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› Furnace Control Circuit Board User Manual

Luxaire P031-01267-001

Furnace Control Circuit Board User Manual

Model: P031-01267-001

Brand: Luxaire

INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of the Luxaire P031-01267-001 Upgraded Furnace Control Circuit Board. This board is a direct replacement component designed to ensure the proper functioning of compatible Luxaire furnace systems. Please read this manual thoroughly before attempting any installation or service.

SAFETY INFORMATION

WARNING: Installation and servicing of heating, ventilation, and air conditioning (HVAC) equipment can be hazardous due to electrical components and sharp edges. Only qualified service personnel should install, repair, or service HVAC equipment. Failure to follow these instructions can result in property damage, personal injury, or death.

- Always disconnect all power to the furnace before installing or servicing the control board.
- Verify that the replacement board is compatible with your specific furnace model.
- Handle the circuit board by its edges to avoid damaging electronic components due to static electricity.
- Ensure all wiring connections are secure and correctly matched according to the furnace wiring diagram and the diagram provided with the new board.
- Test for 24-volt output on your transformer and consider replacing the capacitor during installation.

SETUP AND INSTALLATION

The P031-01267-001 control board is designed for straightforward replacement. Follow these steps carefully:

1. **Power Disconnection:** Turn off all electrical power to the furnace at the main service panel. Verify power is off using a voltage tester.
2. **Access Old Board:** Open the furnace access panel to locate the existing control board.
3. **Document Wiring:** Before disconnecting any wires, take clear photographs of all wiring connections to the old board. Note the position and color of each wire. This will be crucial for correct re-connection.
4. **Disconnect Wires:** Carefully disconnect all wires from the old control board. Label them if necessary to avoid confusion.

5. **Remove Old Board:** Unmount the old control board from its position. Note how it was secured (screws, clips, etc.).
6. **Install New Board:** Mount the new P031-01267-001 control board in the same location as the old one. Ensure it is securely fastened.
7. **Connect Wiring:** Refer to your photographs and the wiring diagram provided with the new board. Connect each wire to its corresponding terminal on the new board. The terminals are clearly labeled.
8. **Verify Connections:** Double-check all connections to ensure they are secure and correctly placed. Incorrect wiring can cause damage to the board or furnace.
9. **Optional: Capacitor and Transformer Check:** It is recommended to inspect and potentially replace the furnace capacitor at this time. Also, test the 24-volt output from your transformer to ensure it is functioning correctly.
10. **Close Panel:** Once all connections are verified, close the furnace access panel.
11. **Restore Power:** Restore electrical power to the furnace at the main service panel.
12. **Test Operation:** Initiate a heating or cooling cycle to confirm the furnace operates correctly.

