

OTTAWA HVAC PRO

Troubleshooting

Diagnosing heating and cooling faults before calling
a technician

23 Expert Answers from Construction Brain

ottawahvacpro.ca/construction-brain

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Q1

Why is there ice on my heat pump?

Ice on your heat pump is actually normal in certain conditions, but it can also signal a problem depending on how much ice there is and how long it's been there.

When ice is normal: During heating mode in cold weather, it's completely normal for a thin layer of frost or light ice to form on the outdoor unit's coil. Your heat pump is designed for this — it has an automatic **defrost cycle** that periodically reverses operation to melt the ice, usually every 30-90 minutes. You might notice steam rising from the unit during defrost, which is perfectly normal.

When ice becomes a problem: If you're seeing thick ice buildup covering the entire unit, ice that persists for several hours without melting, or ice forming during cooling mode (summer), that's a sign something is wrong. Common causes include a **malfunctioning defrost control board**, a **failed defrost sensor**, low refrigerant, restricted airflow from a dirty filter or blocked coils, or a stuck reversing valve.

In Ottawa's climate specifically, our winters are harsh enough that cold-climate heat pumps (rated to -25°C or lower) are strongly recommended. A standard heat pump struggling in -20°C Ottawa temperatures is more prone to excessive icing because it's working beyond its design limits.

On the safety side, a heavily iced unit that can't defrost properly will eventually stop heating your home efficiently — a real concern during an Ottawa winter. If your heat pump is running but you're not getting adequate heat, or the ice has been there for more than a few hours without clearing, it's time to call a technician. Don't try to chip the ice off manually, as you can damage the delicate aluminum fins on the coil.

Your next steps: Check that your air filter is clean and that nothing is blocking airflow around the outdoor unit (snow drifts are common culprits in Ottawa). If the ice clears on its own after a defrost cycle and your home is staying warm, you're likely fine. If the problem persists, Ottawa HVAC Pro can diagnose your defrost system and get your heat pump running properly — feel free to reach out for a service call.

Q2

Why is my thermostat not reaching the set temperature?

When your thermostat isn't reaching the set temperature, it usually means either the heating or cooling system can't keep up with demand, or there's an underlying issue with the equipment, airflow, or the thermostat itself.

Start with the basics. Check your furnace filter first — a clogged filter is one of the most common culprits. A dirty filter restricts airflow so severely that your furnace runs constantly but can't move enough warm air through the home. Filters should be changed every 1-3 months depending on your home and filter type. While you're at it, make sure all your supply and return vents are open and unobstructed by furniture or rugs.

Consider the outdoor conditions. Ottawa winters are brutal, and on days when temperatures drop to -20°C or below, even a properly functioning furnace can struggle to maintain 21°C inside. This is called the "design temperature" limitation — most residential furnaces are sized for average cold days, not extreme ones. If your system only falls short on the coldest days, that may be normal behavior rather than a malfunction.

The thermostat itself could be the issue. If it's poorly located — near a drafty window, in direct sunlight, or above a heat source — it may be misreading the actual room temperature and short-cycling your system. Old or failing thermostats can also lose calibration over time. A smart thermostat upgrade (\$150–\$350 installed) can often solve this and improve efficiency.

Other common causes include leaky ductwork losing conditioned air before it reaches living spaces, low refrigerant (in summer cooling situations), a failing heat exchanger, or a furnace that's simply undersized for your home.

On the safety side, if your furnace is running constantly but your home stays cold *and* you notice any unusual smells, yellow or flickering burner flames, or your carbon monoxide detector goes off — turn the system off and call for service immediately. A cracked heat exchanger can cause CO to enter your living space, which is a serious health hazard.

Your next step is to replace the filter, check your vents, and observe whether the problem happens only on extreme cold days or consistently. If the issue persists after those checks, it's time for a professional diagnostic. A technician can measure airflow, check refrigerant levels, inspect the heat exchanger, and test the thermostat calibration. For a free consultation or to book a diagnostic visit, reach out to Ottawa HVAC Pro — we serve Ottawa and the surrounding area year-round.

Q3

Why is my AC running constantly but not cooling?

Your AC running constantly without cooling is one of the most common summer complaints we hear in Ottawa — and it almost always points to one of a handful of fixable issues.

Start with the basics before calling for service. Check your air filter first — a clogged filter restricts airflow so severely that the system can't transfer heat properly, causing it to run endlessly without results. If the filter is grey and matted, replace it immediately (1-inch filters should be changed every 1-3 months). Also check that all your supply and return vents are open and unobstructed by furniture.

The most common culprit is low refrigerant. Your AC uses refrigerant to absorb heat from your home's air. If there's a leak, refrigerant levels drop and the system loses its ability to cool effectively — but it keeps trying, running non-stop. You might also notice ice forming on the refrigerant lines or the outdoor unit. This is not a DIY fix; refrigerant handling requires an EPA/TSSA-certified technician, and the leak needs to be found and repaired before recharging.

