Frymaster 807-3680

Frymaster 807-3680 High Limit Thermostat User Manual

Model: 807-3680

1. Introduction

This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of the Frymaster 807-3680 High Limit 450 Degree Fahrenheit Thermostat with Manual Reset. This genuine OEM replacement part is designed to ensure the safe and reliable operation of commercial fryer equipment by preventing overheating. Please read this manual thoroughly before installation or operation.

2. Safety Information

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment.

- Always disconnect power to the equipment before performing any service or maintenance.
- Installation and service must be performed by a qualified service technician.
- Ensure all electrical connections comply with local and national electrical codes.
- This thermostat is designed for a specific temperature limit (450°F / 232°C). Do not attempt to alter this setting.
- The manual reset feature requires user intervention after an overheat condition. Understand its function before operation.

3. Product Overview

The Frymaster 807-3680 is a high-limit thermostat designed to protect commercial fryers from dangerous overheating. It features a 450°F (232°C) temperature limit and a manual reset mechanism. When the temperature exceeds the set limit, the thermostat will trip, cutting off power to the heating elements. The unit must be manually reset after the temperature has cooled to resume operation.

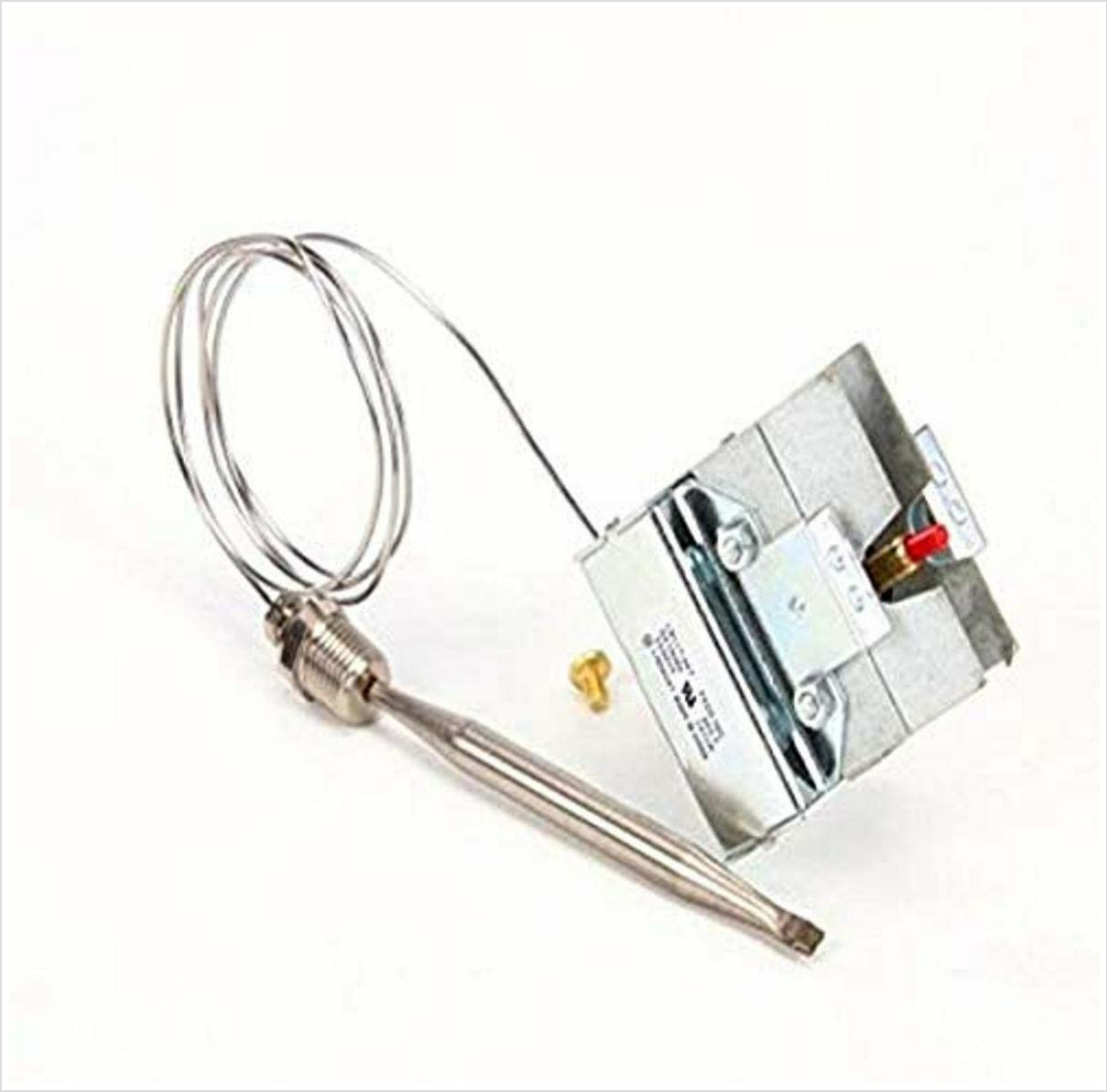

Figure 1: Frymaster 807-3680 High Limit Thermostat. This image shows the complete thermostat unit, including the control box, capillary tube, and sensing bulb, along with mounting screws.

4. Specifications

Feature	Detail
Brand	Frymaster
Model Number	807-3680
Temperature Limit	450°F (232°C)
Reset Type	Manual Reset
Controller Type	Push Button
Voltage	120 Volts
Item Weight	0.39 Pounds (approx. 6.2 ounces)
Product Dimensions	5 x 5 x 9 inches (packaging dimensions)

5. Installation

Installation of the Frymaster 807-3680 High Limit Thermostat should only be performed by a qualified and authorized service technician. Incorrect installation can lead to equipment malfunction, safety hazards, and voiding of warranties.

