

A TMB Publication

# Phc News

plumbing & hydronic contractor news

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***'We want a boiler as good as the last one'***

## Contractor-customer relationship crosses years and generations

There was once a little house on a Pennsylvania prairie. It was built in rural Manheim, Pa. around 1850. And winters were cold.

Two fireplaces and a coal stove provided heat. And because mud and straw were the only insulation — pushed in between logs — the washbasins inside would freeze. But frozen pipes were no concern. The modern convenience of indoor plumbing wasn't added to this home until 100 years later, in 1950, the same year when the home's first boiler and baseboard heat brought unimaginable comfort to the Wolgemuth family.

But it was 30 years before that, in 1920, when the Wolgemuths bought the house and farm. Four years later, Naomi Wolgemuth was born in the second floor, cast-iron bathtub. "Mom told me I was born in the tub and that's where it stood for decades," she said, 82 years later, pointing to a small alcove showing three layers of scarred linoleum. "But my three brothers were born in mamma's bed. We had a rubber plug for the tub. We used buckets to fill it, and to empty it, too. For heat, the buckets were placed on top of a coal stove in the kitchen."

The bathtub still serves its purpose, though is now enclosed in the home's only bathroom just down the hall. Naomi admits she still favors the out-house over the flushing toilet.

But one modern amenity she learned to love quickly was the hot water heating system installed by



Haldeman Mechanical heating service manager, John Dodson, and Naomi Wolgemuth examine the old GE boiler's original operating instructions; "Still in a drawer after all these years," said Naomi. The form, signed by Frank Haldeman, is dated 10/8/57.

Frank Haldeman, then the owner of Manheim-based F.L. Haldeman and Sons Plumbing & Heating founded in 1939. In 1950, Frank ran copper lines to several sections of standing radiator and fin-tube baseboard and connected the one-zone system to a strangely space-age, circular, oil-fired General Electric boiler.

"Mr. Haldeman assured us the boiler was the best on the market at the time, and he was right. It served us well for 56 years," added Naomi. "I recall Daddy marveling at the

thought of using the thermostat to set the temperature inside. He couldn't get over what a long way we'd come. Back then, oil was cheap, but he still protected it like gold, not wanting to spoil us with real warmth. We always went to bed with many blankets and quilts."

During those 56 years of service, the Haldeman company serviced the boiler, oil line and filter whenever necessary. "They were always there when we needed them. Daddy trusted them like his own kin," she said.

Connections like that were important, and in a small community, a company's relationship with families was the root of its success, or failure. A handshake or a man's word sealed the deal, better than any written, notarized contract. These qualities stemmed from hard times and hard work. The Great Depression left in its wake a toughened, self-dependent culture, and the Wolgemuth family had paid their dues.

They subsisted on produce from their fields, selling chickens and eggs, and milk that was sent to the Hershey Chocolate factory 15 miles away. One day, hitching a horse for field work at the house, Naomi's youngest brother Clarence was dragged to death by a horse in 1938. He was 10 years old. Several years later, Katie (her mother) and Irvin Wolgemuth (her father)



The Wolgemuth home, site of a hydronic makeover by Manheim, PA-based Haldeman P&H.

were harvesting corn with a mechanized corn picker. Her mother lost her balance and fell into the husking rolls and was fortunate to have lost just a finger.

Reaching a doctor was always difficult, but their Amish neighbors were always quick to help. Even today, they pass by the Wolgemuth home routinely in their horse-drawn buggies. Grandchildren and great grandchildren of the folks Naomi grew up with now wave at her today.

Most of the farming back in the "old days" was done by mule or horse. "A farming family in those days could get by. If a farm had 400 layer chickens, a dozen dairy cows and several brood sows, they could make a decent living. We did quite well because Daddy also got extra work as an overseer at other farms nearby."

Through the years, Naomi never moved from the house and never married. However, she was away long enough to attend college nearby, and then taught at a local school for 24 years. Her father passed away in 1961 and her mother, in 1973.

"But I outlived that ol' GE boiler," she said, chuckling. "When I called Haldeman's to service the boiler not long ago, they came out to see what they could do."

But the verdict was that the old machine had finally met its match.

***"Setting up an indirect on a priority zone in a hydronically heated home works well because of the minimal loss of heat to comfort zones while the system idles and allows the full power of the boiler to quickly regenerate the domestic tank."***

Frank's grandson, Mark, who purchased the company in 2001 (renamed Haldeman Mechanical, Inc.) told Naomi that it was time to replace the system. They couldn't get replacement parts for the old GE, and it wasn't operating at an efficiency much better than 55% or 60%.