Other likely causes include a dirty condenser coil (the outdoor unit), a failing compressor, or a system that's simply undersized for your home. Ottawa summers have been getting hotter, and older systems sized for milder conditions can struggle during heat waves above 30°C. A frozen evaporator coil (indoor unit) is also common — if you see ice anywhere on the system, turn it off and let it thaw for 24 hours before restarting.

On the safety side, a system running constantly drives up your hydro bill significantly and puts serious wear on the compressor — the most expensive component to replace. Don't ignore this for more than a day or two.

Your next step is to replace the filter, check your vents, and look for any ice on the unit. If the problem persists after those checks, it's time for a professional diagnostic. A refrigerant leak or dirty coil diagnosis typically runs **\$200–\$400** in the Ottawa market, and a refrigerant recharge is **\$200–\$400** on top of that. For a free estimate or to book a diagnostic visit, reach out to Ottawa HVAC Pro — we service all of Ottawa and the surrounding area.

Q4

Why does my furnace smell like burning?

A burning smell from your furnace is one of the most common concerns we hear from Ottawa homeowners, and the cause depends a lot on *when* the smell occurs and *what* it smells like.

The most common and harmless cause is dust burning off at the start of heating season. When your furnace sits unused all summer, dust settles on the heat exchanger and burners. When you fire it up for the first time in fall, that dust burns off and creates a brief, mild burning smell. This is completely normal and should disappear within 30–60 minutes.

When the smell is more concerning, you need to pay attention to the type of odour. A **burning plastic or electrical smell** could indicate a failing motor, overheating wiring, or a melted component — turn your system off and call a technician. A **burning rubber smell** may mean a belt issue on older systems. A **metallic or sharp burning smell** that persists beyond the first run of the season could point to a cracked heat exchanger, which is a serious safety issue.

A cracked heat exchanger is the most dangerous scenario because it can allow combustion gases — including carbon monoxide — to mix with your home's air supply. You won't always see visible symptoms beyond a persistent smell or unexplained headaches in your household.

From a safety standpoint, if you smell anything beyond that brief seasonal dust burn-off, or if your carbon monoxide detector activates, take it seriously. Turn off the furnace, ventilate the home, and call for an inspection. Never ignore a persistent burning smell hoping it resolves on its own.

A furnace inspection in Ottawa typically runs **\$150–\$200**, and catching a problem early almost always saves money compared to emergency repairs. If you'd like peace of mind heading into winter, Ottawa HVAC Pro offers furnace tune-ups and inspections — request a quote and we can take a look at what's going on.

Q5

Why is there condensation on my AC vents?

Condensation on AC vents is very common in Ottawa summers and usually comes down to one of two causes:

warm, humid air meeting the cold surface of your vents, or an issue with your system that's allowing too much moisture to build up.

The most common cause is simply humidity. When your home's indoor humidity is high — especially during Ottawa's hot, humid July and August — the cold metal of your supply vents acts like a cold glass of water on a summer day. Moisture in the air condenses on the surface. This is especially noticeable on vents in rooms with poor airflow, basements, or areas near exterior walls. It's not necessarily a sign that anything is wrong with your AC system.

However, there are a few system-related causes worth investigating. A dirty or clogged air filter restricts airflow across your evaporator coil, causing it to get excessively cold and freeze up — this can lead to excess moisture throughout the system. Similarly, if your AC is **oversized** for your home, it short-cycles (turns on and off too quickly), which means it cools the air without properly dehumidifying it. Low refrigerant can also cause the coil to freeze and create moisture problems.

In Ottawa's climate, humidity swings significantly between spring and late summer. Running a **standalone dehumidifier** or ensuring your AC is properly sized and maintained goes a long way. If you're seeing water actually dripping from vents (not just surface condensation), that's a stronger signal of a system issue like a frozen coil or blocked condensate drain.

Start with these simple checks: Replace your air filter if it's been more than 3 months, make sure all supply and return vents are open and unobstructed, and check that your condensate drain line isn't clogged. If the problem persists or you're seeing actual dripping, it's worth having a technician inspect your system before the issue causes water damage or mold.

If you'd like a professional eye on your AC system, Ottawa HVAC Pro offers inspections and tune-ups — a good tune-up runs **\$150–\$200** and can catch these issues before they become bigger problems.

Q6

Why does my AC smell musty?

A musty smell from your AC is typically caused by mold or mildew growth somewhere in your system, most commonly in the evaporator coil, ductwork, or drain pan. This happens when moisture gets trapped in dark, cool areas of your HVAC system and creates the perfect breeding ground for these microorganisms.