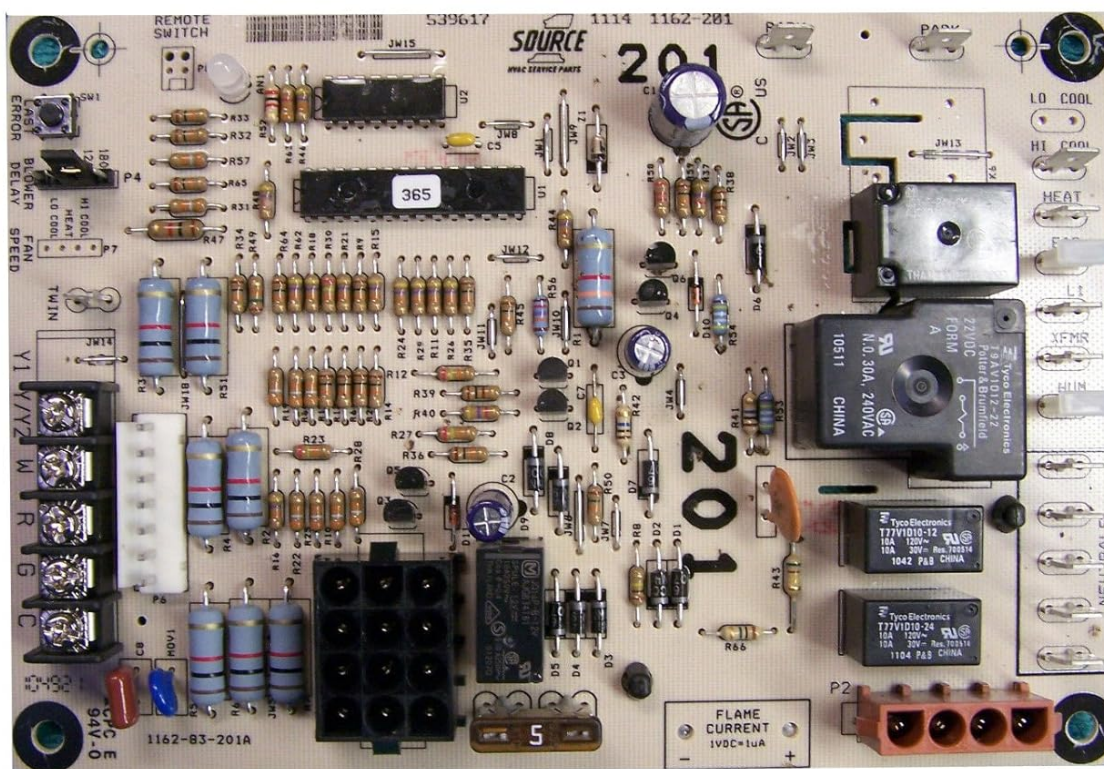


Figure 1: Overview of the Luxaire P031-01267-001 Furnace Control Circuit Board. This image displays the various components, terminals, and labels on the board, which are crucial for correct wiring and installation.

OPERATING PRINCIPLES

The furnace control circuit board acts as the central nervous system of your furnace. It manages various functions, including:

- **Ignition Control:** Initiates the ignition sequence for the burner.
- **Flame Sensing:** Monitors the presence of a flame to ensure safe operation.
- **Blower Motor Control:** Activates and deactivates the blower motor for air circulation based on heating/cooling demands.
- **Safety Lockouts:** Implements safety protocols, such as shutting down the system if a fault is detected.

- **Diagnostic Codes:** Provides error codes through LED indicators to assist in troubleshooting.

Once installed, the board operates automatically in conjunction with your thermostat and other furnace components to maintain desired indoor temperatures.

MAINTENANCE

The furnace control board itself requires minimal maintenance. However, regular maintenance of the overall furnace system is crucial for its longevity and efficient operation. This includes:

- **Filter Replacement:** Regularly replace or clean the furnace air filter as recommended by your furnace manufacturer. A dirty filter can restrict airflow and strain components.
- **Annual Professional Inspection:** Schedule annual inspections and tune-ups by a qualified HVAC technician. They can identify potential issues before they become major problems and ensure all components, including the control board, are functioning optimally.
- **Keep Area Clear:** Ensure the area around the furnace is clear of obstructions and flammable materials.

TROUBLESHOOTING

If your furnace is not operating correctly after replacing the control board, consider the following common issues:

Problem	Possible Cause	Solution
Furnace not starting after board replacement.	Incorrect wiring connections; power not restored; faulty transformer or capacitor.	Double-check all wiring against the diagram. Ensure power is on. Test transformer output and inspect capacitor.
Furnace cycles on and off rapidly (short cycling).	Thermostat issue; airflow restriction; safety limit switch tripped.	Check thermostat settings. Replace air filter. Consult furnace manual for limit switch reset.
No heat, but blower runs.	Ignition failure; gas supply issue; flame sensor dirty/faulty.	Check gas valve. Clean flame sensor. If issues persist, professional diagnosis is recommended.
Error codes displayed on board.	Specific system fault.	Refer to your furnace's specific manual for the meaning of diagnostic codes and recommended actions.

If troubleshooting steps do not resolve the issue, it is recommended to contact a qualified HVAC technician for further assistance.

SPECIFICATIONS

- **Model Number:** P031-01267-001
- **Brand:** Luxaire
- **Product Dimensions:** 8 x 6 x 10 inches
- **Item Weight:** 1.94 Pounds
- **Manufacturer:** Luxaire
- **First Available Date:** July 8, 2014
- **Compatibility:** Designed as an upgraded replacement for compatible Luxaire furnace systems.

WARRANTY AND SUPPORT

For information regarding the warranty of your P031-01267-001 control board, please refer to the documentation provided by your

seller or contact Luxaire directly. Support for installation and troubleshooting beyond this manual's scope should be sought from a certified HVAC professional.

For additional resources or to locate a service professional, visit the official Luxaire website or consult your local HVAC service provider.

