

# Homeowner Maintenance Manual



**please refer to this manual to address any issues that may be happening in your home.**

**if you are unable to find the information you are looking for in this manual, please search Youtube or Google, as these are both excellent resources for information.**

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# humidity

When cold temperatures are on the way, most homes will start to show signs of insulation, air sealing, and humidity issues. Common problems can be ice inside of window sills and ice build-up on doors and door hardware *inside* the home.

## window & door condensation

What is most commonly seen by homeowners during colder months is condensation and ice forming on the inside panes of windows and around doors and handles. This condensation is more prevalent during periods of extreme cold.

The problem occurs from what is called the 'dew point', which is the temperature at which water vapor in the air turn into water droplets. Once it settles onto a cold surface in your home, it appears like raindrops on the inside of windows, doors, and door hardware. If the humidity in your home is too high, you may experience a large amount of condensation and, once the temperature drops, the raindrops will freeze.



*Ice inside your home can lead to material damage and mold. It can be an indicator of heat loss and high humidity.*

### quick tip!

*Reduce the humidity during extremely cold temperatures. Secure an inexpensive hygrometer to determine the humidity level in your home.*

## indoor moisture

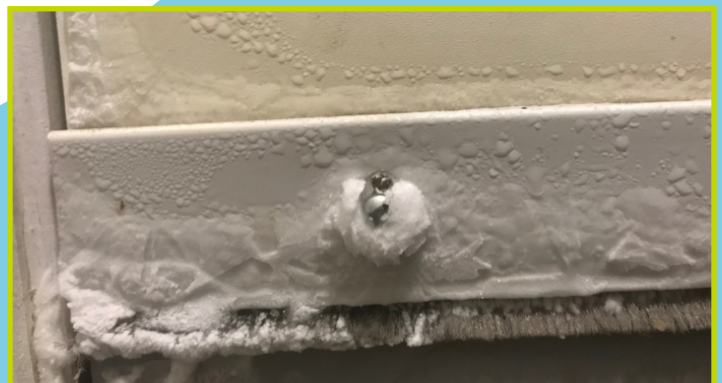
If you have many members in your family, you can inadvertently create plenty of indoor moisture by cooking and showering. As the moisture content increases, so does the potential for moisture to condense on cold surfaces like window frames. If the surface temperature gets cold enough, the condensation will turn into ice. Keeping the humidity level below 15 percent short-term can help, but unfortunately, it does not guarantee that ice will stop forming inside windows and doors.

### quick tip!

*Open your window coverings during the day to release trapped air.*



*-5° outside*



*-28° outside*

## air leakage

Windows and doors are an 'air barrier' for your home, as they keep outside air from entering your warm interior. However, air leaks can occur with both old and new windows and doors. The areas that leak cold air will reduce surface temperatures to create the perfect condition for condensation and ice to form inside the home. You may have to purchase a bulkier weatherstripping for your door.

## potential impacts

Ice on a window indicates that the surface temperature on the interior window is below freezing, which may result in your home being cold and uncomfortable. Energy lost through a window is both wasteful and costly, and can result in long term damages.

- **long-term damage to the window unit.** Any moisture in a window causes swelling and shrinking, and can warp wooden frames. This warping can lead to glass cracks and increases potential for air leakage.
- **health issues.** Condensation and ice accumulation can harbor mold and other lung and sinus irritants.
- **comfort.** Constant cold surface temperatures and condensation can make your home uncomfortable.

## reduce air leaks in your home

- Install or adjust a door sweep along the bottom of exterior doors to block out cold air.
- Seal gaps between the door and side jambs with long pieces of weather stripping.
- Always engage the locks on windows to close and seal any gaps.
- Apply a continuous length of adhesive-backed foam weatherstripping around attic

openings.

- Inspect your entire home for air leaks and block them with insulating material.
- To block cold air from blowing in around an electrical outlet, remove the cover plate and press a soft-rubber gasket over the outlet. Replace the cover plate.
- Use paintable latex caulking to fill cracks around windows, doors, and hatch trims.



## too much humidity

First and foremost, always *ventilate*. Focus on areas that create moisture (like the kitchen and bathroom). Before cooking or showering, turn on vent fans and leave them on 30 minutes after you are finished cooking or showering.

It only takes about nine cups of water to raise the humidity level from 15 percent to 60 percent inside of a 1,000 square feet home!

The number of people within a home affects humidity levels. One person breathing produces approximately a 1/4 cup of water within an hour.

Here are steps to add to your daily routine to keep humidity at bay:

- Take shorter showers and ensure family members use vent fans when using the tub and shower.
- While cooking, cover your food and use the exhaust fans.

- Ensure dryer exhaust hoses are connected properly and lint trays are cleaned after every use. **During winter months, do not hang clothes to dry in your home.**
- If there is a humidifier or vaporizer in the home, turn it off for a little while or simply turn it down.
- Check for plumbing leaks and fix them quickly.
- In the spring, keep downspouts and gutters clean. Adjust downspouts so they carry water further from the house.
- Insulate and caulk gaps and cracks around window trims, door trims, or trims around the attic hatch.
- Open curtains and blinds during the day to expose the window to indoor temperatures and airflow. Do not block vents below windows. Restricting airflow on window surfaces leads to moisture build-up and creates the perfect condition for mold.

## why do new homes have window condensation?

Most new homes are built to have greater energy efficiency. This means they have a sealed combustion furnace and are built air-tight. This means that minimal fresh air from the outside dilutes the humidity in the home.

