

Knowledge Sharing

As homeowners, we often find our way through repairs and renovations alone. We learn as we go.

This FHS Knowledge Sharing Webpage will publish articles submitted by you, a homeowner, with the goal of sharing repair and renovation knowledge that pertains to Forest Hills. You may add to the knowledge or submit alternative or supplementary ideas by using the Guest Book feature below. Keep the conversation going.

Ideas and comments are the opinion of the writer who submitted the article/comment. The opinion(s) expressed herein is that of the author, and provided for your information. Forest Hills does not endorse the opinion of the author. We will not include or recommend vendors.

Adjusting HVAC from Summer to Winter

Most FHs Homes have the same or similar HVAC (heating/air-conditioning) system configuration. When constructed, our homes included air supply and air return ducts. The air supply goes to every room in your home. The returns are located in a central stack, one on each floor with a large vent cover.

You can control the supply of air to each room by adjusting (closing/opening) the vent. You can also adjust the return airflow by opening or closing the baffle usually located behind or near the lower level return inside your utility room. Not every home has this air return baffle adjustment.

How to adjust air supply

In the summer you want to increase air supply to the warmer rooms on the second and third floors. Cold air falls making your lower level the catch basin for heavy colder air. Open the air vents in the upper floors. Closing some or most of the vents in the lower floors will force more to the upper floors. Remember, if you have a low vent and a high vent in the same room, open only the high vent in the summer and open only the lower vent in the winter.

How to adjust air return

Keep in mind the colder air will always fall and warmer air will rise. The goal with the returns is to capture and recalculate the heat or cold air you want to distribute throughout the house. In the winter the warm air is on the 2nd and 3rd floors, this means you should close down the lower air return to pull and circulate the warmer air. (Remember to open the supply on the first floor as mentioned above). In the summer you want to open the baffle on the lower level to pull in the colder air and push it up to the upper floors.

Again, remember to close some of the lower air supply vents.

The baffle in the laundry room should not be completely closed in winter but mostly closed. You can tell how much air goes into the return by holding your hand up or using a sheet of paper in front of the grill near the floor. Baffles are only a flange inside the duct work and not a fine adjustment tool.

One more thought. If your HVAC whistles try adjusting the baffle slightly. The sound is usually caused by the baffle that is almost closed as the air being drawn into the system swirls around this baffle.

Home HVAC Humidifiers

Most, not all HVAC Humidifiers are attached to the air supply stack inside you utility room. AprilAir and Honeywell are two of the most popular models. This is the type that has a water panel filter and a drain tube and for the money is considered one of the better types of home humidifiers because there is no water pan collecting water that requires regular cleaning. The water drips from the water supply line into the top of the water panel filter and the air moves through supplying moist air into the system. The extra water drains out of the bottom of this system. This water panel filter can be purchased online or at almost any HVAC distributor or Home Depot. Be sure to change this every year or every few years as needed.

Several things to know about these systems.

When you turn on the system each winter, open one or both flanges that supply air to the ducts attached to the Humidifier housing. Turn the humidifier control setting to ON and set the expected outside temperature. You may need to adjust this from time to time if you notice dry air or the opposite - too much moisture condensing on your windows.

This is the important part- Adjust the water flow into the unit. Open the unit and take out the water panel. Place a bucket under the unit to catch the water as you adjust water flow. If the water flow is too high into the system you are pouring water down the drain and adding to your water bill. Only a little trickle is needed (5 drops a second).

Adjusting water flow might be different in each house but generally it is a saddle valve. Carefully turn the clockwise to stop the water flow. Saddle valves are not a quality item, use caution if this valve has not been adjusted in many years, sometimes they stick or break. With the bucket in place, and the HVAC running, turn the humidifier control to ON and set to a temperature. You should hear the solenoid that controls the water flow click open and closed, (this humidifier system only gets power to operate when the system is actively running and not when it is about to cycle down). Now adjust the saddle valve to a very slow trickle.

Replace the water panel filter and close the unit.

REMEMBER to always check the drain tube under this unit. Make certain the tube is fairly clean and not blocked and the other end is securely directed into a drain.

In the spring/summer, this system should be turned off and the air supply shut down. Some leave the saddle valve open but it is recommended you close that after the winter season because of the possibility of leaking throughout the summer.

Submitted by: Lester Martin

Gound Fault Breaker Switch

Many Townhomes in Forest Hills have the original developer installed circuit breaker box. Some have upgraded the box after learning they were no longer strong enough for the additional electronic items we use today. I want to tell you about the Ground Fault built into your original circuit panel. This is one breaker that looks slightly different than the others. There is a red “Reset” button next to the switch. This is a Ground Fault Interrupter circuit.

When most Forest Hills townhouses were wired for electricity, all potentially wet applications such as kitchen outlets, bathroom outlets, and outdoor lights were wired off of this GFI breaker. If water leaks grounds any of these outlets or switches, the breaker would trip cutting off electricity to that entire line. This circuit was wired in one long loop from outlets to switches, one after the other. When one went out, they all went out.

