



# Sparky's Current Events

## Trade in the High Heels for Steel Toe Boots

### Women in the Trades

American women have been making their way into the labor force since WW2, when they went to work in place of the men who had gone off to war. Women's participation in the labor force increased during the 1960s through the 1980s, but then started to decline in the beginning of the 21<sup>st</sup> century.

According to the U.S. Bureau of Labor Statistics the women's participation rate reached an average low of 56.7% in 2015. Marital status influences participation with never-married women having the highest participation rate of 64.5 in 2018. Separated and divorced women were more likely to participate than married women, 62.7%, 61.2%, and 58.2%, respectively. In the same year, 2018, women working in construction trades numbered only 1.5% of the entire U.S. workforce.

Wages in comparison, women earned on average 81.1% of men's median weekly earnings in 2018. However, the gender pay gap is much smaller in construction occupations, with women earning on average 99.1% of what men earn, according to the National Association of Women in Construction. A career in the trades can offer financial security.

With the current trends and demands in construction trades, the opportunities available to women, and the more equitable pay, maybe it is time for more women to seek a career in the trades! Of course, there has to be an aptitude and desire to work in the trades, just as with any other job. To find out which trade may be right for you, take an assessment: <https://explorethetrades.org/what-we-do/education/what-trade-is-right-for-you/>

There are still some obstacles in working in the trades for women as there are in other occupations where women are the minority. There will often be some who are not accepting of women in "traditionally male jobs", but the job itself is neither "male" nor "female". It is a job, and whoever can do the work is all that matters. A career in the trades is an open door to ALL.

For women to be equal on the job, they must be able to do the work competently, and unfortunately, prove themselves more so than their male counterparts. There is always the opportunity of advancing to project manager or supervisory positions for women in construction where women can have more influence on the company culture. The key to survival when you are the minority is to find allies and supporters!

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## Women at work!



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At VTA, in the last year, there have been eleven women who enrolled and completed courses. Out of the eleven, there was one electrician, one plumber, one HVAC technician and eight in Building Maintenance. They all excelled in their classes and all graduated to jobs paying equal, and in one case, more, than their male counter parts! Trade work can be an excellent career choice for women. It can provide for a financially stable and rewarding career and demand is high all over the United States! Let's start promoting this career option to young women as well as young men!

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*"When you reach the end of your rope, tie a knot in it and hang on."*  
- Franklin D. Roosevelt

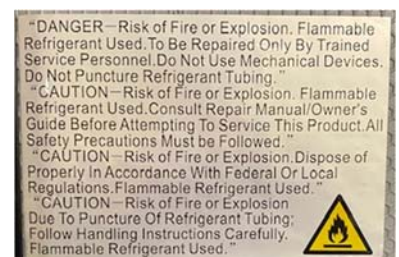
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## Hydrocarbon Refrigerant

Chances are, if you bought a new refrigerator in the last year, it will be one that uses a new refrigerant, R-600a. As a consumer, you may not have a choice because this is the new refrigerant being used for all refrigerators and freezers as of January 1, 2021, when the EPA made it unacceptable to use hydrochlorofluorocarbon refrigerants (HCFCs) in new equipment. The previous refrigerant for refrigerators/freezers was R-134a, which is one of these HCFCs being phased out. With the United States being a signatory to the Montreal Protocol, an international treaty designed to protect the ozone, we must incrementally decrease HCFC production and consumption, with the goal of complete phaseout by 2030.

So, what is this new refrigerant, R-600a? It is a natural isobutane refrigerant and has been in use around the world for many years. It has only been in use in the U.S. since 2018 but is gaining wider use because of the phaseout of R-134a. R-600a is one of three flammable refrigerants approved for use in household refrigerators/freezers. The other two are R-290 (propane), R-441a (a hydrocarbon blend). The conditional use is that the charge cannot exceed 57 grams per appliance. There are supposed to be warning labels for this flammable refrigerant (see below) and only qualified technicians should work on this equipment. Which brings us to the next question: how do you know your appliance technician is qualified? First, ask the technician if he/she has a 608-certification, Type 1, for handling refrigerants. Second, ask the technician if he/she holds a safety certification for working on hydrocarbon systems. Third, ask the technician if he/she has any formal training to work on appliances. The reason you may want to ask these questions directly to the technician is because presently in the United States, appliance technicians are not required to have any formal training to service appliances. All they need is a business license to run an appliance repair service.

Virginia Technical Academy offers a two-day safety course on hydrocarbon refrigerant with Lok-ring technology. This course has been available since 2016 and over 150 students have attended to date. VTA is one of only a handful of schools to teach the hydrocarbon refrigerant with Lokring technology class where compression fittings replace brazing. This course is highly recommended for appliance technicians and light commercial refrigeration technicians. For residential and commercial HVAC, hydrocarbons will be replacing the current refrigerants soon and training will be required by 2023.