The most frequent culprit is **dirty evaporator coils** inside your indoor unit. When these coils get coated with dust and debris, they retain moisture longer after cooling cycles, allowing mold spores to take hold. Your **air filter** also plays a role - a clogged filter restricts airflow, causing the coils to stay wet longer and potentially allowing contaminants to bypass the filter entirely.

Ductwork issues are another common source, especially if you have leaky ducts that allow humid air to enter, or if there's been water damage in your home. The condensate drain pan and drain line can also harbor mold growth if they're not draining properly or haven't been cleaned regularly.

In Ottawa's humid summers, this problem becomes more pronounced because your AC works harder to remove moisture from the air. If you haven't had **professional duct cleaning** in the past 3-5 years, accumulated debris in your ducts could be contributing to the musty odor.

Start by replacing your air filter and checking that your condensate drain isn't backed up. However, if the smell persists, you'll need professional attention. Mold in your HVAC system can affect indoor air quality and potentially trigger respiratory issues. A licensed HVAC technician can inspect your evaporator coils, clean your system thoroughly, and identify any ductwork problems that need addressing.

For persistent musty odors, consider professional duct cleaning and sanitization to eliminate mold spores throughout your system. Want to discuss your specific situation? We offer free consultations to assess air quality concerns in Ottawa homes.

Why is my air conditioner freezing up?

Your air conditioner is likely freezing up due to restricted airflow or low refrigerant levels, both of which cause the evaporator coil to get too cold and ice over.

Restricted airflow is the most common culprit. When your AC can't pull enough warm air across the evaporator coil, the coil temperature drops below freezing and ice forms. This typically happens when your air filter is severely clogged, blocking airflow to the system. Other airflow issues include closed or blocked vents, dirty evaporator coils, or problems with the blower fan motor.

Low refrigerant levels from a leak can also cause freezing. When refrigerant is low, the remaining refrigerant expands too much in the evaporator coil, causing extremely cold temperatures that freeze moisture in the air. You might notice reduced cooling performance along with the ice buildup if this is the issue.

In Ottawa's climate, freezing can also occur when you run your AC during cooler weather (below 15°C/60°F). Most residential air conditioners aren't designed to operate efficiently in cool temperatures and can freeze up even under normal conditions.

Immediate steps: Turn off your AC immediately and let all ice melt completely before restarting - this usually takes 2-4 hours. Check and replace your air filter if it's dirty, and ensure all vents are open and unobstructed.

When to call a professional: If the problem persists after addressing airflow issues, you likely have a refrigerant leak or mechanical problem that requires a licensed HVAC technician. In Ontario, only licensed technicians can handle refrigerant, and continuing to run a frozen AC can damage the compressor - an expensive repair typically costing \$1,500-\$3,000 in the Ottawa market.

For a proper diagnosis of your AC freezing issue, Ottawa HVAC Pro offers comprehensive system inspections to identify and resolve the root cause.

Why does my ductwork make popping sounds?

Ductwork popping sounds are typically caused by thermal expansion and contraction as your HVAC system cycles on and off. When heated or cooled air flows through metal ducts, the temperature changes cause the metal to expand and contract, creating those distinctive popping or ticking noises.

The most common cause is undersized or improperly supported ductwork. When ducts are too small for the airflow volume, they can flex and "oil can" - bowing in and out like the bottom of an oil can when pressed. This creates loud popping sounds, especially when the system first starts up. Similarly, ducts that aren't properly secured with hangers or strapping can move and pop as air pressure changes.

Temperature differentials make the problem worse during Ottawa's extreme seasons. In winter, when your furnace pushes 120°F air through ducts in a cold basement or crawl space, the rapid temperature change causes significant expansion. The same happens in reverse during summer with cold AC air. Poorly insulated ducts in unconditioned spaces are particularly prone to this issue.

Loose or damaged ductwork connections can also create popping sounds. Over time, duct joints can separate slightly, and the flexible movement at these connections produces noise. Additionally, if your return air ducts are undersized, they can create negative pressure that causes supply ducts to collapse inward and pop back out.

While popping sounds are usually harmless, they indicate your duct system isn't operating efficiently. This can lead to uneven heating and cooling, higher energy bills, and unnecessary wear on your HVAC equipment. In Ottawa's climate, proper ductwork is essential for comfort and efficiency.

A licensed HVAC technician can diagnose the exact cause by inspecting your ductwork for proper sizing, support, and sealing. Solutions might include adding duct supports, increasing duct size, or improving insulation. For a professional assessment of your ductwork, request a quote from Ottawa HVAC Pro.

Q9

Why won't my furnace ignite?

A furnace that won't ignite is typically caused by issues with the gas supply, ignition system, or safety controls that prevent the unit from starting safely. This is a situation that requires immediate professional attention since it involves gas appliances and potential safety hazards.