Why is this important?

Over the years homeowners may have added GFI outlets to their bathrooms or kitchen or outside outlets. Inspectors may have required it from a homeowner trying to sell their home. Before someone added the additional GFI outlets you would know it could only “trip off” in one location, the main breaker. But now you have to check each GFI outlet at the fault, or before the fault, and the breaker. Once a GFI outlet trips off, all the outlets or light switches AFTER that outlet will not work. They all run in one long line throughout the house similar to Christmas lights. When one goes out all lights after that fault won’t light.

It may be confusing, but remember when a wet area light switch or wall outlet fails, check the circuit breaker first, then check and reset your GFIs (if you have them) in all the rooms until you find the tripped device before calling the electrician.

Garage Door Replacement

especially for garages located inside your townhouse

When my neighbor suggested that after he replaced his garage door he noticed the entire house was warmer I was skeptical.

After all, I assumed the garage is insulated from the house right? You would think so...but that's not necessarily completely true. Even the best builders were not diligent about keeping leaks and adding vapor barriers to separate areas such as a garage. Our townhouses have many breaks in the outside walls where electric outlets, wiring outlets behind outside lights, hose faucets, vents for dryers or ranges or even the HVAC cables and pipes enter our home. I have opened walls and found no insulation or missing insulation possibly from tradesman during or after the home was build. A hole in the outside brickwork is basically a hole to the outside environment. In large/tall townhomes, this creates a chimney effect pulling a draft up through the cavities inside our houses and up to the attic. (further pulled in by an attic fan) Pulling in air under our floors and ceilings, down through the lights and into our laundry rooms or wherever there is a break in the ceiling or floor. The best solution for this is to carefully inspect your home outside for any gaps where air can infiltrate. You can use caulk, spray foam or mortar to seal breaks in the exterior brick skin of your house.

Which brings me back to the subject of replacing a garage door. If your garage door leaks as older doors usually do, and there are large or small breaks in the drywall of the inside of your garage, cold or heat can be drawn inside your home.

Maintaining our older garage doors is a time consuming task and requires scraping and painting every few years. These doors were not the best quality and if you knock on them with your knuckles will find they are very thin and easily damaged. They provide ZERO insulation to keep the cold or heat out. The seals on the sides of the door and where the door hits the concrete driveway often are worn and don't function properly. To further compound the leaks into the garage, many have a mailbox cut into the door allowing greater leaks into the home.

I decided to replace my garage door. At a cost of less than \$1000.00 I purchased and had installed an aluminum/insulated garage door that met Forest Hills Architectural Control requirements. I further elected to NOT cut a hole for the mail slot by adding an outside mailbox. Cutting a mail slot hole will defeat the purpose of trying to seal airflow. Remember to check with the FHs ACC Committee to gain approval.

The result, my garage is warm, my house is warmer.

Buying a new insulated door will last a lot longer than the last scrap and paint job costing about the same.

My townhouse is now warmer and my utility bills will be less.

The fact that my garage is instantly warm demonstrates how much my house heat (and air conditioning) had leaked into the garage all these years.

Central Vacuum System - Nutone

Many townhomes in Forest Hills have a Whole House Vacuum. These were options when the original owner purchased the townhouse and would most likely be a Nutone Vacuum. Nutone is still one of the best in the industry and the motor has an average life expectancy of 1000 hours. With proper maintenance the vacuum can last much longer.

Nutone vacuum systems technology is a very simple concept. A motor rotates a fan that creates suction in a remote tank that is attached to pipes throughout the townhouse. The tank is bag or typically bag-less. The exhaust is vented to the outside.

You may experience some minor issues with the plastic hose port doors and electric switches. I recommend you listen to your motor. If the motor is whining or begins sounding unusually loud it most likely time to replace the brushes inside the motor. A motor brush is a small block of carbon that transfers electricity to the rotor as it rotates. After years of rubbing inside the motor rotors the brushes wear away. They can be difficult but not impossible to replace on your own or by a repair service.

You can order the small graphite brushes (2) by doing a google search online and should cost around \$12.00.

Some repair services might suggest you "Update" your system and purchase a new unit. As I stated at the beginning of this article, Nutone is one of the best in the business and if properly maintained, will last for a very long time. Newer is not necessarily better. Be wise about buying the next greatest thing.

If your motor is damaged because of wear or as a result of worn out brushes, you can purchase a new motor for less than \$150.00 and it is easily installed once you pull the unit off the wall and open the top. The old motor easily lifts out of the top. A job for the skilled handyman in you.

Remember four things.

1. If your Nutone Vacuum begins to whine, turn it off and consider your options. Running the motor with worn out brushes will damage the motor.
2. If the brushes are worn, you can order and replace them if you're very handy. If not, you can call a repair service.
3. If your motor is damaged, you can replace the motor without buying a new expensive system.
4. Nutone is one of the best systems in the industry. The bag-less and vented to the outside systems are ideal

Please use caution when working or repairing within your home. Knowledge is power, use it wisely.