Viessmann 7822767

Instruction Manual: Viessmann Vitodens 333 WS3A 26KW Boiler Flue Gas Temperature Sensor

Model: 7822767

1. Introduction

This manual provides essential information for the safe and efficient installation, operation, and maintenance of the Viessmann Vitodens 333 WS3A 26KW Boiler Flue Gas Temperature Sensor, model 7822767. This sensor is a critical component designed to accurately measure the temperature of flue gases within the boiler system, ensuring optimal performance and safety.
Proper understanding and adherence to the instructions outlined in this manual are crucial for the longevity and correct functioning of the sensor and the overall boiler system. Please read this manual thoroughly before proceeding with any installation or maintenance.

Figure 1: The Viessmann Vitodens 333 WS3A 26KW Boiler Flue Gas Temperature Sensor. This image shows the sensor probe, which is a metallic rod, connected to a black housing, and a white electrical connector at the end of a white wire. The probe is designed to be inserted into the flue gas path to measure temperature.

2. Safety Information

Always observe the following safety precautions to prevent personal injury or damage to the equipment:

- **Professional Installation:** Installation and servicing must only be carried out by a qualified and competent heating engineer or technician.
- **Power Disconnection:** Ensure the boiler's main power supply is completely disconnected and locked out before commencing any work on the sensor or boiler system.

- **Hot Surfaces:** Boiler components, including the flue, can be extremely hot. Allow sufficient time for cooling before handling.
- **Gas Safety:** Work involving gas appliances carries inherent risks. Always follow local gas safety regulations and codes of practice.
- **Original Parts:** Use only genuine Viessmann replacement parts to ensure compatibility and safe operation.
- **Personal Protective Equipment (PPE):** Wear appropriate PPE, including safety gloves and eye protection, during installation and maintenance.

3. Package Contents

Upon opening the package, verify that all components are present and undamaged:

- 1 x Viessmann Vitodens 333 WS3A 26KW Boiler Flue Gas Temperature Sensor (Model: 7822767)
- 1 x Instruction Manual (this document)

If any items are missing or damaged, contact your supplier immediately.

4. Setup and Installation

The installation of the flue gas temperature sensor requires technical expertise. It is strongly recommended that this procedure be performed by a certified heating engineer.

1. **Preparation:**
    - Ensure the boiler is completely shut down and isolated from the main power supply.
    - Allow the boiler and flue system to cool down to a safe temperature.
    - Gather necessary tools (e.g., screwdrivers, wrenches, multimeter).
2. **Locate Existing Sensor (if applicable):** Identify the current flue gas temperature sensor's location within the boiler's flue system. Refer to the boiler's specific service manual for precise location.
3. **Remove Old Sensor:** Carefully disconnect the electrical wiring from the old sensor. Then, unmount the sensor from its housing. Be mindful of any seals or gaskets.
4. **Install New Sensor:**
    - Insert the new Viessmann 7822767 sensor into the designated opening in the flue. Ensure it is seated correctly and securely.
    - If applicable, use new gaskets or sealing compounds as specified by the boiler manufacturer to ensure a gas-tight seal.
    - Secure the sensor in place using the appropriate fasteners.
5. **Connect Wiring:** Connect the sensor's electrical connector to the corresponding wiring harness in the boiler's control unit. Ensure connections are firm and correct according to the boiler's wiring diagram.
6. **Post-Installation Checks:**
    - Visually inspect all connections and mounting points for security.
    - Restore power to the boiler.
    - Perform a functional test of the boiler, monitoring the flue gas temperature readings on the boiler's display or diagnostic tool to confirm correct operation of the new sensor.

5. Operating Principles

The Viessmann Flue Gas Temperature Sensor (7822767) is a thermistor-type sensor designed to provide precise temperature readings of the exhaust gases leaving the boiler's combustion chamber. Its primary functions include:

- **Combustion Efficiency Monitoring:** By measuring flue gas temperature, the boiler's control system can optimize the combustion process, ensuring maximum energy efficiency and reduced emissions.
- **Safety Cut-off:** In the event of excessively high flue gas temperatures, which could indicate a fault or blockage, the sensor provides a signal to the boiler's safety system to shut down operation, preventing potential damage or hazards.
- **System Diagnostics:** The sensor's readings are used by the boiler's diagnostic system to identify and report operational issues, aiding in troubleshooting and maintenance.