The most common causes include a **faulty igniter or pilot light**, **gas supply problems**, or **blocked venting**. Modern furnaces use either a hot surface igniter or electronic ignition system that can fail over time. If your furnace is trying to start but you hear clicking without ignition, the igniter may be cracked or worn out. Older furnaces with pilot lights may have the pilot extinguished due to drafts, thermocouple issues, or gas supply interruptions.

Safety controls are designed to prevent dangerous situations and will stop ignition if they detect problems. A dirty flame sensor, blocked air intake, or restricted exhaust vent can trigger these safety shutoffs. The furnace's control

board monitors these systems and won't allow ignition if conditions aren't safe. Additionally, issues with the **gas valve, pressure switch, or limit switches** can prevent the ignition sequence from completing.

In Ottawa's climate, furnace reliability is critical during winter months. **Never attempt to bypass safety controls or work on gas components yourself** - this work requires a TSSA-licensed G2 technician. If you smell gas at any time, leave your home immediately and call Enbridge at 1-866-763-5427.

Check your thermostat settings and replace your air filter first, as these simple issues can sometimes prevent ignition. If the problem persists, turn off your furnace and contact a licensed HVAC professional immediately. Ottawa HVAC Pro provides emergency furnace repair services and can safely diagnose and resolve ignition problems to restore heat to your home.

Why is my heat pump not heating in winter?

Heat pumps can struggle or stop heating in winter due to several common issues, with outdoor temperature limits and defrost cycle problems being the most frequent culprits.

The most likely cause is that your heat pump has reached its **heating capacity limit** in cold weather. Standard air source heat pumps typically lose efficiency below -5°C and may struggle to provide adequate heat below -10°C. In Ottawa's harsh winters, this is a common issue with older or standard-efficiency heat pumps. When outdoor temperatures drop too low, the heat pump simply can't extract enough heat from the cold air to warm your home effectively.

Another frequent issue is **defrost cycle problems**. Heat pumps need to periodically defrost ice buildup on the outdoor coil, which temporarily reverses the heating process. If the defrost system isn't working properly, ice accumulation can block airflow and prevent heat transfer. You might notice thick ice or frost coating the outdoor unit that doesn't clear away.

Additional causes include dirty air filters restricting airflow, low refrigerant levels due to leaks, faulty thermostats, or issues with the backup heating system (if equipped). In Ottawa's climate, many heat pump installations include electric backup heat or a dual-fuel system with a gas furnace for extreme cold periods.

For safety and proper diagnosis, turn off the system if you notice unusual sounds, burning smells, or if ice buildup seems excessive. Check your air filter first - a clogged filter can cause the system to shut down on safety limits. If the outdoor unit is completely encased in ice, don't attempt to chip it away as this can damage the coils.

Your next step should be calling a licensed HVAC technician for diagnosis, especially since heat pump refrigerant systems require specialized tools and training to service safely. For a professional assessment of your heat pump's winter performance, request a quote from Ottawa HVAC Pro - we can determine if your system needs repair, maintenance, or if it's time to consider a cold-climate heat pump upgrade designed for Ottawa's winters.

Why is my furnace running but no air coming out?

Your furnace running without air coming out typically indicates a **blower motor problem or a severely clogged air filter blocking airflow**. This is a common issue that can usually be diagnosed and resolved quickly by checking a few key components.

Start by checking your air filter immediately. A completely clogged filter can restrict airflow so severely that little to no air reaches your vents, even though the furnace is firing normally. If you can't remember the last time you changed it, or if it looks dark and dirty when you pull it out, replace it with a new filter and see if airflow returns within 10-15 minutes.

If the filter isn't the culprit, the issue is likely with your blower motor or fan. The blower motor is responsible for pushing heated air through your ductwork and out your vents. When it fails, you'll hear the furnace ignite and run, but no air will circulate. This can happen due to a faulty motor, broken fan belt (in older systems), or electrical issues with the blower motor circuit. You might hear unusual sounds like grinding, squealing, or complete silence where you'd normally hear the fan running.

In Ottawa's climate, running your furnace without proper airflow can cause serious problems. The heat exchanger can overheat and crack, leading to dangerous carbon monoxide leaks and expensive repairs. Modern furnaces have safety switches that should shut down the system if airflow is blocked, but older units may not have this protection.

Turn off your furnace immediately if changing the filter doesn't restore airflow. This prevents potential damage to your heat exchanger and ensures your family's safety. A qualified HVAC technician can quickly diagnose whether you need a new blower motor (typically \$400-800 in Ottawa) or if there's a simpler electrical issue. For a free diagnostic consultation on your furnace issue, request a quote from Ottawa HVAC Pro - we're TSSA licensed and can safely restore your home's heating.

Q12

Why is one room in my house always cold?

One room being consistently cold is usually caused by airflow issues, insulation problems, or ductwork imbalances - all fixable problems once you identify the root cause.

