

# McFarlane Aviation: The Little Company That Could... and Did!



*By Jim Cavanagh*

I love success stories in aviation; the little guy makes it big; the ordinary Joe becomes a hero; the poor kid becomes an astronaut. These stories make the heart sing and tomorrow worth waking up to. One of my favorite stories is one that I can put my finger on everyday, if I feel like it. It is one of a simple but professional crop duster/mechanic who parlayed his FBO into a multi-national aviation parts manufacturing business. Yep, Dave McFarlane, who started out dusting corn and beans now has fifty employees, thousands of square feet of manufacturing space, and sells his parts to all of the big guys, and the little guys, all over the world.

McFarlane aviation has saved pilots literally millions of dollars by providing these parts. Their biggest sellers, besides cables, are seat tracks and rollers for a number of aircraft, and the flap tracks and rollers for Cessnas. Aileron and flap skins, trailing edges, bushings, tubing, heat shields, and the list goes on and on, and to talk to the, this is still just a start.

Dave and Fred McLenahan, who has been with Dave since before McFarlane Aviation started, use a common sense approach to dealing with a not so common sense industry. Operating a small airport just south of Lawrence KS, Dave and Fred were maintaining a number of airplanes besides their own, and were continually chagrined at the number of parts that were high dollar, certified parts, but wore out on a regular basis. Read "prematurely!" They were flying Cessna Ag planes, Ag Truck/Ag Wagon, and working on a number of Cessnas and ***Fred and Dave, who were mechanics by trade and engineers by nature, decided that the parts could be made better and cheaper.*** This continues to be their business model: build a replacement part that fits exactly, but lasts longer, and is much less expensive. Together they built their first part, ***washers***

***that go on either side of the flap rollers*** and to do everything legally, they went ahead and received a PMA. Since then, they have developed thousands of products and created an infrastructure encompassing 50,000 sq. ft. of buildings, fifty acres and an airport.

When we visited McFarlane, we were introduced to Dan, Dave's son, who is the general manager. Dan has a Masters in Aerospace Engineering, and has been a pilot since high school. He spent a year in England studying math and physics, and was my host for the nickel tour. He has been working around and within the company since he was knee high to fence post, having become intimate with the sub-corporate world of brooms, mops and lawnmowers. Dan was erudite, knowledgeable and very congenial, and knew the facilities well.



***McFarlane Aviation Products Facility***

And the facilities are pretty impressive. Vinland Valley (K64) is not much more than a school; a couple of churches and a few houses nestled in a valley off of County Road 460. The charm of the airport is that along the eastern side of the North/South runway are an old general Store, a church and the oldest Library in Kansas. The runway is very close, almost like Main Street and it is a very pleasant, almost a Currier and

Ives-ish caricature of an old Aerodrome. Tin T-hangars are along the road to the north, full of a Grumman, Taylorcraft, Cessna 140 and a few other Cessnas, and more are arranged south of the old village. The McFarlane complex is the entire northwestern corner of the airport, and the forty acres just south of the current buildings that are slated for expansion.

You can't really say that McFarlane specializes in any one product, because their philosophy is to build what is needed. They are definitely strong in cables and engine controls. Dan estimated that they build round ten thousand cables a year, and they have a number of exact replacement engine controls, as well as some new designs which are being patented before the PMA process. Their catalog is about 3/8-in. thick, or you can find parts on line or on a CD (Free) that mechanics like to load onto their laptops. Adding the parts that they get from other vendors, to create a one stop shopping experience for a needy airman, McFarlane's staff of sales folk offer over ten thousand items for both certified and homebuilt aircraft.



*Wheel Balancer Part Number TOOL108*



*Cowl Saver Baffle Seal Material*

We all know that the economy has played tricks on aviation over the last few years. McFarlane has noticed this and manipulates their manufacturing to reflect the trends. One example of this is a fuel drain, part of which was a casting when they were selling thousands of them a year, but are now machined out of solid stock when they are selling a few hundred. Pure economics. Efficiency auditors have told Dave that they have too much inventory, but again, the company goal is to fill orders, not create back orders.

Dan's tour took us through the engineering offices, where the company's seven engineers, including Dan, are currently working on an estimated two hundred new products and the certification of six completed prototypes. Dave's office is as nondescript as you could imagine for a "reigning monarch", but this is a rather humble, everyday man who thinks more about business than frills. A half completed glass table whose frame is made up of riveted airframe aluminum, and an exercise bike flank his desk, with aviation magazines, including CPA, completing the aviation theme.

The offices are in the old building, which was the new building when I last visited Vinland Valley in the '90's. The old inventory spot is now a mezzanine, ready for office expansion, and through a large door to the east are the engine control and flight control cable shops. Giant rod lathes that thread and finish pieces for their controls are much longer than you would imagine. CNC milling machines with adaptive fittings line the aisles. In the Cable room, that has been soundproofed to protect the outside workers, massive swedging machines that swedge under constant pressure, not a hammering swedge that could harden and fatigue a part, look like they weight a ton each. Layout tables where the lengths of the fixtures are calibrated and dated on a regular basis to ensure the proper length are lighted and lined with bins of knobs, ferrules, and hardware necessary to create direct and Vernier controls for the engine and cowl flaps. Some of this tooling is new as the company is spooling up to do more fabrication for Cessna Caravans. Everything, from doors to floors, is labeled and placarded with safety instructions.