If the house is energy efficient and air-tight, you will likely not need to run the furnace as much, which is how fresh air enters the home. Unless you switch on the principal exhaust fan (located in the hallway near the thermostat), you will not be able to reduce the humidity. A new home has many products that are still curing and releasing

moisture into the atmosphere. Concrete, paints, and glues contain water from the manufacturing process and can longer to evaporate. If you moved into a new home that was recently completed, it is likely that the concrete in the basement is still curing.

## reducing humidity in a new home

- Turn on your vent fan and allow it to run all day.
- Turn down/off any humidifiers in your home.
- Open a window to allow cold, drier air in to rid of the moisture.
- If you have an HRV, ensure it has been serviced and maintained properly.
- Open curtains and blinds all day to allow the sun to warm the windows.
- Ensure the weatherstripping on your entry door is big enough to create a tight seal and remove any gaps where you can see light coming through. Many doors come with a factory weather strip that may work for certain situations, but not all. Consider buying a better strip if needed.

### quick tip!

*If maintaining proper humidity levels is still an issue, you may want to invest in a dehumidifier. In order to ensure proper circulation, dehumidifiers need to be placed away from any walls and furniture.*

# humidity reduction checklist

## **check your humidifier settings**

You might notice condensation in your bathroom, kitchen, or bedrooms. If you use a humidifier in any part of your home (including the humidifier that works with furnaces), try turning it down or off. Your home should not be higher than 30 percent humidity. During extreme cold, it is recommended that your home not be more than 15 percent humidity.

## **check bathroom and kitchen fans**

Use your bathroom and kitchen fans every time you cook or shower. Showering and cooking releases a lot of moisture into the air, and sometimes this moisture cannot escape from your house easily. You will want to run the fans for 20-30 minutes after you shower or cook.

## **use your vent fan**

Use your vent fan (the switch is usually located near your thermostat).

## **open your windows**

If it is not too cold, you can open your windows to release humidity.

## **raise the temperature**

Raising the temperature of the windows will reduce condensation on them. Condensation occurs when warm air hits a cold surface. Open blinds, curtains, or drapes to raise the window temperature by exposing the glass to indoor air.

## **buy a dehumidifier**

Purchasing a dehumidifier is an inexpensive way to remove the moisture in your home. If a full size dehumidifier, which is usually \$200 to \$300, is too expensive for you, you can also purchase a mini-dehumidifier. Some dehumidifiers will need to be turned on-and-off, while others will turn on automatically when the humidity level in the home reaches a certain point.

## **regularly clean your windows and tracks**

Dirt trapped in window tracks can stop the window from closing properly and allow cold air to leak inside. If a window with condensation is left uncleaned and unmaintained, damage from water accumulation, mold, and mildew will likely follow.

## **fix air leaks by blocking them with appropriate materials**

Use latex caulk on windows, doors and attic hatch opening trims where there are cracks. Improve or replace worn weatherstripping.



Thermal imaging of an attic. Note: dark purple coloring indicates colder area. Air leak? 0° outside, 20° inside.

## vent fan switches

Certain homes have a central fan switch. A vent switch controls the fans in your home. If it is on, then so are your fans.

When the vent switch is on, your bathroom and furnace exhaust fans engage and exchange the air in your home for fresh, outside air.

If you try to turn a vent off in the bathroom, but the fan continues to run, then check your vent switch. If it is in the 'on' position, you will not be able to shut your fan in the bathroom off by using the switch in the bathroom.

The vent switch in your home is used for intermittent control of issues like humidity, smells, and temperature.

Keeping this fan on all of the time puts an unusual strain on the fan motor, which is not designed to run continuously. You may also find that using the fan continuously will cause dust build up or blockage and need to be cleaned more often. Use



when you need to rid your home of excessive smells and moisture.

When to use the vent fan:

- When smells from cooking are heavy and noticeable long after you have eaten.
- When you see moisture on the inside of your window in winter.
- When you see frost on the inside of door knobs and locks in winter.
- When someone is using the shower and forgot to turn on the bathroom fan.
- When you have a a lot of visitors and need to freshen the air.
- To cool down the room after extreme sun exposure in the summer.

## humidity and outdoor temperature guide

Use this chart to help you know how to avoid moisture build-up on windows and doors by adjusting the humidity in your home.

outside air temperature	max indoor relative humidity (at 20°C)
-30°C or below	15%
-30°C to -24°C	20%
-24°C to -18°C	25%
-18°C to -12°C	35%
-12°C to 0°C	40%



# furnace shut-downs & frozen pipes

You may experience a furnace shut-down when you need heat the most, and often at an inconvenient time. Calling a professional for repairs can cost a lot of money.

## quick tip!

*Routinely save for possible home maintenance fees. The unexpected can cost more than you bargained for.*

To help, go through the troubleshooting section of your furnace owners manual and use the following steps to help solve the issue.

If your furnace is not working:

- Is your thermostat working? Does it need batteries? Is it set to 'heat' and not 'fan'? Set the thermostat to 10 degrees above the room temperature and wait. Did the furnace start?
- Check the electrical panel to see that the circuit breaker was not tripped. Reset the breaker. Increase the temperature at the thermostat to 10 degrees above current temperature.
- Check the power switch by the furnace (it looks like a light switch). Make sure it is on. **It costs approximately \$148 for a service tech to turn it on for you!**
- Is your filter dirty? Turn off the furnace before checking. Always replace a dirty furnace filter. Dirty filters will shut down a sensitive furnace. Turn the furnace on and increase the heat to 10 degrees above the room's current temperature.
- Turn the furnace off and wait 10 seconds. Some furnaces are like computers and need to be shut down in order to reboot their programming. Turn up the heat 10 degrees higher than the current temperature.
- Check the gas valve. Is it open? If not, turn

it to the open position. Then, return to your thermostat and turn it up 10 degrees higher than current temperature.

