



## HVAC Maintenance & Homeowner Mistakes to Avoid

Ultimate DIYer Free Library – AC / HVAC Series

Simple maintenance prevents costly HVAC failures.

### Seasonal Maintenance

Change filters, clear debris, and inspect vents.

### Outdoor Unit Care

Keep condensers clear of plants and debris.

### Common Homeowner Mistakes

Blocking vents and ignoring filters causes system strain.

### Know When to Stop

Electrical and refrigerant issues require licensed technicians.

#### ◆ HVAC Safety: Know Where DIY Stops

HVAC systems combine **electricity, pressurized refrigerant, moving parts, and stored energy**.

Some maintenance tasks are homeowner-safe — others are **life-threatening** if done incorrectly.

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#### ◆ Electrical Dangers: Disconnect Power FIRST

One of the most dangerous homeowner mistakes is working on HVAC equipment **without fully disconnecting power**.

⚠ People have been seriously injured or killed spraying condenser coils with a water hose while the unit was still energized.

### Why This Is Dangerous

- Outdoor condensers run on **high voltage**
- Water conducts electricity
- Energized components can arc or short instantly

#### Always:

- Shut off the breaker
- Pull the outdoor disconnect
- Verify power is off before touching anything

If you're unsure — stop.

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## ◆ Capacitors: Stored Energy That Can Kill

HVAC units contain **capacitors**, including:

- Start capacitors
- Run capacitors

These components:

- Store large electrical charges
- Can discharge suddenly
- Can shock even when power is OFF

A capacitor does not need active power to injure you.

⚠ Contact with a charged capacitor can cause:

- Severe electrical shock
- Burns
- Cardiac injury

Capacitor handling is **not homeowner DIY work**.

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## ◆ Refrigerant Safety: Not DIY — Ever

Refrigerants are:

- Pressurized
- Chemically hazardous
- Regulated by law

Refrigerant systems are **sealed systems**.

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**Never:**

- Release refrigerant into open air
- Attempt to “top off” refrigerant
- Open refrigerant lines

Refrigerant exposure can cause:

- Frostbite-like injuries
  - Breathing issues
  - Environmental harm
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## ◆ Refrigerant Is Regulated for a Reason

Working with refrigerant requires:

- Specialized gauges
- Recovery equipment
- Vacuum pumps
- Leak detection tools

Vacuum pumps are used to:

- Remove moisture and air
- Prevent system contamination
- Protect compressors from failure

⚠ Federal law requires technicians to be **licensed** to handle refrigerants.

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## ◆ Homeowner Maintenance That *Is* Safe

Homeowners should limit maintenance to:

- Changing air filters
- Clearing debris from around outdoor units
- Keeping vents and returns unobstructed
- Scheduling professional inspections

Anything involving:

- Electrical components
- Capacitors
- Refrigerant lines

➔ **Stop and call a licensed HVAC professional.**

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## ◆ Common Dangerous Mistakes to Avoid

- Spraying energized equipment with water
  - Removing electrical panels “just to look”
  - Touching capacitors
  - Releasing refrigerant
  - Bypassing safety switches
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### Ultimate DIYer Rule of Thumb

**If it involves stored electricity or refrigerant pressure — it’s not DIY.**