*VTA's new Resource Lab with computers from Cheryl Hickok and Larry McKenzie.*

## Instructor Highlight - Mike Grow

Early on in his work life, Mike Grow was faced with an opportunity...to stay where he was at, moving furniture and doing deliveries, or transfer to the maintenance department and enter an apprenticeship in either electrical or heating and air conditioning. He chose the apprenticeship in heating and air conditioning and hasn't looked back. As a youngster, our HVAC instructor liked to tinker around with cars with his father. Mr. Grow had the desire to know how things worked, so he thought a career in heating and air conditioning would suit him well.

Mr. Grow completed his four-year apprenticeship and proceeded to get a job with Damuth, working on commercial equipment and also on building control systems. In the eleven years he was with Damuth, Mr. Grow became more experienced in his work, and decided to start his own HVAC company, B&M Services, LLC.

As any small business owner will tell you, it can be very demanding to run your own business because you have to do everything yourself, from answering the phone, to scheduling, to doing the service call, to finding parts, to doing payroll, and then closing all the work tickets! But over the years, Mr. Grow nurtured a successful business. When asked if there were any memorable jobs he could recall, Mr. Grow said that the more memorable ones were the ones where things didn't go as planned, but because you gave your word to the customer you would get it done, it had to get done! These jobs were the most challenging, and maybe not the most lucrative, but they certainly were memorable because you stuck to it, you tried to solve a problem, and you succeeded!

And these are the values Mr. Grow tries to impart on his students. Your word means a lot and it is integrity that will make you successful and respected. If you make a mistake, own it, and fix it! Learn from it. Each challenge will make you stronger. And learn to think outside the box sometimes when it comes to problem-solving.

Fair warning to those who are or will be in Mr. Grow's class. He will definitely challenge you! But he is fair and patient!

## Generous Donation

Virginia Technical Academy is the lucky recipient of a generous donation of refurbished computers from Cheryl Hickok and Larry McKenzie! Ms. Hickok is a realtor with Rose and Womble Realty at 123 S. Lynnhaven Road in Virginia Beach and Mr. McKenzie is the owner of Macro IT LLC at 760 Pilot House Drive, Suite D in Newport News. Macro IT designs, installs, and maintains computer hardware and networks for large and small businesses. During a recent Business Network International (BNI) meeting, Mr. McKenzie mentioned he had refurbished computers for sale. Ms. Hickok immediately thought of Virginia Technical Academy! VTA is very familiar to her because her husband, Tal Baggett, is the Director of Education at VTA! Ms. Hickok purchased 15 refurbished computers for VTA, and Mr. McKenzie's company donated the installation of the computers. Mr. McKenzie, along with Jodie Monro and Amy Grunow from Macro IT brought over all the computers, set them up and installed the network cables. VTA now has a **Resource Lab!**

VTA is very grateful for this donation and the timing could not be better because starting in August, all written tests will have to be done and submitted electronically!

To Ms. Hickok, Mr. McKenzie, Ms. Grunow and Ms. Monro a big **THANK YOU** for your generous support of Virginia Technical Academy!

## Scholarship Raffle Winners!

### Did you know?

Have you ever wondered how birds can sit on a power line and not get electrocuted? If a bird sits on just one power line, it is safe. However, if the bird touches another line with a wing or a foot, it would create a circuit, causing electricity to flow through the bird's body. This would result in electrocution.



VTA is pleased to announce the winners of the \$1,500 and \$2,500 raffle. The drawing was held on July 5, 2021. The winner of the \$1,500 prize was T. J. Andrae, who graduated earlier this year from VTA. He donated his prize to Camrion Fowler, who will use his scholarship for Building Maintenance. The winner of the \$2,500 prize was Dameon Hargrove, who will also use his scholarship for Building Maintenance. Congratulations!

## Upcoming Events

**August 2-5:** International Plumbing Code 2015 - 30-Hour Course

**August 6-8:** Virginia Sales Tax Holiday. During this annual sales tax holiday, you can buy qualifying school supplies, clothing, footwear, hurricane and emergency preparedness items, and Energy Star™ and WaterSense™ products without paying sales tax.



**August 11:** VTA Graduation 5:00-7:00pm at 809 Omni Blvd. Newport News. **(RSVP by 8/6)**

**August 16-20:** National Electrical Code 2017 - 30-Hour Course

**August 18:** EPA-608 one-day course.

**September 13:** Day Classes Begin: EL-101, 2101; HV-101, 2101; BM-100.

Night Classes Begin: EL-104, HV-104, PL-101, 2101, PL-104, P2104, BM-102.

**September 14:** HV-201 (Night Class), HV-202 Electrical Controls (Night Class)

Virginia Technical Academy was founded on the principle that every community needs a skilled and well-educated workforce. Our goal is to provide an environment that will exceed the educational requirements and needs of both future tradespeople and their employers.

### MISSION STATEMENT

Virginia Technical Academy is dedicated to keeping our trades strong through education, validation, and professional networking.

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