- Check to see if you have an auxiliary condensate pump connected to the outside of your furnace. Check the condensate pump safety switch to see if the pump is working.
- Turn the furnace off and open the furnace front door. Is there water inside? Is the drain clogged? If so, call for service from an HVAC company, especially if water has entered the main body of the furnace. Your furnace will not run with the door off as it has a safety switch that cuts power off. Close its door and turn the furnace power back on.
- Are there any vents in the house that are blocked by objects? Remove any blocking items and proceed to turn the thermostat up to 10 degrees above its current setting to see if the furnace will restart.
- Check the white pipes outside of your home. They are the intake and exhaust pipes. Make sure they are not blocked with ice, snow, or other debris.

## quick tip!

*Always wait at least three minutes after making changes to your furnace settings. It can take time to kick-in.*

If you have completed these checks and still do not have heat, **it is time to call a professional.**

## don't forget!

If you leave your home to seek alternate accommodation for an extended period of time due to a heating interruption, you **MUST** drain your water lines to avoid water damage by frozen and bursting water pipes if your heat is not working.

1. Find the shut-off point and turn off the water supply. The shut-off valve for the water main is likely located in the basement near your water meter (or wherever the local water supply enters your home).

2. Turn on the taps. Once you have turned off the water supply, turn on the faucet in the lowest part of your basement first, then make your way upstairs and turn on the rest of the faucets. Start with taps on the top floor. Leave the faucets open.

3. Flush all of the toilets in your home. Start with toilets on the top floor and work your way down to the basement. Remove the tank cover from each toilet and hold the flush lever down until all of the water drains out of the tank.

4. Empty your appliances. Depending on how long you will be away, you may also want to consider draining any appliances in your home that use water, including your washing machine, dishwasher, and water heater. Turn off the water supply to each of these appliances and follow the manufacturer's recommendations for draining.

# resetting a tripped breaker: AFCI & GFCI

## why do circuit breakers trip?

If you plug too many appliances into a circuit or use a two-pronged plug in a three-pronged wall receptacle, the system senses a fault in the movement of the electricity along its path. The circuit breaker trips and shuts off power. It is a safety measure designed to protect the wiring in the circuit, as too great a demand or improper grounding can cause the wires to overheat and potentially cause a fire. This is why power bars with built in GFCI and surge detectors are recommended to protect your electrical system.



*GFCI/Ground Fault Circuit Interrupter*



*Breaker with Arc Fault Circuit Interrupter*

to outlets not working. Press and hold the 'RESET' button on the GFCI. That should reset the GFCI.

If the GFCI or AFCI will not reset when you press the 'RESET' button, it is likely that there is an unsafe condition on the circuit or the wiring itself. In that case, hire a certified electrician to service your electrical issue.

Reset a breaker in the service panel by first pushing it to the 'OFF' position and then pushing it back to the 'ON' position.

**Do not continually reset a breaker that constantly trips.** This is an indicator that something is wrong and you need to call a certified electrician. To force a breaker to stay "on" by using tape or string is a fire hazard and is dangerous.

## if certain outlets are not working

You likely have GFCI outlets in areas (like your kitchen, bathroom, and exterior plug-ins) exposed to water. If you notice that certain outlets around your home are not working, test and reset the GFCI outlets that are nearby. Check your electrical panel for tripped breakers. Unplug any tools or devices that are connected

# sink draining

If the water in your sinks or tubs are draining slowly, it is time to have your drains cleaned. Routine maintenance of your plumbing system relies heavily on keeping your drains clear. Avoid putting items in the drain line that are not intended for disposal in that way.

Knowing how to take apart a pop-up drain for routine cleaning can help you clear the drain of substantial clogs like hair and build-up.

Do not allow food to go into your sinks. Ask your family to scrape all the extra food off into the garbage first before rinsing. Drains cannot handle foods like rice, pasta and meats. These items will clog your drains quickly.

Be sure to check and clean the backflow valve every year to ensure it is working properly. **Do NOT pour fats, oils, or grease (FOG) down your drains!**

Remove FOG prior to washing dishes by either pouring cooled cooking oils into an old can and throwing into the garbage or by wiping with paper towel and throwing the paper towel into the garbage. Even small amounts of oils will build up in your drainage and cause expensive issues down the road.

## quick tip!

*A half vinegar half baking soda mixture poured into drains followed by warm water every 4 months will help reduce clogs. Removing pop-up style drain plugs and cleaning any trapped hair will help your drains to flow normally in bathrooms.*

## how to unclog your drain

1. Pour hot tap water down the drain.
2. Pour a cup of baking soda mixed with one cup water and one cup vinegar solution.
3. Cover the drain plug and wait five to ten

minutes.

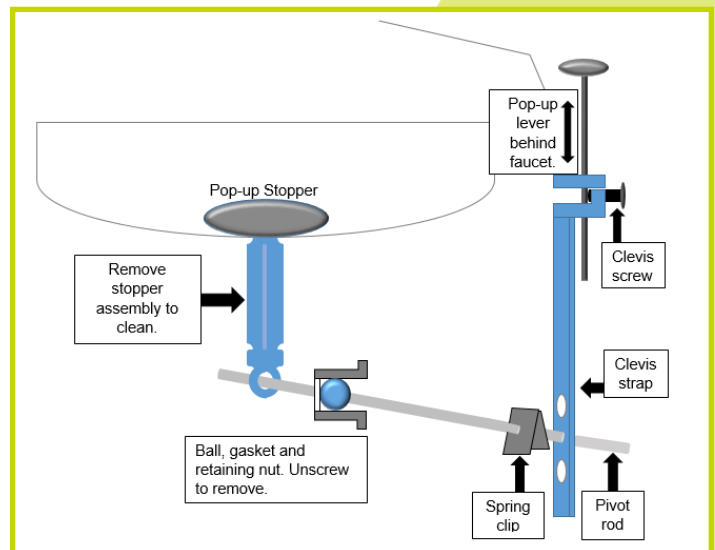
4. Run hot tap water down the drain again.