And everything is clean, clean, clean. I need to invite them over to my house!



**Engine Control Assembly Area**

*At this point, we need to mention the synergy between Cessna and McFarlane. When the company was begun, back in the 1980's; this upstart company was Cessna's main Competitor for many of their parts.*

*Dave reiterated his respect for Cessna's engineering and manufacturing capabilities and that Cessna was not purposely building parts that failed or required replacement at regular intervals. "It's just that Cessna's emphasis was on designing and building new and improved airplanes, not redesigning hundreds of parts for legacy aircraft, unless of course, there was a major safety issue identified." Stopping to redesign, retool and build new and improved parts for these aircraft, was simply impractical for Cessna, and this made Dave's job a bit easier. Today, Cessna Aircraft is one of McFarlane's biggest customers.*

Soon to be another of the company's primary customers is none other than our dear old Uncle Sam. Despite the hoops a business has to jump through and the somewhat skeptical appreciation of the government's spending habits, a government contract is a very juicy carrot for a small business. McFarlane is spooling up for a government project, and as soon as the requirements are met, the "I's" dotted and the "T's" crossed, yet another company milestone will be achieved.

This brings to mind the, for lack of a better word, "courage" of Dave et al, to be so deeply involved in aviation. This industry, like no other, is rife with dangers and pitfalls. The constant threat of litigation, the capital

necessary to establish and maintain a foothold, and, particularly having to work with the FAA to achieve Certification would cow lesser men. Aviation businesses in general are nothing less than fiduciary and philosophical heroes, enjoying the good times when they can and taking the lumps when they must... all because they love aviation.

*Dave's company has to answer to the FAA Certification office, in Wichita, and FAA Manufacturing Inspection office in Kansas City. They enjoy a relatively good relationship with the FAA and Dave is quick to tell us that the FAR's are concise, direct, and having been created in the spirit of safety. However problems arise due to continuous change in FAA personnel, general lack of sufficient staffing within the FAA, and lack of continuity or a unilateral interpretation of the FAR's.*

Traditionally, this has been the bugaboo of the industry, particular when interpretations differ so greatly from region to region, while products are being sold and installed on airplanes over an entire continent. Alaska may as well be Mars.

While touring the plant, I didn't see one employee that didn't look happy to be here. Nearly fifty full time employees and a handful of part timers kept things running, and the shipping department, self-proclaimed to be the Best Department in the business, sang and joked and scurried around filling orders. A basketball hoop is in the maintenance hangar, where you can find a full badminton court when there is no airplane inside. Company picnics and an annual Easter hunt for employees and townsfolk keep people close and family oriented. They keep a man sized bunny suit in a trash can marked, "bunny!" They wouldn't tell me who wore it!



In spite of doubling their manufacturing space over the last couple of years, the company is prepared for any growth the future would bring. They put a truck loop into their new shipping and receiving bay, preparing to add other buildings to the complex when the need arises. They had purchased and rezoned forty acres south of their building, along side the airport Dave already owns. They are very, very bullish on aviation and the industry, with the possible exception of too much of our technology and fabrication being taken out of the United States.

McFarlane has a number of parts that are their own design, including some VERY good engine baffling that is flexible and coated with Teflon to eliminate metal cracking via vibration, and a couple of unique and very intelligent engine controls, a throttle control and a mixture control, that this writer predicts are going to become industry standards. It is a breath of fresh air that McFarlane will create a custom piece for an owner and do it in a timely fashion and with quality equal to their certified parts.



*Vernier Assist Throttle and Mixture Controls*

McFarlane is a large company that is run like and seems like a small company. There are no corporate politics, no pressures, and none of the dramatics associated with larger concerns. Sure, it is a family business, but all of the family is friendly with each other and the employees. Fred McLenihan is a true character on his own, and probably deserves his own article. The company is growing steadily in an economy that is

prohibitive and Bearish. And they achieve this by simply doing their job.

What do they have in store for us in the upcoming months or years? Out of two hundred projects waiting in the wings, some will no doubt be ingenious; others mundane but necessary. I can hardly wait!

This piece was a pleasure to write.

*As a writer, I have flown over 180 different aircraft models in 38 years of flying. I have always kept my flying simple, sane and inexpensive, but have had marvelous and myriad opportunities to fly great planes with great people.*

*I have also rebuilt over a dozen airplanes and built most of three Experimentals, developing mechanic and how to skills to relate to readers. A mechanic by nature and inclination, I have not pursued any licenses due to time and no real interest in chasing ratings.*

*I have written three aviation books, thousands of articles and am truly devoted to recreational and personal flying and hands on maintenance.*



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