

Homeowner Furnace Troubleshooting Guide

This is a basic furnace troubleshooting guide for homeowners, designed to help identify and resolve the most common heating issues, or equip you with key information before calling a professional. Follow these steps to assess your furnace's condition and potentially fix minor problems safely.

Safety Precautions

- Never do something you are uncomfortable with!
- Always turn off power to the furnace before performing any checks or repairs to avoid electrical shock.
- If you smell gas: shut off the gas supply, ventilate your home, and call your gas provider or emergency services. Do not attempt repairs.

Step-by-Step Troubleshooting

1. Check Thermostat Settings

- Ensure the thermostat is on and set to "Heat" mode.
- Set the temperature at least five degrees above room temperature.
- Replace batteries if your thermostat uses them.
- Dust inside mechanical thermostats gently to clear debris.

2. Inspect Power Supply

- Make sure the furnace power switch (often near the unit) is on.
- Check your home's electrical panel for blown fuses or tripped breakers; reset as needed.
- If power cannot be restored, or breakers continue to trip, call a professional.

3. Examine Furnace Filter

- Locate and inspect the air filter for dirt and clogs. Replace if dirty (every 2–3 months is typical).
- Never operate the furnace without a filter, as this causes damage.

4. Assess Vents and Airflow

- Ensure all supply and return vents are open and unblocked by furniture or other objects.
- Check for visible obstructions or blockages in exhaust vents and ductwork.

5. Check the Gas Supply (Gas Furnaces)

- Make sure the furnace's gas valve is open.



- If the pilot light is out (for older models), follow manufacturer instructions to relight it.
- Modern furnaces often have electronic igniters. If ignition problems persist, call a professional.

6. Investigate Unusual Noises

- Listen for banging, rattling, or squealing, which may indicate loose or damaged parts.
- Tighten visible screws and clean around the blower fan.
- Persistent unusual sounds warrant a professional inspection.

7. Look for Short Cycling (Frequent On/Off)

- Check for a clogged filter, improperly set thermostat, or blocked vents.
- Replace or clean filters and check thermostat placement; if unresolved, your system may be oversized, needing professional assessment.

8. Inspect Thermostat Wiring

- Ensure wires to the thermostat are intact and securely connected.
- Damaged or loose wiring usually requires a technician.

9. Consult Furnace Manual

- Refer to your furnace manual for model-specific troubleshooting steps and locations of key components.

When to Call a Professional

- Issues with complex components (control board, igniter), recurring electrical problems, persistent gas supply issues, or anything you feel uncomfortable handling should be referred to an HVAC technician.

Common Furnace Problems and Solutions Table

Problem	Typical Fix You Can Try	When to Call a Pro
No Heat	Check thermostat, power, pilot	After checking basics
Not Enough Heat	Replace filter, open vents	Still not resolved
Short Cycling	Clean filter, check thermostat	Persists after checks
Loud Noises	Tighten screws, see what feels loose	Noise continues
Won't Turn On	Reset breaker, check thermostat	Repeated trips/offline

Final Tips

- Changing filters regularly, keeping vents clear, and monitoring thermostat settings can prevent many issues before they start.
- If you ever feel unsure or unsafe, do not hesitate to call a licensed HVAC technician.