The bubbling reaction from the baking soda/vinegar solution helps to loosen the drain clog, and the hot water in step 4 helps to remove it from your pipes.

**Do not pour boiling water into a toilet to solve toilet clogs.** Toilet clogs require a plunger or drain snake (and sometimes even a plumber) .

Do not flush anything in your toilet other than normal human waste and tissue paper. Flushing babywipes, feminine hygiene products, condoms or other items will lead to expensive plumbing bills and damage to your sewer system.

If your drain is a pop-up style drain, you will have to disassemble to remove stuck on hair clogs routinely:



# attic rain & ceiling stain removal

Stains on your ceiling? What's causing it? Many times a stain on a ceiling is from a one-time occurrence like the kids in the bathtub pretending to be whales and mermaids! This can throw a lot of water onto the floor of your bathroom. That water will run into areas below the flooring and can do a lot of damage to your baseboards, sub-floors and even to the ceiling below, if there is one.

Protect floors with towels and supervise small children to ensure that their activity is not leading to water damage. Clean up any water spills around the house, right away.

## attic rain

Attic rain is responsible for a lot of concern for homeowners. Remember! **When it is -20C outside, it's -20C in your attic.**

That means if your warm, humid home air leaks into your attic, you may experience condensation build-up and frost. Once the weather outside warms up again, that frost will melt and drip down onto your insulation like rain. Having weather-strip on your exterior doors keeps warm air in during the winter. The same applies to the door in your ceiling.

A simple solution would be to change the weather stripping on an annual basis. A great time to change it out would be during the regular annual inspection of your attic in the spring. For around \$8, you can purchase a package of 'closed-cell, high density' foam tape weather-strips.

When installing weatherstripping, ensure there are no gaps, especially at corners or where tape ends meet.

Also, be aware a leak near the trim around the attic hatch will allow air into your attic. If the trim around the attic hatch has cracked or is missing caulking, it can lead to small, but significant, air leakage and water stains.

As part of the routine maintenance of your home, check for cracks or missing caulking around all window and door trims. There are different types of caulking on the market, but any paintable latex caulking will suffice. For around \$5, you can fill the holes and gaps in the trim to stop air leaks.

Ceiling stains can also be caused by other factors, including blocked soffits that restrict the air flow in your attic, leading to frost build-up in the winter and melting frost and water damage in the spring.



A bathroom vent fan that is leaking wet shower air into the attic is a concern. An annual check-up in your attic will help avoid issues that may lead to greater damage. A check-up can be as simple as popping your head in the attic once a year in the spring to look for signs of water damage or insulation issues.

Remember, never enter your attic unless you are familiar with its construction. Entering an attic could lead to greater damage, injury, or death.

## expired attic weather-strips

When it comes to attic insulation and protecting a home from air leaks, pay attention to weather-strip performance and cracks around the trim.



Example of commonly used insulation and where to install. Foam weather-strip is considered single-use. Once you've opened the hatch, you must replace the strip.



Photo of attic framing that needs latex caulk to avoid potential air leaks. Apply latex, paintable caulk to cracks.

## ceiling stain removal

- Ensure water issues are resolved and wait a few days. Watch for changes and allow area to dry out.
- Mix a solution of half water and half bleach in a spray bottle that has a fine mist setting.
- Cover floor and furniture with a drop cloth and/or move items below area to be treated.
- Use the proper personal safety equipment (e.g. safety glasses and gloves).
- Spray a fine mist of solution over the stain

area and allow it to dry.

- Repeat and allow to dry thoroughly until the area has turned white and blends well with the rest of ceiling.



# maintaining vent fans, cold air returns, & heating vents

Keep your humidity and air quality in check by using and maintaining exhaust fans:

- Heating vents
- Bathroom vents
- Stove hood vents

Keep these vents clean and avoid blocking them with furniture. In order for the air to circulate properly in your home, vents need to be cleaned regularly and air must circulate.

Maintain a 3-month vent cleaning routine:

- Use your vacuum to clean vent covers.
- Remove covers and wash.
- With covers removed, clean inside of fans with a vacuum or duster.

## cleaning bathroom vents

Most exhaust fans have a plastic cover that simply snaps into place. You should not need any tool for this job (other than a vacuum and a step stool). When installing weather-strip, you must ensure that there are no gaps, especially at corners or where tape ends meet. Even if there is not visible dust and dirt in the fan cover, your exhaust fan can always benefit from a cleaning.

Start by vacuuming any visible dust and dirt from the fan cover so that it does not fall down onto the bathroom floor or into your eyes when you remove the cover.

Grab the fan cover on either side and gently pull it down toward you. The cover is usually held in place with small metal springs that will allow it to come away from the ceiling about two inches, but not completely off.



Find the metal springs on either side of the cover and squeeze them together to free the cover from the ceiling. The cover will come out with a gentle tug as you squeeze the springs together. Some vents, like the round one shown below, require you to simply pull out the plastic vent and wash.



*Do not let your vents look like these. This is a fire hazard and does not allow for proper ventilation.*



*Rinse the cover in the tub/sink to remove any loose dust from the inside.*



After rinsing the vent cover, set it aside to dry. Before you replace the cover, vacuum the motor housing or other interior parts of the fan that you are able to reach. Be careful with this part; there are live wires in the fan type. To be safe, unplug the fan before cleaning.