The most common culprit is **poor airflow to that room**. Check if the supply vent is blocked by furniture, curtains, or debris, and ensure the return air vent (if present) isn't obstructed. Sometimes the damper in the ductwork serving that room may be partially closed or the duct itself could be disconnected, crushed, or leaking in the basement or crawl space.

Insulation deficiencies are another frequent cause, especially in older Ottawa homes. The cold room might have inadequate wall insulation, poor window sealing, or air leaks around outlets, baseboards, or the ceiling. Rooms over unheated spaces like garages or crawl spaces are particularly vulnerable. You can often feel drafts with your hand

around windows, doors, and electrical outlets on exterior walls.

HVAC system imbalances can also create hot and cold spots throughout your home. Your furnace might be properly sized for the whole house but the ductwork wasn't designed to deliver equal heating to every room. This is common in home additions or renovations where new rooms were added without upgrading the HVAC system accordingly.

In Ottawa's climate, this problem often worsens during our harsh winters when the temperature differential puts extra stress on your heating system. The cold room might be on the north side of your house, getting less solar heat, or it could be the furthest from your furnace with the longest duct run.

Start by checking the simple fixes first - ensure vents are open and unobstructed, replace your furnace filter if it's dirty, and look for obvious air leaks you can seal with weatherstripping or caulk. If the problem persists, you'll need a professional assessment of your ductwork, insulation, and system balance. A qualified HVAC technician can perform airflow measurements and thermal imaging to pinpoint exactly what's causing your comfort issues.

For a comprehensive evaluation of your heating system and ductwork, request a consultation with Ottawa HVAC Pro to get your home heating evenly again.

Why is my furnace making a loud banging noise?

A loud banging noise from your furnace typically indicates either **delayed ignition** (gas buildup causing a small explosion when lit) or **expanding/contracting ductwork**, both of which need attention.

The most concerning cause is **delayed ignition**, where gas builds up in the combustion chamber before igniting, creating a loud bang or boom when it finally lights. This happens when the burners are dirty or the gas valve isn't opening properly, causing gas to accumulate before ignition. This is a safety issue that requires immediate professional attention, as it can damage your heat exchanger and poses carbon monoxide risks.

Expanding ductwork is another common cause, especially when your furnace first starts up. As heated air rushes through cold ducts, the metal expands rapidly and can create banging sounds. While less dangerous than delayed ignition, loud ductwork banging often indicates undersized ducts, loose connections, or missing expansion joints that should be addressed.

Other potential causes include a **cracked heat exchanger** (very serious - can leak carbon monoxide), loose blower motor components, or debris in the blower assembly. In Ottawa's climate, these issues often worsen during our cold winters when furnaces work hardest.

Turn off your furnace immediately and call a licensed HVAC technician. Don't attempt to restart it until it's been inspected. TSSA regulations require that only licensed G2/G3 technicians work on gas furnaces, and delayed ignition issues can be dangerous if not properly diagnosed and repaired.

For immediate service in Ottawa, we offer emergency HVAC repairs and can typically diagnose furnace noise issues the same day. Most banging noise repairs range from \$200-600 depending on the underlying cause.

Why does my AC make a clicking noise?

AC clicking noises are usually related to **electrical components cycling on and off**, though the specific cause depends on when and where you hear the clicking.

The most common source is your **thermostat and electrical contactors** - these make brief clicking sounds when your AC starts up or shuts down, which is completely normal. You'll typically hear a click when the thermostat calls for cooling, followed by the outdoor unit starting up a few seconds later.

However, **rapid or continuous clicking** can indicate problems that need attention. If you hear repeated clicking from the outdoor unit without the AC starting, this often points to a failing contactor or capacitor. The contactor is trying to engage but can't complete the connection, creating that rapid clicking sound. A **clicking from inside your home** might be a thermostat issue, especially if it's clicking constantly without the system responding.

Debris in the outdoor unit can also cause clicking noises. Small sticks, leaves, or other objects can get caught in the fan and create clicking sounds as the blades hit them. This is more common in Ottawa during spring startup after winter debris accumulation.

In Ottawa's climate, **electrical components can be affected by humidity and temperature swings**, making contactors more prone to failure over time. If the clicking is accompanied by the AC not cooling properly or not starting at all, this typically indicates an electrical component needs replacement.

Turn off your AC if you hear continuous rapid clicking - this prevents potential damage to other components. While brief clicking during normal startup is fine, persistent clicking usually requires professional diagnosis. The electrical components in AC systems can be dangerous to work on and should only be handled by licensed technicians.

For persistent clicking issues or if your AC isn't starting properly, contact Ottawa HVAC Pro for a diagnostic service call to identify and resolve the electrical problem safely.

Q15

Why is my furnace blower running continuously?

A continuously running furnace blower is usually caused by incorrect thermostat settings, a faulty limit switch, or a stuck relay. The most common culprit is the thermostat fan setting being switched to "ON" instead of "AUTO."

