

# VINCENT'S NEWS

The 'Van-Go' Gallery



*"Wherever you see a 'Vincent's Van Go' you know the job will be a work of art."*

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**Did You Know...**  
**...that Vincent's Heating & Plumbing is on Facebook?**  
**Check us out!**

### OWNER'S CORNER

## THROUGH MY EYES

"I love your slogan!" compliment is typically followed up with the question of "Who thought of it?" Frankly, I don't know. It just sort of evolved and – fortunately – stuck.

That is a comment I hear frequently with a smile and a chuckle. I never tire of hearing it. That is, of course, referring to "Wherever you see a 'Vincent Van Go' you know the job will be a work of art!"

I love puns because I think they are witty and this one has served us well. The

Ironically, it only was made possible because my father, Ray Squires, decided to keep



I couldn't resist having my wife, Karen, take my photo with a few Vincent Van Gogh paintings while visiting the Art Institute of Chicago.

'Vincent's' in the company name from the man he bought the

## HOW A FURNACE HEAT EXCHANGER GOES BAD AND WHAT YOU CAN DO ABOUT IT - Part 3

*(Parts 1 & 2 to this series were in the September and October issues of Vincent's News. These articles are available as PDF downloads in the 'Van Go' Gallery at [www.VHPinc.com](http://www.VHPinc.com) or call and request a copy by mail)*

### Heat Exchanger Failure Reason #4 – Poor Air Flow

In the simplest terms, a furnace has two major functions: to make heat and to distribute heat. When a furnace is prevented or hindered from performing this second function – to distribute heat – damage to the heat exchanger occurs. This problem is typically referred to as 'poor air flow'.

#### Why Air Flow Matters

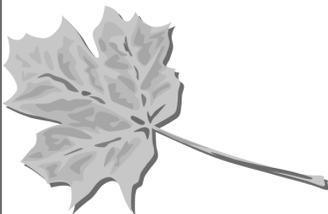
As described earlier in this series, the #1 reason heat exchangers fail is due to metal fatigue. A heat exchanger is made of steel and when the furnace operates it reaches temperatures over 400°F. When the metal heats up it expands. Conversely, when it cools down metal contracts. In every furnace cycle the heat exchanger first expands and then contracts. This expansion and contraction is essentially no different than when you bend a metal paper clip back and forth. Eventually, the paper clip 'fatigues' and breaks. A furnace heat exchanger is no different.

This metal fatigue in the heat

exchanger will eventually occur over time even when there are no air flow problems. However, when air flow problems exist, the expansion and contraction force is multiplied dramatically and damage to the heat exchanger is accelerated. Here's why: as air is blown across the heat exchanger by the furnace blower the heat exchanger is cooled as the air is heated. However, when air flow is less than what it should be the heat exchanger gets hotter than what it was designed for and this causes damage.

So, using the bent paperclip analogy, instead of a little

*Continued Page 2*



## Through My Eyes (Continued from Page 1)

company from, Vincent Unte, rather than changing the company name to Squires Heating & Plumbing. I like our slogan if it makes someone smile, but even more so for what it conveys of the quality that we strive for on every job. I am very fortunate and thankful for the team we have

at Vincent's Heating & Plumbing because they really care about doing the job right. And so when you see the slogan – typically on a 'Van' as it is 'Go'-ing – it is one of our 'resident artists' who are driving to serve someone. And since it is the Thanksgiving season I want to

publically thank Michael, Tom (both of them), Andrew, Paul, Marvin, Rob, Jay, Dave, and Tyler - and our support staff – Nancy, Carol and Colleen for all the great work they do. But most of all, I want to thank you and all of our other clients for giving us the opportunity to serve you!

*"...There are many causes of poor air flow. The good news is that poor air flow is fixable. While some causes require our help to correct, there are some causes directly in your control...."*

## Heat Exchangers (Continued from Page 1)

back and forth motion of bending the paperclip -which takes a long time for the paperclip to break - overheating the heat exchanger is comparable to bending of the paperclip faster and farther. Just as the paperclip breaks more quickly, the damage to the heat exchanger is likewise accelerated.

### Causes Of Poor Air Flow

There are many causes of poor air flow. The good news is that poor air flow is fixable. While some causes require our help to correct, there are some causes directly in your control. Examples include:

- A plugged or dirty furnace filter restricts air flow. You can prevent this by changing the filter before it gets too dirty.
- Avoid buying certain filters. Typically, the higher the filter MERV rating the more air flow will be restricted. Electrostatic filters – sold under well-known brand names – restrict air flow by design to create the static charge to attract

dust particles. For more information on this topic refer to the May 2014 issue "Why You Should Never Buy Certain Furnace Filters" also archived on our website.