Once everything is clean, you need to put it back together. Squeeze the metal springs together and fit them back into the slots in the fan base. Then gently push the fan cover back up until it is flush with the ceiling. If you have a round vent fan, push it until seated. To test your fan, turn it on, then hold a tissue near the fan. The fan should suck the paper up against the cover and hold it there.

## cleaning cold-air return & heating vents

Remove floor, ceiling, and cold air return vents. For the return vents in particular, you might need a screwdriver. Place the vent covers in a bathtub in warm water. Add a few drops of dish soap to the water and let the bubbles build up. The dish soap will help cut in grease and grime that has built up on the vents. Allow the vent covers to soak for 10 minutes.



Drain the bathtub and rinse each vent cover under warm water. Shake off any excess water and dry with a towel. Vacuum inside of the vents before replacing the covers. Do this at least once every six months to improve the air circulation system in your home.



# cleaning windows, screens, and tracking

Cleaning and maintaining your windows in the spring or summer is an essential task to ensure the freezing temperatures in the winter do not enter the home and that mold and mildew will not accumulate due to sitting water. Check your owners manual for instructions.

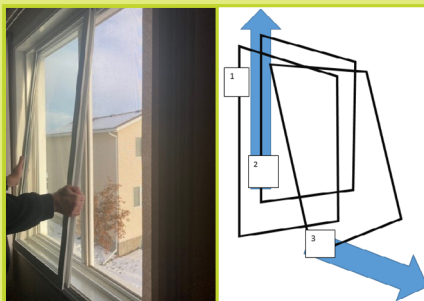
## cleaning a common window

- Unlock your window.
- Slide window open. Note any anti-theft clips as they will not allow the window to pull out. Open the window to a position that is clear of the clips.
- Gripping the window firmly with both hands,



lift the window straight up until the bottom can be tilted out towards you. Carefully set it aside. It is a good idea to put a towel on the floor to protect flooring from the dirt that may be stuck under the window.

- Note the way the track is placed. Take a photo if you are unsure that you will remember how to put it back in the same way. Carefully pull out the track. You



may need a flathead screwdriver if your tracks are dirty and stick.

- Remove the screen by pulling the tab towards you. Be careful not to drop your screen out of the window. Bring screen in and set it aside carefully. These

can be cleaned in the tub using an extended shower head.

- Note the holes in the window sill. These are



drainage holes, and important to keep clean and clear of blockages. This allows water to drain to the outside and protects your window from moisture damage. Make sure these are clean before re-assembling your window.

- Clean all parts with a mild cleaner and soft rags or paper towel. Do not forget to clean the area under the window where there may be slider wheels.
- Once all parts are clean, replace the screen and track until you hear the click to indicate it is set. Return the window back into frame, paying attention to the anti-theft clips that will keep the window from fitting properly.
- Finally, check the window for smooth sliding and a working lock mechanism.

## recipe for homemade window wash

You will need:

- 1 part white vinegar
- 1 part water
- A spray bottle

Fill the spray bottle with equal parts vinegar and water. Then use as you would any store-bought glass cleaner. If the windows are extra grimy, you can add a drop of dish washing liquid and wash first. Then repeat with the vinegar and water mix for shine.

## safety notes

If unsure how to maintain your windows, review the owners manuals supplied with your Homeowner's Handbook for window maintenance and warranty information. If you do not have a manual, visit the window manufacturer's website for more information.

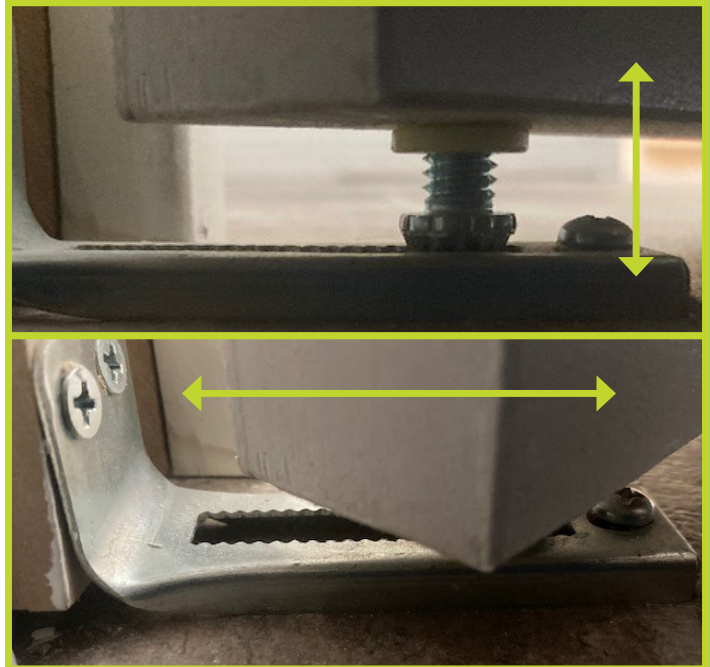
Cleaning windows should be done on a warm day with little-to-no wind. It also may be a two-person job. Never over-exert yourself to wash the outside of a window. You could fall. For fixed windows that are out-of-reach, use a garden hose with a window cleaning attachment.

Watch that small children are supervised around open windows. Screens are not secure. Children should never lean on them.

# adjusting items in your home

As a home becomes worn through activity and time, changes will be noticeable. Some changes are great, like family photos on the walls. However, other changes are not positive. For example, too much humidity from forgetting to use vent fans when cooking, or poor maintenance and skipping the professional servicing of your heating and ventilation systems.

There will be other parts of the home that will eventually need to be repaired, replaced or adjusted. For example, the amount of times the doors in your home open and close puts stress on the door hardware and even the door's surface. Remember to adjust the doors in your home before other damage is done by falling closet doors, misaligned entry doors, and cupboard doors that rub and damage the finish.



