are not a qualified professional. Improper installation can void warranties and create hazardous conditions.

OPERATING PRINCIPLES

The monitoring electrode, also known as a flame sensing electrode or ionization electrode, is a safety device that detects the presence of a flame in the boiler's combustion chamber. When the burner ignites, the flame creates an electrical current (ionization current) between the electrode and the burner. The boiler's control unit monitors this current.

- If a flame is detected, the control unit allows the gas valve to remain open, and the boiler continues its operation cycle.
- If no flame is detected after ignition, or if the flame extinguishes during operation, the control unit will shut off the gas supply to prevent the accumulation of unburnt gas, which could lead to a dangerous situation. This is a critical safety feature.

The Vaillant 090686 electrode is designed to provide reliable flame detection for the specified Vaillant boiler models,

ensuring safe and continuous operation.

MAINTENANCE

Regular maintenance of the monitoring electrode is essential for the safe and efficient operation of your Vaillant heating system. Maintenance should be performed by a qualified technician as part of the boiler's annual service.

- **Inspection:** During annual service, the technician should visually inspect the electrode for signs of wear, corrosion, cracking of the ceramic insulator, or carbon buildup.
- **Cleaning:** If carbon deposits are present, the electrode should be carefully cleaned using fine sandpaper or a wire brush. Avoid damaging the ceramic insulator.
- **Gap Check:** Verify the correct gap between the electrode tip and the burner. Refer to the boiler's service manual for the precise measurement.
- **Replacement:** Electrodes are wear parts and should be replaced if they show significant signs of degradation, if the ceramic is cracked, or if they fail to reliably detect the flame. The lifespan of an electrode can vary depending on usage and water quality, but regular replacement (e.g., every 3-5 years) is often recommended.

Caution: Always ensure the boiler is de-energized and gas supply is shut off before performing any maintenance.

TROUBLESHOOTING

If your Vaillant heating system is experiencing issues related to flame detection, the monitoring electrode might be a contributing factor. Common symptoms include the boiler failing to ignite, locking out, or repeatedly attempting ignition without success.

Common Issues and Potential Solutions (for qualified technicians):

Symptom	Possible Cause	Action (by qualified technician)
Boiler fails to ignite or locks out after ignition attempt.	<ul style="list-style-type: none">• Dirty or corroded electrode.• Cracked ceramic insulator.• Incorrect electrode gap.• Faulty electrode wiring.• Worn-out electrode.	<ul style="list-style-type: none">• Clean the electrode.• Inspect for damage; replace if cracked.• Adjust the gap according to manufacturer specifications.• Check and secure wiring connections.• Replace the electrode.
Intermittent flame failure.	<ul style="list-style-type: none">• Weak ionization current due to dirty electrode.• Fluctuating gas pressure (less common for electrode).	<ul style="list-style-type: none">• Clean or replace the electrode.• Check gas supply and pressure.

Important: Troubleshooting and repairs should only be carried out by a qualified heating engineer. Attempting DIY repairs can be dangerous and may void your warranty.

SPECIFICATIONS

Feature	Detail
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Feature	Detail
Brand	Vaillant
Model Number	090686
Product Type	Monitoring Electrode (Flame Sensor)
Dimensions (L x W x H)	12 x 2 x 1 cm
Weight	15 grams
Compatibility	Vaillant VKC, VKS, VKU series (refer to product overview for specific models)
ASIN	B0017V5GPK

WARRANTY AND SUPPORT

This Vaillant 090686 Monitoring Electrode is an original spare part. Warranty terms are typically provided by Vaillant or the authorized distributor at the point of purchase. Please retain your proof of purchase for any warranty claims.

For technical support, service, or warranty inquiries, please contact your local authorized Vaillant service partner or the retailer from whom the product was purchased. You can find contact information for Vaillant support on their official website or through your boiler's documentation.

Important Links:

- [Vaillant Official Website](#) (for general information and local support contacts)
- [Product Page on Amazon.com.be](#) (for purchase details and seller information)

This instruction manual is for informational purposes only. Always consult a qualified professional for installation, service, and repairs of heating systems.