- Heating registers that are painted over can affect air flow. Avoid painting registers and consider replacing painted or old registers.
- Decorative registers are very restrictive. Those fancy wood registers look nice, but they are bad for air flow. Avoid them or consider replacing them if you have them.
- Damaged and poorly designed or poorly installed ductwork will restrict air flow. These problems probably require professional help to correct. Examples include ductwork that has been crushed, flexible ducts that droop or bend, and ductwork that is too small and does not have enough capacity to handle the amount of air needed for the system to work properly.

- Ductwork that is not properly designed for how air moves. Air does not turn corners well, and when air 'hits' an abrupt right angle, turbulence is created that restricts air flow.

Armed with this knowledge, there are things you can do to avoid restricting air flow and thereby reduce damage to your heat exchanger. Also, this should underscore the importance of having an HVAC company that understands these issues and we are happy to fulfil this role for you. Should you suspect air flow problems that need to be fixed give me a call.

While this article focuses on the relation of air flow to heat exchangers, there other very important concerns about air flow and furnace performance, but that is a topic for a future issue. —

*Daniel Squires*

## WHAT OUR CLIENTS ARE SAYING

Dear VHP,

When I was in the Navy and someone did something outstanding, they occasionally received recognition from the Commanding Officer. This was typically done with a "Bravo Zulu" which means "well done." That meant that you stood out from the crowd and went the extra mile at some task.

VHP has an employee who deserves a "Bravo Zulu" for going the extra mile in helping your customer. We had to make a weekend service call because our furnace quit working this past weekend when the night time temperatures went below freezing. VHP employee Michael showed up and did what was necessary to restore service with the caveat, "if it blows the fuse again give us a call."

When Michael left, the furnace was running. We knew there was the possibility that our 1940's wiring might be the culprit if the 3 amp fuse blew again. It did just that not long after Michael had left. We had discussed installing a wireless thermostat, but there was none available over the weekend. Michael installed a new thermostat thinking that our old one might have been the cause for blowing the 3 amp fuse.

When I called the answering service to report the blown fuse after Michael's first call, he called back and discussed bringing a wireless thermostat early in the week when he could obtain one. I explained that we would use the fireplace in the meantime.

On Sunday we received a visit from Michael who said he had figured a way to

get us back online until the wireless unit could be obtained. He moved the thermostat from the wall upstairs to the furnace room with a short wire to the furnace, bypassing our 1940's wiring. After that we had heat once again.

We had expected to be on fireplace heat until Tuesday, but Michael saved the day by showing up on Sunday to offer a temporary remedy.

Thank you Michael and thank you VHP. Bravo Zulu to Michael.

On Tuesday, Michael returned with a wireless thermostat and installed that to give us a more permanent resolution. VHP has an excellent employee in Michael and we thank him for his dedication in taking care of your customer.

Mr. + Mrs. G.  
Johnston, Port Huron  
October 2015

**"...We had expected to be on fireplace heat until Tuesday, but Michael saved the day by showing up on Sunday to offer a temporary remedy.**

**Thank you Michael and thank you VHP!"**

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## Thanksgiving Word Search

B H O Y U V T D D I A K E B E  
S E I R R E B N A R C S Y B I  
S E O T A T O P D E H S A M P  
H O R N O F P L E N T Y T Y N  
Y L I M A F T H A N K F U L I  
L Y V N L L A B T O O F R P K  
R T V C W F H B L H A L K X P  
K G E A X C R T N E T Y E E M  
P I L G R I M S Y R T I Y D U  
F S W M L G L N D V K M U O P

Thankful  
Turkey  
Gravy  
Mashed Potatoes  
Family  
Horn of Plenty  
Pumpkin Pie  
Family  
Football  
Pilgrims

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*The Most Reasons to be Your  
Best Choice*

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## Humor Section



*The loaded mini-van pulled into the only remaining campsite. Four children leaped from the vehicle and began feverishly unloading gear and setting up the tent. The boys rushed to gather firewood, while the girls and their mother set up the camp stove and cooking utensils. A nearby camper marveled to the youngsters' father, "That, sir, is some display of teamwork."  
The father replied, "I have a system — no one goes to the bathroom until the camp is set up."*