*Lifting and shifting the door 'right/left' panel on the floor bracket will help with door alignment.*

## adjusting bi-fold closet doors

A small wrench can be purchased that will allow easy access to the adjustment nut at the bottom of your bi-fold door. But with two people, you can just as easily use your hand while someone lifts the door so that you do not pinch your fingers. Turn to adjust height.



*Using a multi-bit screwdriver is necessary to set the top screw that keeps the door aligned.*

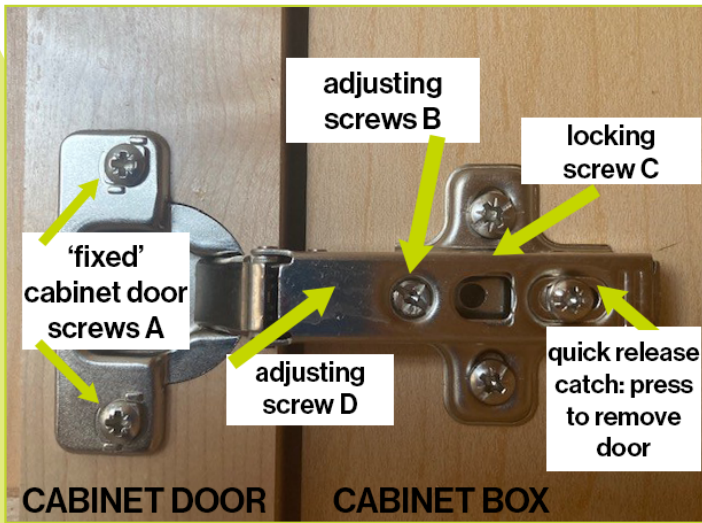


*A multi-bit screwdriver is a must-have tool for basic home maintenance.*

## adjusting cabinet doors

Poorly fitted kitchen cabinet doors are a common problem. Most cupboards these days use a concealed steel hinge which are sprung so the door stays closed without the need for any magnetic catch. They are fairly easy to adjust if you understand how they work.

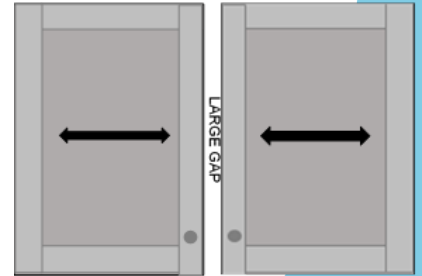
If your hinges are different than those pictured below, review the manufacturer's website for notes regarding maintenance.



Use this image as a reference for the following guides.

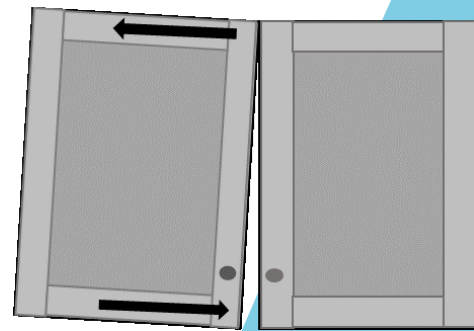
by turning the adjusting screw D on **BOTH** hinges on each door. You may have to slightly release the locking screw C first. Ensure it is tight afterwards.

- Adjust the angle of a cabinet door with the adjusting screw D, but this time, only tighten/loosen the top or bottom screw. For a bigger adjustment, tighten/loosen the top one way and the bottom the other way. You may need to slightly release the locking screw C to do this. Make sure it is tight afterwards.



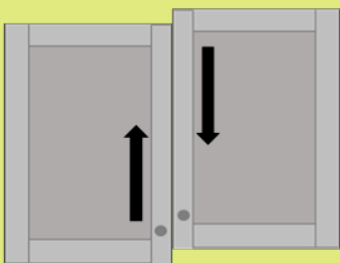
## loose cabinet doors

- Ensure the locking screw C is tight. If it has loosened, the door may have slid from its original position. When the door is open as shown, aim for an approximately 1mm gap between the door and the cupboard. This gap may not work out perfectly, but it is a starting point.
- If this does not fix the looseness, tighten the fixed door screws A and the adjustable screws B. If they will not tighten, fill the holes with two-part wood filler to secure a tight connection.



## badly-aligned doors

- To change the vertical height, undo the two adjustable screws B on both hinges. They are usually in slotted holes which means you can adjust up or down by a few millimetres. Then tighten back up.

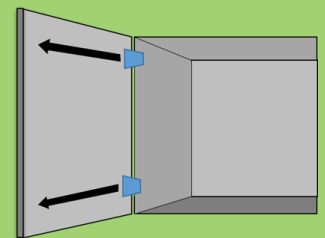


- Adjust the doors side-to-side slightly

## binding doors

If a door is not closing properly or is creaking, it may be binding on the cupboard frame.

- Inspect the hinges from the outside of the door. The door may be touching the cupboard frame as it closes (binding). To stop the binding, adjust the door out towards you slightly.