"I agreed," said Naomi. "The old boiler was in no shape for another



Haldeman technicians (from left to right) Gary Forry, Bill Aller and Tavi Nistor, complete the Laars Max boiler and indirect water heater installation.



winter. But I told them to be sure that the new boiler would be as good as the last one!”

A few weeks later, Keith Eshleman, inside sales rep for Mount Joy-based



Haldeman technicians Bill Aller, left, and Gary Forry, begin installation of the new Laars boiler.

HVAC Distributors, delivered the boiler on site to a Haldeman Mechanical installation crew made up of installers Bill Aller, Gary Forry and Tavi Nistor.

“HVAC helped us choose just the right boiler for Naomi’s home,” said Mark Haldeman. Together they selected a 75,000-Btu oil-fired Laars “Max” boiler and its partner, a 40-gallon DuraFlow indirect-fired hot water heater, easily meeting Naomi’s domestic water needs.

The boiler is a low-mass, direct-vent unit with a two-pass cylindrical heat exchanger that delivers about 87% efficiency. According to Aller, the new boiler, matched with a Carlin burner, would use up to 50% less fuel than the old one while retaining 30% of the heat previously lost to the chimney.

“Balanced flue” for the sidewall venting is Laars’ term for direct venting of the Max boiler, Aller explains. “It’s a quick and easy connection with stainless steel lines between the



Haldeman technicians and Keith Eshleman, Mount Joy, PA-based HVAC distributors (center) remove the new, oil-fired Laars Max boiler from the truck prior to installation at the Wolgemuth home.

boiler’s exhaust and outdoor air and the termination box where the incoming air passes over the outgoing, inner stainless steel piping — this pre-warms the incoming air. No flue draft regulator is needed when using this kit.”

The Laars DuraFlow indirect-fired water heater would replace a free-standing electric unit that began duty nine years ago. “It was limping along OK, but was beginning to have a few problems,” added Aller.

“With just one heat zone, the indirect’s load was not a real factor in sizing the boiler,” said Nistor. “Setting up an indirect on a priority zone in a hydronically heated home works well because of the minimal loss of heat to comfort zones while the system idles and allows the full power of the boiler to quickly regenerate the domestic tank.”

They also chose to install Grundfos multi-speed circulators for the two hydronic zones. “The key advantage for our guys is to match a pump’s performance, or flow characteristics, to the specific job that it



Haldeman technician Bill Aller makes an adjustment to a Grundfos three-speed SuperBrute circulator.

needs to perform within the system. A single-speed pump has one performance curve — a measurement of head (ft.) and flow (gpm) — and operates at that level only. But these new circulators — Grundfos now has three of them, each with three operating levels — offer a much broader range of performance,” said John Dodson, heating services manager. With the flick of a switch, various speeds can be chosen, easily changing head and flow to meet the specific needs of the system.

“We were introduced to Grundfos’ SuperBrute pumps through a job that specified the circulator,” added Haldeman. “We were very impressed



Bill Aller, hydronic technician, installs a Grundfos three-speed SuperBrute circulator.

with the concept of having three speeds to choose from.”

“Our core heating business is with hydronics,” continued Haldeman. “Most of our installations are split into multiple zones. Some have large radiant heat zones requiring high flow rates and some are small zones requiring low flow rates.

Dodson explained that he always calculates heat loss, flow rate and pressure drop for each zone. He uses this information and the manufacturer’s pump curve to choose the proper pump for each zone. In the past, they might have three or four different pump models on one job, all selected to match the exact needs that we’ve determined. “But with the Grundfos multi-speed pumps, I can use one pump and select the speed to match the flow and head that we want.”

“We had a situation recently where the multi-speed pumps got us through a pinch,” added Dodson. “One customer wasn’t getting enough heat in the kitchen floor. Then the circ went

out on it. Rather than doing an exact replacement of the single-speed pump, we replaced it with a multi-speed circ. The pump’s middle setting did the job well, but the high setting performed perfectly.”

Another key advantage, said Haldeman, “is the ability to standardize on one pump line. Multi-speed pumps can serve so many needs that our firm can standardize on one pump line.”

Last winter, temperatures stayed in the single digits for three weeks or so. But Naomi’s house was warm and the supply of domestic hot water was plentiful. Another source of comfort was the greatly reduced need for heating oil to fuel the system.

Frank Haldeman passed away in 1991. “But no doubt, if he’d have learned about Naomi’s new heating system, replacing the one he installed there 56 years ago, he’d be happy for her,” said Mark Haldeman. “And I’m sure Naomi’s father would have been just as pleased with this one, too.” ■



Haldeman technicians (from left to right) Tavi Nistor, Gary Forry and Bill Aller take pride in a job well done. “The system works like a charm,” said homeowner Naomi Wolgemuth.