

Vive (American) LaFrance!

Turbine-Powered 1961-Vintage Pumper Truck Was

“Red-HOT”



A 1961, 900-Series American-LaFrance 1,000-gpm pumper truck. The engine is by Boeing—a \$10,000 option. The truck was one of three that American-LaFrance built that year and the only one shipped to the East Coast—specifically, to Mount Vernon, Virginia, where Dave Collins worked at the time as a professional firefighter. Note how the clearance between the top of the tire and the front fender opening speaks to how light the engine was. (courtesy Dave Collins).

Energy—how to produce it cleanly and how to conserve it—presents a daunting challenge for developed and developing countries around the globe. And it’s a challenge that is only beginning to be met by those countries’ governments. So it may come as somewhat of a surprise to know that decades ago—a decade before Earth Day—attempts at energy conservation were not unheard of. Witness the turbine-powered 1961 American LaFrance pumper (pictured)—at that time a rare part of the fleet at the fire house in Mount Vernon, VA.

To tell us more about it, the Power Play team spoke with Dave Collins, a 25-year veteran of Fairfax County (VA) Fire and Rescue. “Fairfax County Fire and Rescue is a very progressive fire service,” says Collins, “and I am proud to be able to say that I was a part of such an elite department. We are known worldwide as we have sent crews to Russia, Haiti and other areas in times of disaster. We usually have an employment waiting list of 150 + men and women.”

Inspired by a recent profile of Chrysler turbine pioneer George Huebner in the October 2010 issue of *Hemmings Classic Car*, Collins recalls that the LaFrance pumper was one of three that American-LaFrance built that year, and was the only one shipped to the East Coast—specifically, to Mount Vernon. So Collins had the chance to man the wheel of the pumper many times, even once driving it as far as Washington, D.C. to participate in a special display of turbine-powered vehicles. Here’s how Dave tells it.

“It is a 1961 900-Series American LaFrance, 1,000-GPM pumper. The engine was made by Boeing Aircraft—weighing in at approximately 330 lbs.—and gave us approximately 330 blown horsepower. If you note in the picture, the clearance between the top of the tire and the front fender opening speaks to how light the engine was. The chrome stack—it looks a bit like something off a steamship—was the exhaust stack. The engine was rather unique in that it had an air intake at the front axle. There was an intake impeller, two fireboxes and a second impeller. The first and second impellers were directly connected to each other by a single shaft. There was a third impeller— inches from the second one—with no direct connection. The burning fuel in the fireboxes turned numbers 1 and 2 impellers—the thrust coming off #2 would turn #3. That 3rd impeller was connected to a gear reduction box. Connected to the gear reduction box was a normal flywheel

and clutch and five-speed transmission. Since there was no direct connection between the #2 and #3 impellers, you could put the transmission in gear, hold the brake and let the clutch out until you were ready to move, and then let your foot off the brake and roll down the road. The gear reduction box was needed because the engine idled at 19 thousand, with a top-RPM of 39,000! The starter and igniters brought the engine to 10,000 rpm. At that point incoming fuel was ignited by what was already in there burning. Under normal driving, we came out of the building starting in 5th gear, because if you did normal shifting you lost too many RPMs between each shift. Using 5th gear got you to top-speed quicker. Lower gear starts were more for hills.

“On occasion, when starting the engine, you would get a “hot start”— i.e., flame bursting from the exhaust stack. With no one among us harboring a death wish, we had to install asbestos on the ceiling above the pumper. One more thing—the heat from the exhaust would break the window panes in the door in winter, so we changed the center panes to heat-resistant glass.

“The engine fuel was kerosene.

“The ‘apparatus’ was extremely fun to drive. At the time of purchase, the turbine engine was a princely \$10,000 option.

“A big drawback was maintenance—if we had a problem, we had to fly a Boeing mechanic in to do the repairs, feed him and put him up in a motel. One trip, he decided to stay in our bunkroom and, naturally, it turned out to be a busy time and we ran all night. So he didn’t get any sleep.

“The vehicle was kept in service for about 10 years, but not all of that turbine-driven. The fuel-control governor went out—probably in 1966-67. The cost would have been \$3,000 (at that time) to replace it. The fuel-control governor was, for all practical purposes, a carburetor. But— needless to say—more complicated. Engine maintenance was becoming cost-prohibitive—especially with having to fly in the Boeing mechanic each time.

“When the turbine was removed, a Continental inline six-cylinder was its replacement. The turbine was sold to a racer in California. Eventually, the pumper ended up at our academy as a training piece for the recruits. It was eventually sold at auction.”