- Unscrew locking screw C on both hinges. The door can now slide in and out. Pull it

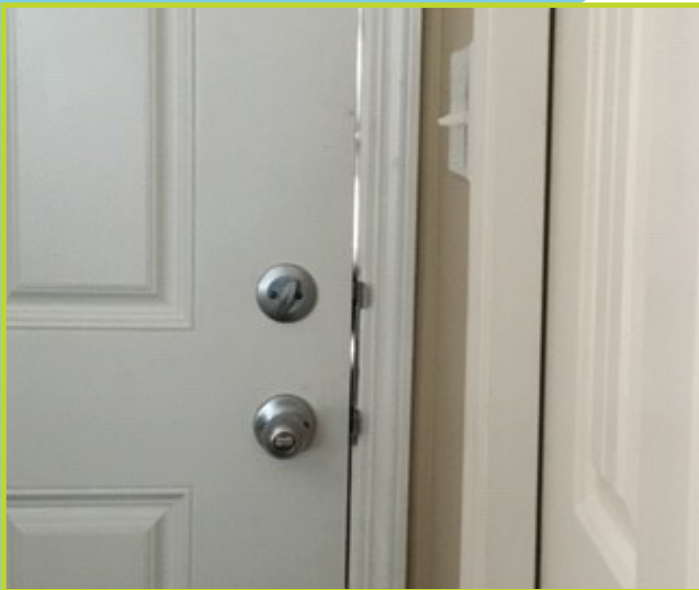
towards you slightly and re-tighten. The ideal gap need not be any more than 1mm, but should be even from top to bottom.

## adjusting entry doors

When uneven gaps form around the door frame, it can allow for pests to enter your home. It can also cause loss of heat and condensation build-up. It is an important part of homeownership to watch for changes and adjust accordingly.

parts of maintaining a door that closes and locks properly.

Learn more about how to adjust exterior doors through research online, speaking with a handyman, or reviewing the owners manual and the warranty and maintenance routine recommended by the manufacturer.



*Watch for gaps like these to avoid a bigger problem in the future.*

Adjusting exterior doors to solve gaps can include everything from adjusting hinge screws and adjusting locking mechanisms all the way to replacing the entire door frame.

As your home settles and shifts, you may need to add commercially-made hinge shims or have the door frame shimmed in order to solve frame movement issues.

Adjusting the strike plates, checking the door for warping, and replacing and keeping up with weather-strip maintenance are all important

# things that expire

Like milk, eggs and bread, items in your home have a lifespan and will eventually become unusable. Certain items have a specific expiry date, like smoke detectors and furnace filters. Other items are ready to expire because they are not functioning properly.

Filters will get dirty and need to be cleaned or replaced (depending on the type). Most exterior door weather-strips will have a life of 5-7 years before they start to become brittle and allow your expensive heating to escape in the winter. Weather-strips around your doors and attic hatch will eventually need to be replaced.

Any surface constantly exposed to water will eventually break down or rot. This includes things you cannot see, like rubber gaskets in taps and around drains. The rubber in your toilet tank will eventually break down and could lead to expensive water leaks. Cartridges in taps eventually wear and cause faucets to drip. Caulking exposed to water will, over time, shrink and crack and need to be replaced.

Heavy trafficked floor surfaces that are not protected with rugs or mats will be damaged over time as they wear down from dirt on the bottom of shoes, heavy furniture, spills, and pet damage.

Keeping door hinges greased prevents rust and allows for smooth movement, but will wear off over time.

Batteries in smoke detectors and carbon monoxide detectors expire, and need to be replaced regularly. Many smoke detectors have a 10-year lifetime. Check the detector for the expiry date.

Lightbulbs will burn out and need to be replaced. Systems like pumps that can be found in a sump pit generally last only 7-10 years depending on how often they run. If they are not cleaned and maintained, they can fail even sooner.

It is important to pay close attention to items that are used on a daily basis and note any signs of wear or malfunction. Routine cleaning and maintenance will help you notice when household items are nearing the end of life.

## the best maintenance is prevention!

Expired silicone around sinks can cause a great deal of damage to your counter tops and the inside of your cabinets. Perform an intentional inspection of your sinks and counters. Is the silicone sealer peeling, cracked, or missing? Replace it regularly to avoid having to replace more expensive counters tops.

Control the amount of water that sits on counter tops and floors. Exposure to water will cause mildew, rotting and mold. It is cheaper to buy a tube of silicone for \$5 than to replace your counter top or flooring.



*This task is a MUST and should never be ignored. If you do not know how to silicone around sinks and bathtubs, there are plenty of quick, informative videos on YouTube.*

# HRV units

Your heat recovery ventilator (HRV) helps keep your house clean and healthy while reducing your heating bills. This hardworking equipment is often overlooked, but it should become part of your overall home maintenance routine.

## what is an HRV system?

An HRV is a home system that regulates the quality of air in your home by replacing your stale indoor air with fresh, filtered air, and regulates condensation, temperature, and humidity.

Cycling of air prevents your home from becoming too cold or damp due to poor ventilation and



*An example of an HRV system you may see in a home.*

reduces the presence of condensation, mould, odours and even dust mites.

HRV systems also contain filters that prevent particulates like pollen or dust from entering your home.

Because of its ability to reduce condensation in the home, HRVs create a drier home, which is more efficiently heated and cooled. This efficiency means that in the long run, homeowners end up saving money on heating and cooling expenses.

While it is true that your HRV system requires energy to run, this energy consumption is easily offset by the heat recovered from the exhaust air. Airtight homes equipped with HRV systems will have substantially lower energy costs per year home ventilation without heat recovery.

## how do HRV systems work?

Before maintaining your HRV, it helps to understand how it works. An HRV system works by using two fans:

1. One fan draws the warm, stale, and polluted air from the living areas of your home through the HRV system and releases it outside.
2. The second fan then draws a continuous stream of cool, fresh air through the system and distributes it throughout your home.

As the warm air is expelled through the HRV system and draws in cool fresh air, heat is transferred from the outgoing stale air to the incoming fresh air. The core transfers heat from the outgoing stream the same way that the radiator in your car transfers heat from the engine coolant to the outside air. It is composed of a series of narrow alternating passages through which incoming and outgoing airstreams flow.

