

Paying taxes, driving in traffic and A/C repair are all inevitabilities of life here in the city. Houston is an incredibly difficult climate to condition; due to high humidity. Essentially, we have heavier air than other parts of the United States. Refrigerant has a pressure-temperature correlation. Air-Conditioning, in this application, is the achievement of human-comfort. With these things in mind, let's dive into the most common air-conditioning repairs.

1. **Dirty Filters** - a dirty filter will drag air slower across your evaporator coil and will lower the DAS (discharge air temperature). Slower air pressure will lower refrigerant temperatures.
2. **Thermostat**- mercury bulb thermostats must installed level and be secure on a load-bearing wall; digital thermostats can fail at anytime, but in our experience, they fail mostly in the side seasons. I don't like recommending digital thermostats programmed for a heating and cooling parameter; Instead, choose heat or cool.
3. **Refrigerant Leaks**- These can occur at anytime and often present themselves prematurely due to improper start-up practices. Did you know that if an air conditioner is under-charged by twenty-five percent, it can result in 50% more energy consumption!
4. **Drain clogs**- High-humidity means high moisture content in the air. Relative humidity in the air must be removed before the sensible temperature of your thermostat will lower. On a typical summer-day in Houston, a 5 ton air-conditioner can remove 25 gallons of water from the air. This cold water then is discharged into a 3/4 inch pvc drain-line. Sign up for ac maintenance to get your drains cleared on a consistent basis!
5. **Evaporator Coils**- this part of the air-conditioner is what traps the water vapor in the air and condenses it. It's made of copper and aluminum. This part will eventually fail because of these two facts. To ensure it lasts longer, make sure your HVAC company is practicing proper vacuuming of the system before start-up and keep your AC at a consistent temperature to ensure unnecessary humidity removal (over-working the ac).
6. **Breakers or Fuses**- I've seen dogs chew wires that pop fuses, squirrels and rats too! Power surges can trip breakers. A "on" breaker in your panel box should never be warm/hot, I have a great master electrician friend that can help!
7. **Capacitors**- essentially, the battery for compressor, out-door fan motor and indoor blower motor. This is the part customers always think is the problem! Haha! I find it funny when I go to a service call and then the customer belittles my trade-knowledge by saying "it's probably the capaciter". A good technician will smile at you, and follow the sequence of operations to determine problem, every time.

8. **Compressor-** the "heart" of the AC system, can fail from lack of refrigerant, being un-level, running with a bad capacitor, improper installation practices, dirty filters and restrictions of refrigerant flow to name a few. Very expensive! Get ac maintenance!
9. **Condenser Coils-** this is what stores the heat energy that the evaporator coil removed from your home. The condenser coil can fail from dog urine, weed eaters and degradation of metallic surfaces.
10. **Worn Contactor-** the contactor is essentially a magnet that opens and closes. In maintaining the magnetic field a frequency is emitted; this frequency can attract ants and dirt-dobbers, which can prevent the contactor from closing. Mechanical failure can happen at anytime.
11. **Poor Breaker panel balancing-** If your main breaker panel for your home is not load balanced it can wear our mechanical parts faster and make you spend more money each month on electricity. Thor Electric is the company I refer to all my customers in Houston and surrounding areas.