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Delixike 80599

Delixike 80599 Ceramic Low Temp Limit Switch Instruction Manual

Brand: Delixike | Model: 80599

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Delixike 80599 Ceramic Low Temp Limit Switch. This component is designed as a replacement part for various pellet stove models, ensuring proper temperature regulation and safety.

Compatible Models:

- Vogelzang VG5770, VG5790 Pellet Stoves
- US Stove 5501S, 5560, 5660, 5660E, Bay Front 5660 Pellet Stoves
- Ashley AP5660, AP5660L, AP5710, AP5780, AP5790, AP5660PE Pellet Stoves
- King 5501S Pellet Stove



Figure 1: Delixike 80599 Ceramic Low Temp Limit Switch, front view. This image shows the metallic disc and ceramic base with electrical terminals.

2. SAFETY INFORMATION

Always prioritize safety when working with electrical components and heating appliances. Failure to follow these safety guidelines may result in property damage, personal injury, or death.

- **Disconnect Power:** Always ensure the pellet stove is completely disconnected from its power source before attempting any installation, maintenance, or repair.
- **Qualified Personnel:** Installation and replacement should ideally be performed by a qualified technician.
- **Correct Part:** Verify that the 80599 limit switch is the correct replacement part for your specific stove model. Refer to your stove's original manual for part numbers.
- **Electrical Connections:** Ensure all electrical connections are secure and properly insulated to prevent short circuits.
- **Temperature Ratings:** Do not bypass or alter the temperature ratings of the switch. This component is critical for preventing overheating.

3. PRODUCT OVERVIEW

The Delixike 80599 is a ceramic low-temperature limit switch designed to monitor and control the exhaust temperature in compatible pellet stoves. It acts as a safety device, preventing the stove from operating outside safe temperature parameters.

Key Features:

- Part Number: 80599 thermodisc temperature switch

- Type: F140-10F Exhaust Motor Mount Switch
- Operation: Normally open, closes at 140 degrees Fahrenheit, reopens at 10 degrees Fahrenheit
- Material: Ceramic construction for durability
- Voltage: 250 Volts (AC)



80599 Low Temperature Ceramic Limit Push Button Disc Switch

Figure 2: The Delixike 80599 Low Temp Limit Switch displayed alongside a pellet stove, illustrating its application.

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Video 1: This video provides a visual overview and comparison of the Delixike 80599 Ceramic Low Temp Limit Switch, showcasing its physical characteristics and components.

4. INSTALLATION INSTRUCTIONS

Follow these steps carefully to install the 80599 Low Temp Limit Switch. Always refer to your specific pellet stove's service manual for detailed instructions and diagrams.

4.1 Tools Required

- Screwdriver set (Phillips and flathead)
- Pliers or wire strippers (if new terminals are needed)
- Multimeter (for testing, optional but recommended)

4.2 Installation Steps

1. **Disconnect Power:** Ensure the pellet stove is unplugged from the electrical outlet.
2. **Access Switch:** Locate the existing low temp limit switch. This is typically found near the exhaust motor or within the exhaust path of the stove. You may need to remove access panels.
3. **Note Connections:** Before removing the old switch, carefully note or photograph the wiring connections.

4. **Remove Old Switch:** Disconnect the electrical wires from the old switch. Then, unmount the old switch from its position.
5. **Install New Switch:** Mount the new Delixike 80599 switch in the same location and orientation as the old one. Secure it using the existing screws or mounting hardware.
6. **Connect Wiring:** Reconnect the electrical wires to the new switch's terminals, ensuring they match the original configuration. Make sure connections are tight and secure.
7. **Verify Installation:** Double-check all connections and ensure the switch is firmly mounted. Replace any access panels.
8. **Restore Power:** Plug the pellet stove back into the electrical outlet.
9. **Test Operation:** Follow your stove's manufacturer guidelines for initial startup and verify that the stove operates correctly and the new switch functions as expected.