As the streams move through, heat is transferred from the warm side of each passage to the cold, while the airstreams never mix. HRVs can recover up to 70-80% of the heat in the exhaust air – saving you money.

## how to clean & maintain an HRV

Your HRV cannot do all the hard work on its own

– it needs your help! In only a few simple steps, the HRV can be working at peak performance.

Clean your HRV air filters with the following steps:

1. Turn off your HRV and unplug it.
2. Locate your filter(s) by removing/opening the door on the front of your HRV unit.
3. The filter(s) can be removed by sliding them forward from where they rest in the middle of the unit.
4. After removing the filter(s), clean off any large build-up with a vacuum cleaner.
5. Then, soak the filter(s) in warm water and dish soap.
6. Rinse and let dry before returning them to the unit.

You should try to clean your HRV air filters every 2 months or so to ensure that they are working efficiently and are not introducing dust, dirt, and pollution into your home.

## replacing HRV filters

Your HRV air filters should be replaced 1-2 times per year depending on how dirty they appear. If after a thorough cleaning you see major signs of wear, it is time to replace the filter.

## inspecting your HRV

- **Check your HRV outdoor intake and exhaust hoods:** Remove leaves, waste, or other obstructions that may be blocking the outside vents of your HRV. Without this airflow, your HRV will not function properly. During winter make sure to clear any snow or frost buildup blocking outside vents.
- **Inspect the condensate drain:** Check to see if your HRV has a condensate drain. It will be a pipe or plastic tube protruding from

the bottom of the unit. If it does, slowly pour about two litres of warm clean water in each drain pan inside the HRV to make sure it is flowing properly. If not, simply clean the drain.

- **Clean the heat exchange core:** Check your HRV owners manual for instructions for cleaning the heat exchange core. Vacuuming the core and washing it with soap and water will help reduce dust that can build up inside the heat exchange core.
- **Clean grilles and inspect the ductwork:** Check the ductwork leading to and from your HRV. Remove and inspect the grilles covering the duct ends and vacuum inside the ducts. If a more thorough cleaning is required, call a certified service technician.
- **Service the fans:** Remove the dirt that has accumulated on the fan blades by gently brushing them.
- **Book your annual HRV service:** Your HRV should be serviced annually, much like your furnace. If you are not comfortable doing this yourself, contact a certified service technician accredited by the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI).

There are many videos on YouTube to walk you through the maintenance process for HRV units.



# maintenance monthly schedule

## january

- Vacuum the condenser coil located in the back or bottom of the refrigerator and clean the drain pan
- Wash kitchen exhaust hood and filters
- Clean dishwasher food filters and check that openings in the spray arms are clear
- Examine and change furnace filter if dirty
- Clean HRV filter(s)
- Clean humidifier filter
- General visual inspection

## february

- Examine and change furnace filter if dirty
- Clean HRV filter(s)
- Clean humidifier filter
- General visual inspection

## march

- Examine and change furnace filter if dirty
- Clean HRV filter(s)
- Clean humidifier filter
- Ensure downspouts are down and in place: spring melt is here
- Clear snow from window wells
- Check sump pump including the discharge hose
- General visual inspection

## april

- Examine and change furnace filter if dirty

- Clean HRV filter(s)
- Clean humidifier filter
- Ensure downspouts are down and in place: spring melt is here
- Check grading for settlement and repair if needed
- Check sump pump, including the discharge hose
- General visual inspection

## may

- Examine and change furnace filter if dirty
- Clean HRV filter(s)
- Clean humidifier filter
- Remove debris from gutters and downspouts
- Fertilize and aerate your lawn
- Extend downspouts away from house onto splash pads
- Inspect your deck and patio and paint if necessary
- General visual inspection

## june

- Extend downspouts away from house onto splash pads
- Check sump pump including the discharge hose
- Examine and change furnace filter if dirty
- Clean HRV filter(s)
- Examine and trim trees and shrubs if required
- General visual inspection

## july

- Extend downspouts away from house onto splash pads
- Check sump pump including the discharge hose
- Examine and change furnace filter if dirty
- Clean HRV filter(s)
- Examine and trim trees and shrubs if required
- General visual inspection

## august

- Inspect and have the furnace cleaned
- Extend downspouts away from the house onto splash pads
- Check sump pump including the discharge hose
- Examine and change furnace filter if dirty
- Clean HRV filter(s)
- Examine and trim trees and shrubs if required
- General visual inspection

## september

- Disconnect garden hoses and shut off valve to outside faucets
- Extend downspouts away from house onto splash pads
- Check sump pump including the discharge hose
- Examine and change furnace filter if dirty
- Clean HRV filter(s)
- Examine and trim trees and shrubs if required
- General visual inspection

## october

- Ensure all doors to the outside shut tightly, and check other doors for ease of use. Renew door weather-stripping if required.
- Test all smoke detectors
- Disconnect garden hoses and shut off valve to outside faucets
- Extend downspouts away from house onto splash pads
- Check sump pump including the discharge hose
- Examine and change furnace filter if dirty
- Clean HRV filter(s)
- General visual inspection

## november

- Ensure all doors to the outside shut tightly, and check other doors for ease of use. Renew door weather-stripping if required. Clean HRV filter(s)
- Extend downspouts away from house onto splash pads Ensure downspouts are down and in place: spring melt is here
- Check sump pump including the discharge hose
- Examine and change furnace filter if dirty
- Clean HRV filter(s)
- General visual inspection

## december

- Ensure all doors to the outside shut tightly, and check other doors for ease of use. Renew door weather-stripping if required.
- Extend downspouts away from house onto splash pads
- Check sump pump including the discharge hose

- Examine and change furnace filter if dirty
- Clean HRV filter(s)
- General visual inspection

# connect with us



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