Check your thermostat first - if the fan setting is on "ON," it will run continuously regardless of heating cycles. Switch it to "AUTO" so the blower only runs when heating or cooling is needed. If the thermostat is already set correctly, you likely have a mechanical or electrical issue that requires professional attention.

The limit switch is a safety device that can cause continuous blower operation if it fails. When the furnace overheats, the limit switch is designed to keep the blower running to cool down the heat exchanger. If this switch is stuck or malfunctioning, the blower won't stop. This often happens alongside restricted airflow from a dirty filter, blocked vents, or closed dampers.

A stuck blower relay is another common cause, where the electrical component that controls the blower motor gets stuck in the "on" position. This is an electrical issue that requires replacement of the relay or control board. In Ottawa's climate, continuous blower operation can also indicate problems with heat pump systems trying to maintain temperature during extreme cold snaps.

Safety considerations include checking that your furnace isn't overheating - feel the air coming from vents to ensure it's not excessively hot. A continuously running blower uses more electricity and can indicate underlying problems that may lead to carbon monoxide issues if the heat exchanger is compromised.

Start by checking your thermostat fan setting and replacing your air filter if it's dirty. If the problem persists, the issue likely requires diagnosis by a licensed HVAC technician, as it involves electrical components or safety switches that shouldn't be handled by homeowners. For professional furnace diagnosis in Ottawa, consider getting a free consultation to identify the exact cause and prevent potential safety hazards.

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Why does my furnace keep tripping the breaker?

A furnace that repeatedly trips the breaker typically indicates an electrical overload, often caused by a failing blower motor, dirty air filter, or electrical component malfunction. This is a safety issue that requires immediate attention from a licensed HVAC technician.

The most common culprit is a **struggling blower motor** that's drawing too much current. When your furnace's air filter becomes severely clogged, the blower motor has to work much harder to push air through the system, causing it to overheat and draw excessive power. Over time, this extra strain can damage the motor's windings, leading to electrical shorts that trip your breaker. A **dirty or blocked air filter** should be your first check - replace it immediately if it's visibly dirty or hasn't been changed in over 3 months.

Electrical component failures can also cause breaker trips. The furnace's control board, capacitors, or wiring connections may be faulty, creating dangerous electrical conditions. In Ottawa's climate, furnaces work hard during our cold winters, and components can wear out faster. Additionally, older homes may have undersized electrical circuits that can't handle modern high-efficiency furnace demands.

Safety is critical here - a tripping breaker is your electrical system protecting you from potential fire hazards or electrocution. Never attempt to "solve" this by installing a larger breaker, as this removes important safety protection. Turn off your furnace at the thermostat and electrical panel until a licensed technician can diagnose the issue.

For Ottawa homeowners, furnace electrical repairs typically range from \$200-600 depending on the component involved. Blower motor replacement can cost \$400-800, while simple fixes like capacitor replacement might only be \$150-250. Given our harsh winters, it's essential to address this immediately to avoid being without heat. Contact a TSSA-licensed HVAC technician for safe diagnosis and repair of your furnace's electrical system.

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Why is water dripping from my AC unit?

Water dripping from your AC unit is usually caused by a clogged condensate drain, dirty air filter, or frozen evaporator coil. This is a common issue that can often be resolved, but it's important to address it quickly to prevent water damage.

The most common culprit is a blocked condensate drain line. Your air conditioning system naturally produces condensation as it cools the air, and this water should drain away through a small pipe or tube. When this drain gets clogged with algae, dirt, or debris, water backs up and can overflow from the indoor unit. You might notice water pooling around your furnace or dripping from the ceiling if the unit is in your attic.

A dirty air filter can also cause water dripping. When your filter is severely clogged, it restricts airflow over the evaporator coil, causing the coil to freeze. When the ice melts, it creates excess water that can overwhelm the drain system. Check your filter first - if it's dirty or hasn't been changed in over 3 months, replace it immediately and see if the problem resolves.

In Ottawa's climate, frozen coils are particularly common during our hot, humid summers. If you notice ice on the indoor coil or copper lines, turn off your AC immediately and let it thaw completely before restarting. Running the system with a frozen coil can damage the compressor, leading to expensive repairs in the \$1,500-\$3,000 range.

For safety, turn off your AC unit if water is actively dripping to prevent electrical hazards or water damage to your home. While you can try changing the air filter yourself, drain line cleaning requires special tools and knowledge of your system's layout. A clogged drain cleaning typically costs \$150-\$250, much less than repairing water damage to your floors or ceiling.

If the problem persists after changing the filter, or if you see ice formation, it's time to call a licensed HVAC technician. We can safely clean the drain line, check refrigerant levels, and ensure your system is operating efficiently. For a professional diagnosis of your AC water issue, request a quote from Ottawa HVAC Pro.

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Why is my house so humid even with AC running?