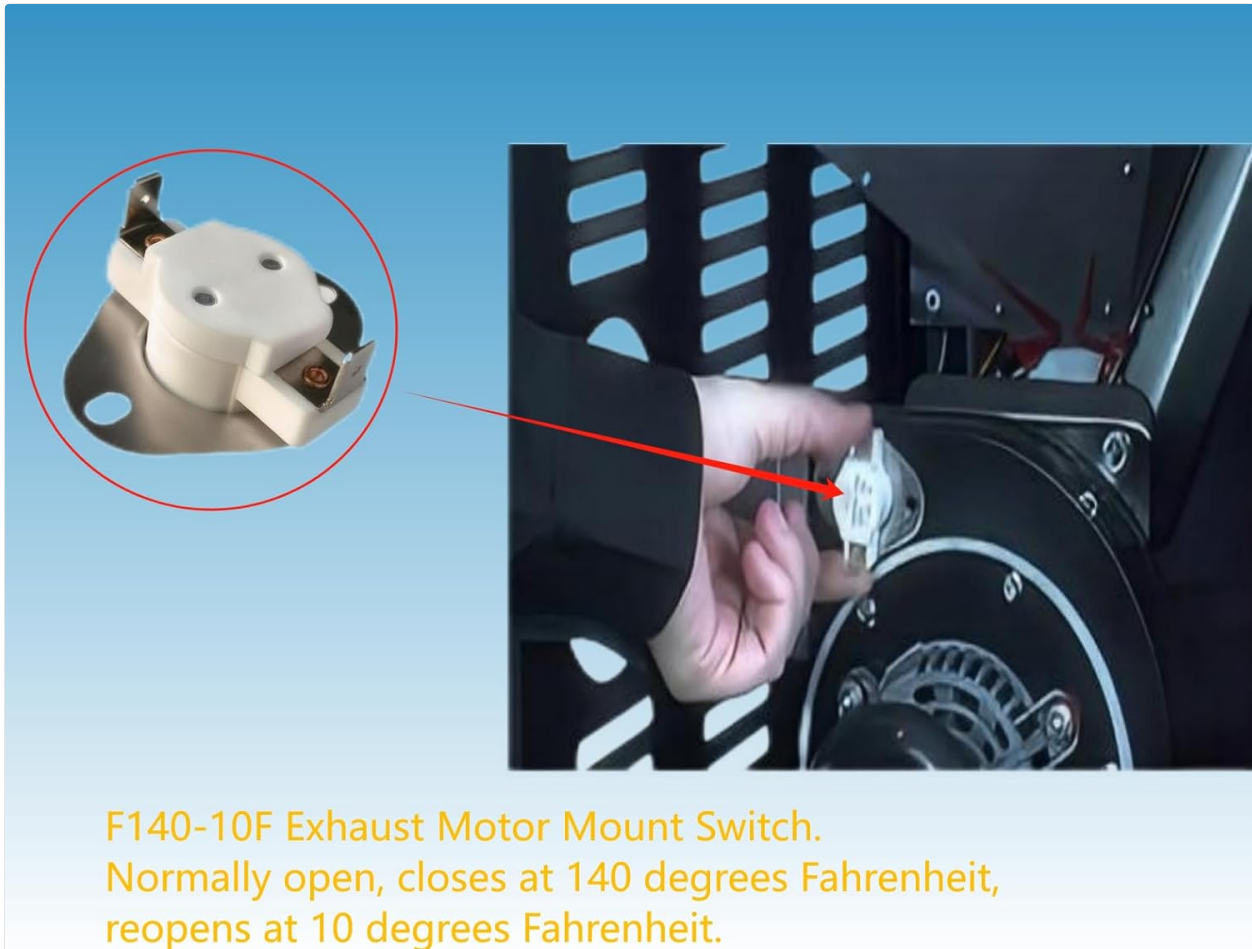


Figure 3: An illustrative diagram demonstrating the proper method for installing the 80599 Low Temp Limit Switch within a pellet stove system.

5. OPERATING PRINCIPLES

The 80599 Low Temp Limit Switch is a bimetallic thermodisc switch. Its function is based on temperature changes:

- **Normally Open (NO):** In its default state, below 140°F, the electrical circuit through the switch is open, meaning no current flows.
- **Closes at 140°F:** When the ambient temperature around the switch reaches 140°F, the bimetallic disc inside snaps, closing the electrical contacts. This completes the circuit, typically allowing the exhaust fan or other components to operate.
- **Reopens at 10°F:** As the temperature drops and falls below 10°F, the bimetallic disc snaps back to its

original position, opening the circuit. This ensures that certain components, like the exhaust fan, do not run unnecessarily when the stove is cold or off, preventing cold air from being drawn into the living space.



Figure 4: A magnified view of the 80599 Low Temp Limit Switch, highlighting its F140-10F rating, indicating it is normally open, closes at 140°F, and reopens at 10°F.

6. MAINTENANCE

The Delixike 80599 Low Temp Limit Switch is a sealed unit and does not require routine maintenance itself. However, regular maintenance of your pellet stove is crucial for the longevity and proper function of all its components, including the limit switch.

- **Stove Cleaning:** Keep the area around the limit switch and the exhaust system clean from ash and debris. Excessive buildup can affect temperature readings and switch operation.
- **Visual Inspection:** Periodically inspect the switch and its wiring for any signs of damage, corrosion, or loose connections.
- **Professional Inspection:** Have your pellet stove professionally inspected and serviced annually to ensure all safety components, including the limit switch, are functioning correctly.

7. TROUBLESHOOTING

If your pellet stove is experiencing issues related to temperature sensing or exhaust fan operation, the limit switch may be a factor. Always ensure power is disconnected before inspecting components.

- **Exhaust Fan Not Starting:** If the exhaust fan does not start when the stove heats up, the limit switch might be faulty (stuck open) or the wiring could be loose.
- **Exhaust Fan Running Continuously (when stove is cold):** If the exhaust fan runs even when the stove is cold, the limit switch might be stuck closed.
- **Intermittent Operation:** Loose wiring connections or a failing switch can cause inconsistent operation.

Note: A multimeter can be used to test the continuity of the switch. When cold (below 140°F), there should be no continuity. When heated above 140°F, there should be continuity. If the switch fails this test, it likely needs replacement.

8. SPECIFICATIONS

| Attribute | Value |
|--------------------------|------------------------|
| Part Number | 80599 |
| Item Model Number | 80599 |
| Manufacturer | Delixike |
| Material | Ceramic |
| Voltage | 250 Volts (AC) |
| Switch Style | Limit Switch |
| Activation Temperature | Closes at 140°F |
| Deactivation Temperature | Reopens at 10°F |
| Product Dimensions | 2 x 1.63 x 1.05 inches |
| Item Weight | 1.12 ounces |

9. WARRANTY AND SUPPORT

Warranty: This product comes with a 30-day warranty from the date of purchase. This warranty covers manufacturing defects under normal use. It does not cover damage resulting from improper installation, misuse, or unauthorized modifications.

Support: For technical assistance, troubleshooting, or warranty claims, please contact the seller or manufacturer through the platform where the product was purchased. Provide your order details and a clear description of the issue for prompt support.