The sensor continuously transmits temperature data to the boiler's electronic control unit, which then processes this information to regulate boiler operation.

6. Maintenance

Regular maintenance ensures the continued accuracy and reliability of the flue gas temperature sensor. It is recommended that these checks be performed annually by a qualified technician during routine boiler servicing.

- **Visual Inspection:** Check the sensor and its wiring for any signs of physical damage, corrosion, or loose connections.
- **Cleaning:** Over time, soot or debris can accumulate on the sensor probe, affecting its accuracy. Carefully clean the probe using a soft brush or cloth. Ensure the boiler is cool and power is disconnected before cleaning.
- **Resistance Check:** A qualified technician can measure the sensor's electrical resistance at known temperatures using a multimeter and compare it against the manufacturer's specifications to verify its accuracy.
- **Seal Integrity:** Verify that the seal around the sensor's mounting point is intact and free from leaks. Replace if necessary.

7. Troubleshooting

If you suspect an issue with the flue gas temperature sensor, consult the table below. For complex issues, always contact a qualified heating engineer.

Symptom	Possible Cause	Solution
Boiler displays flue gas temperature error code.	Faulty sensor, loose wiring, or control board issue.	Check wiring connections. Test sensor resistance (requires technician). Replace sensor if faulty. Consult boiler manual for specific error codes.
Inaccurate temperature readings.	Sensor probe fouled with soot/debris, sensor degradation.	Clean sensor probe. Verify sensor resistance. Replace sensor if readings remain inaccurate.
Boiler frequently cycles on/off or shuts down unexpectedly.	Sensor providing incorrect high/low temperature signals, leading to safety cut-offs.	Have a qualified technician diagnose the sensor and boiler control system.

8. Specifications

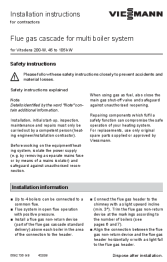
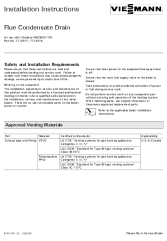
Attribute	Detail
Brand	Viessmann
Model Number	7822767
Part Number	7822767
Compatible Boiler Models	Viessmann Vitodens 333 WS3A 26KW (and potentially others as specified by Viessmann)
Sensor Type	Flue Gas Temperature Sensor
Manufacturer	VIESSMANN
Date First Available	26 July 2016

9. Warranty and Support

This Viessmann product is manufactured to high standards and is subject to the manufacturer's standard warranty terms and conditions. For specific warranty details, please refer to the documentation provided with your boiler system or contact Viessmann directly.
For technical support, troubleshooting assistance, or to arrange for professional servicing, please contact your certified Viessmann installer or the official Viessmann customer support in your region. Always provide the model number (7822767) and the boiler's details when seeking support.
Viessmann Official Website: www.viessmann.co.uk

Related Documents - 7822767

	Viessmann Vitodens Gas Boiler Guide: Efficient Heating Solutions Explore the Viessmann Vitodens range of high-efficiency gas condensing boilers, including models 050-W, 100-W, 111-W, 200-W, 222-F, and 242-F. Learn about their features, benefits, technical specifications, installation accessories, and control systems for optimal home comfort and energy savings.
	Viessmann Domestic Gas Boiler Guide: Vitodens Series Overview Explore the Viessmann Vitodens range of domestic gas condensing boilers, including models 050-W, 100-W, 111-W, 200-W, and 222-F. Learn about features, specifications, installation, and digital services.

	[Viessmann Flue Gas Cascade for Multi Boiler System Installation Instructions] Installation instructions for Viessmann Vitodens 200-W flue gas cascade systems (45 to 105 kW). Covers safety, components, installation dimensions, and flue pipe installation in a shaft.
	[Viessmann Flue Condensate Drain Installation Guide for Vitodens WB2B-80/105] Official installation instructions and safety requirements for the Viessmann Flue Condensate Drain, compatible with Vitodens WB2B-80/105 boilers. Includes approved venting materials and installation steps.
	[Vitodens 100-W Operating Instructions] User guide for the Viessmann Vitodens 100-W B1HE and B1KE Series gas-fired condensing boilers, covering operation, safety, and maintenance.
	[Viessmann Vitodens 050-W & 100-W Technical Guide | Gas Condensing Boilers] Comprehensive technical guide for Viessmann Vitodens 050-W and 100-W gas condensing boilers. Covers product specifications, installation, design information, and control units.