High humidity with AC running usually indicates your air conditioning system isn't properly removing moisture from the air, which can happen for several reasons including an oversized unit, dirty components, or ductwork issues.

The most common cause is an **oversized air conditioning system**. When your AC is too powerful for your home, it cools the air quickly but shuts off before running long enough to remove humidity. Air conditioners dehumidify by running the warm, humid air over cold evaporator coils, causing moisture to condense and drain away. If the system cycles on and off too frequently, this dehumidification process gets cut short.

Dirty or clogged components can also prevent proper dehumidification. A dirty air filter restricts airflow, while a dirty evaporator coil can't effectively remove moisture from the air. Similarly, a clogged condensate drain means the moisture your AC does remove can't exit properly, potentially backing up into your home. Low refrigerant levels will also reduce your system's ability to cool and dehumidify effectively.

Ductwork problems in Ottawa homes can contribute significantly to humidity issues. Leaky ducts allow humid outdoor air to enter your system, while poor insulation on ducts running through unconditioned spaces can cause condensation. Many older Ottawa homes have ductwork challenges that affect both cooling efficiency and humidity control.

In Ottawa's climate, summer humidity levels can be particularly challenging, especially during those muggy July and August days when outdoor humidity regularly exceeds 70%. Your AC should maintain indoor humidity between 30-50% for optimal comfort and to prevent mold growth.

Safety considerations include monitoring for mold growth in high-humidity areas and ensuring your condensate drain isn't backing up, which could cause water damage. If you notice musty odors or see condensation on windows even with AC running, these are signs that need immediate attention.

Next steps include checking and replacing your air filter, inspecting visible ductwork for obvious leaks, and ensuring your condensate drain is flowing freely. However, issues like refrigerant levels, coil cleaning, and system sizing require professional diagnosis. For a comprehensive humidity assessment and solution, consider having Ottawa HVAC Pro evaluate your system's performance and ductwork integrity.

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Why is my furnace pilot light going out?

A pilot light that keeps going out is typically caused by a dirty or faulty thermocouple, draft issues, or a clogged pilot orifice. This is a common issue that requires professional attention since it involves gas components.

The **thermocouple** is the most frequent culprit - this safety device senses the pilot flame and signals the gas valve to stay open. When it gets dirty or starts failing, it may not detect the pilot flame properly, causing the gas valve to shut off as a safety measure. Over time, thermocouples can also weaken and need replacement, which typically costs \$150-\$300 including labor.

Draft problems can also extinguish your pilot light. This might be caused by a blocked venting system, downdrafts from wind, or issues with your home's air pressure. Sometimes a dirty or partially blocked pilot orifice restricts gas flow, creating an unstable flame that's easily blown out. Additionally, if your furnace is older, the pilot assembly itself may be wearing out.

In Ottawa's climate, furnace reliability is crucial, and **pilot light issues can indicate carbon monoxide risks** if combustion isn't happening properly. Modern high-efficiency furnaces use electronic ignition instead of pilot lights, which eliminates this problem entirely while saving energy.

Never attempt to repair gas components yourself - this work requires a TSSA-licensed technician in Ontario. If your pilot light won't stay lit after one relight attempt, turn off the gas supply and call for professional service. A qualified technician can diagnose whether you need a thermocouple replacement, cleaning, or if it's time to consider upgrading to a more reliable high-efficiency furnace.

For a proper diagnosis of your pilot light issues, contact a licensed HVAC professional who can safely inspect your gas furnace components and ensure your system operates safely through Ottawa's winter months.

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Why does my AC turn on and off every few minutes?

Your AC turning on and off every few minutes is called "short cycling," and it's a sign that something is preventing your system from running properly. This wastes energy, increases wear on components, and reduces cooling effectiveness.

The most common cause is a dirty air filter. When your filter is clogged, it restricts airflow over the evaporator coil, causing the system to overheat and shut down for protection. Check your filter first - if it's dirty or hasn't been changed in over 3 months, replace it with a new one and see if the problem resolves.

Other frequent causes include refrigerant leaks, oversized equipment, or thermostat issues. Low refrigerant levels cause the system to struggle to reach the set temperature, leading to frequent cycling. An oversized AC unit will cool the space too quickly without running long enough to remove humidity properly. Faulty thermostats can also send incorrect signals to the system.

More serious issues like frozen evaporator coils, failing compressors, or electrical problems require professional diagnosis. A frozen coil often results from poor airflow or refrigerant issues, while compressor problems typically develop over time and need immediate attention to prevent complete system failure.

In Ottawa's climate, short cycling is particularly problematic during our humid summers when your AC needs to run longer cycles to effectively remove moisture from your home. **TSSA requirements may vary for any electrical work - confirm with your licensed HVAC technician.**

Turn off your AC and call for service if the problem persists after changing the filter. Continued short cycling can damage expensive components like the compressor. For a professional diagnosis of your AC short cycling issue, Ottawa HVAC Pro offers comprehensive system inspections to identify and resolve the root cause.