1. **Safety First:** Ensure the fryer is completely disconnected from its power source before beginning any installation work.
2. **Access:** Gain access to the existing high-limit thermostat within the fryer's control panel or component area.
3. **Removal:** Carefully disconnect the wiring from the old thermostat, noting the position of each wire. Remove the old thermostat and its sensing bulb from the fryer.
4. **Placement:** Install the new 807-3680 thermostat in the same location and orientation as the original. Ensure the sensing bulb is correctly positioned within the fryer's oil well or designated temperature sensing area, making good contact for accurate temperature readings.
5. **Wiring:** Connect the electrical wires to the new thermostat terminals exactly as they were connected to the old unit. Refer to the fryer's wiring diagram if necessary.
6. **Secure:** Securely mount the thermostat and ensure the capillary tube is not kinked or damaged during installation.
7. **Testing:** After installation, restore power and perform a thorough operational test to confirm proper function and temperature cutoff.

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Video 1: This video demonstrates the physical components of a high-limit thermostat, including the sensing bulb, capillary tube, and control box, and how they connect. It provides a visual guide to the part's structure.

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Video 2: This video showcases the high-limit thermostat switch, highlighting its features and potential applications in commercial fryers. It provides a general overview of the product's design and function.

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Video 3: This video provides a detailed look at the 1177 High Limit Fryer Switch, demonstrating its components and construction. It emphasizes the quality and design of the thermostat for fryer applications.

6. Operation

The Frymaster 807-3680 High Limit Thermostat operates automatically to monitor the fryer's oil temperature. Its primary function is to act as a safety device.

1. **Normal Operation:** During normal fryer operation, the high-limit thermostat remains in a closed circuit, allowing power to flow to the heating elements.
2. **Overheat Condition:** If the fryer oil temperature exceeds 450°F (232°C) due to a malfunction of the primary thermostat or other issues, the high-limit thermostat will automatically trip, opening the circuit and cutting off power to the heating elements. This prevents the oil from reaching dangerously high temperatures.
3. **Manual Reset:** Once the high-limit thermostat has tripped, it will remain open until manually reset. To reset the thermostat:
    - Allow the fryer oil to cool down to a safe temperature (below 450°F / 232°C).
    - Locate the red reset button on the thermostat (refer to Figure 1).
    - Press the reset button firmly until it clicks. This will close the circuit and allow the fryer to resume

operation.

4. **Troubleshooting Overheating:** If the high-limit thermostat trips frequently, it indicates a problem with the primary temperature control system of the fryer. Do not repeatedly reset the high-limit thermostat without addressing the underlying cause. Consult a qualified service technician.

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Video 4: This video demonstrates the functionality of a minivolt thermostat control for a fryer, including how the temperature knob operates and its role in maintaining oil temperature. While not the exact 807-3680, it illustrates general thermostat operation.

7. Maintenance

Regular maintenance ensures the longevity and proper functioning of your Frymaster 807-3680 High Limit Thermostat and the overall safety of your fryer.

- **Cleaning:** Keep the exterior of the thermostat and its sensing bulb clean and free from grease buildup. Ensure the sensing bulb is not coated with hardened oil, which can affect its accuracy. Always disconnect power before cleaning.
- **Inspection:** Periodically inspect the capillary tube for kinks, damage, or signs of wear. Ensure all electrical connections are secure and free from corrosion.
- **Functionality Check:** As part of routine fryer maintenance, verify the high-limit thermostat's trip function. This should be done by a qualified technician following the fryer manufacturer's recommended procedures.
- **Replacement:** If the thermostat shows signs of damage, erratic behavior, or fails to trip at the specified temperature, it must be replaced immediately by a qualified technician with a genuine OEM part.

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Video 5: This video provides a glimpse into the manufacturing process of thermostat components, emphasizing quality control and assembly. It highlights the precision involved in producing reliable parts.

8. Troubleshooting

This section outlines common issues related to the high-limit thermostat. For complex problems, always consult a qualified service technician.

Problem	Possible Cause	Solution
Fryer not heating, high-limit tripped	Overheat condition occurred; primary thermostat malfunction.	Allow oil to cool, then manually reset the high-limit thermostat. If it trips again, inspect the primary thermostat and heating elements. Consult a technician.
High-limit trips frequently	Primary thermostat failure, improper oil level, poor circulation, or faulty heating elements.	Have a qualified technician diagnose and repair the primary temperature control system. Check oil level and circulation.
Thermostat does not reset	Oil temperature still too high, or the thermostat itself is faulty.	Ensure oil has cooled sufficiently. If it still won't reset, the thermostat may be damaged and requires replacement by a qualified technician.

Inaccurate temperature readings (if applicable to fryer's primary control)	Sensing bulb coated with grease or damaged capillary tube.	Clean the sensing bulb. Inspect the capillary tube for damage. If issues persist, consult a technician.

9. Warranty Information

This Frymaster 807-3680 High Limit Thermostat is a genuine OEM part. For specific warranty details, please refer to the original equipment manufacturer's warranty statement provided with your fryer or contact Frymaster customer service. Using genuine OEM parts helps maintain your equipment's warranty.

10. Customer Support

For technical assistance, replacement parts, or service inquiries, please contact your authorized Frymaster service provider or visit the official Frymaster website for support resources.
Frymaster Customer Service: Refer to your fryer's documentation for specific contact information or visit www.frymaster.com.