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Why is my furnace leaking water?

Furnace water leaks are typically caused by condensation issues, a clogged drain, or problems with the heat exchanger. Most water leaks are related to normal condensation that isn't draining properly, but some causes require immediate professional attention.

High-efficiency furnaces (90%+ AFUE) produce condensation as part of their normal operation. This water should drain away through a condensate drain line and floor drain. If you see water pooling around your furnace, the most common culprit is a **clogged condensate drain line** or a blocked floor drain. The drain line can become clogged with algae, debris, or ice during winter months, causing water to back up and leak around the unit.

Mid-efficiency furnaces (80% AFUE) shouldn't produce condensation during normal operation. If you see water around an older furnace, this could indicate a **cracked heat exchanger**, which is a serious safety concern. A cracked heat exchanger can allow combustion gases (including carbon monoxide) to mix with your home's air supply, creating a dangerous situation that requires immediate professional attention.

In Ottawa's climate, **frozen condensate lines** are also common during extreme cold snaps. The drain line that exits your home can freeze, causing water to back up into your basement. Other potential causes include a faulty humidifier connected to your furnace, improper venting, or issues with the furnace's internal components.

Safety is paramount - if you smell gas, hear unusual sounds, or suspect a heat exchanger problem, turn off your furnace immediately and call for emergency service. For condensate drain issues, you can check if the floor drain is clear, but avoid attempting repairs on gas components yourself.

Next steps: Turn off your furnace and contact a licensed HVAC technician to diagnose the leak source. In Ottawa, this type of service call typically costs \$150-250, and repairs can range from simple drain cleaning to more extensive component replacement depending on the cause.

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Why does my furnace have a yellow flame instead of blue?

A yellow flame in your furnace indicates incomplete combustion and requires immediate professional attention. This is a serious safety concern that should never be ignored.

Normal furnace operation produces a steady blue flame, which indicates complete combustion of natural gas or propane. When you see yellow, orange, or flickering flames, it means the gas isn't burning efficiently. This incomplete combustion creates carbon monoxide - a deadly, odorless gas that can poison your family.

Common causes of yellow flames include:

- **Dirty or clogged burners** that restrict proper air flow
- **Incorrect gas pressure** from the utility or regulator issues
- **Blocked air intake or exhaust venting** preventing proper combustion air
- **Cracked heat exchanger** allowing combustion air to mix improperly
- **Dirty air filter** restricting airflow through the system

In Ottawa's climate, furnaces work hard through our long winters, and components can become dirty or wear out over time. The problem often develops gradually, which is why annual maintenance is so important for catching these issues early.

Turn off your furnace immediately and call a licensed HVAC technician. Only TSSA-licensed G2 or G3 gas technicians can safely diagnose and repair gas appliance combustion issues. This isn't a DIY repair - working on gas appliances without proper licensing is illegal in Ontario and extremely dangerous.

Ensure your carbon monoxide detectors are working and consider having your family stay elsewhere until the furnace is properly repaired. A yellow flame often means CO is being produced, even if your detectors haven't alarmed yet.

For immediate furnace repair in Ottawa, contact a licensed HVAC professional who can safely diagnose the combustion problem and restore proper operation.

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Why is my AC not cooling my house?

Your AC may not be cooling due to several common issues, ranging from simple fixes like a dirty filter to more complex problems requiring professional repair. The most frequent culprits are restricted airflow, refrigerant issues, or thermostat problems.

Start with the basics first. Check your air filter - a clogged filter is the #1 cause of cooling problems and can reduce efficiency by 15-20%. Replace it if it's dirty or hasn't been changed in over 3 months. Next, ensure your thermostat is set to "cool" mode and the temperature is set lower than the current room temperature. Check that all vents throughout your home are open and unblocked by furniture or curtains.

If those basics don't solve the problem, you're likely dealing with a mechanical issue. Low refrigerant levels from a leak can prevent proper cooling - you might notice ice forming on the outdoor unit or copper lines. A failing compressor, dirty evaporator coils, or electrical problems can also cause poor cooling performance. In Ottawa's climate, outdoor units can get clogged with cottonwood seeds, leaves, or debris, restricting airflow to the condenser.

Don't ignore safety signs - if you smell burning, hear grinding noises, or see sparks, turn off the system immediately. **AC repairs in Ottawa typically range from \$200-\$700** depending on the issue, while a full system replacement runs \$3,500-\$5,500 for most homes.

Turn off your AC and call a licensed technician if basic troubleshooting doesn't restore cooling. Continuing to run a malfunctioning system can lead to more expensive damage, especially to the compressor. For reliable AC repair and a free diagnostic, Ottawa HVAC Pro can quickly identify and fix the problem to restore your home's comfort.

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