



# *Mustang* **MASTERS**

CRIPES A MIGHTY • DADDY'S GIRL • RED DOG



Mike Vadeboncoeur and Dave Young.  
*Photos: Greg Morehead*

The airport at Danville, Illinois is hardly the location one would expect to find the home of one of the world's premier restoration companies. A young man named Mike Vadeboncoeur calls the town his home and he has put it on every warbird enthusiast's map. Warbird Digest sat down with Vadeboncoeur and his right hand man, David Young to learn about Midwest Aero Restorations.

Vadeboncoeur's passion for warbirds stretches back three decades. "I had an early interest in warbirds and I started going to Oshkosh in 1976 with the Young family. I was twelve and Dave was five. His mother was gracious enough to pick me up from a camp I was attending in northern Wisconsin every year to attend. My introduction to the Experimental Aircraft Association (EAA) helped foster my interest in warbirds and airplanes in general. The television show 'Baa Baa Black Sheep' was also certainly a factor."

A local Danville resident would cement Vadeboncoeur's lifelong involvement with World War Two aircraft. Henry "Butch" Schroeder had purchased a T-6 in 1975, and several years later Vadeboncoeur's dad introduced them. Schroeder would soon purchase both a Mustang project and a flying example. Vadeboncoeur was able to experience the start of the restoration of what would eventually become 'Lil Margaret.'

After graduating from high school Vadeboncoeur attended the Spartan School of Aeronautics in Tulsa, Oklahoma. While at the school he worked on several warbirds that were being restored by Ken Sternberg. These aircraft were part of the David Tallichet collection. "This was a good experience, for a multitude of reasons. When I returned from Spartan I worked at the local Danville fixed base operator (FBO) and helped Butch in my spare time. An opportunity came along to work at the University of Illinois' aircraft maintenance facility where I did a lot of structural repair work and became the master sheet metal mechanic in the shop. I did most of the project type work and I found I enjoyed it."

While working for the university Vadeboncoeur commuted 30 miles on evenings and weekends to work for Butch. "During routine maintenance on Butch's T-6 we found it had a problem with the splines on the crankshaft so the engine had to be pulled for overhaul. This led to a firewall forward restoration, which then blossomed into a full fuselage restoration. Somewhere in the middle of that project Butch offered me the opportunity to come work for him full time. I elected to do that, albeit with a little ulterior motive. I decided that if I was going to leave a good solid position with the university, I would use this opportunity to evaluate whether down the road I could establish a business doing similar work for others."



Midwest completed 'Daddy's Girl' in 2004 and displayed it at Oshkosh where it won the Reserve Grand Champion Warbird-WWII award. This was the second full Mustang restoration completed by the company. This aircraft, USAAF Serial No. 44-63807, now resides in California. *Photo: James Church*

In 1990 the T-6 was finished and taken to Oshkosh where it won the Reserve Grand Champion Award. When they returned from the event, Schroeder and Vadeboncoeur dug into the restoration of the photo-reconnaissance F-6D Mustang. It was about this time that David Young joined the team. "I had just graduated from high school, and was going to the local community college and I started working with Mike and Butch part time. I grew up in aviation, and my Dad was the sheet metal man who rebuilt the fuselage of the F-6D. At the time I liked it, but I didn't really have a big desire to do it for a living. After I started working on the warbirds and able to do a little hand's on work, I found I really liked what I was doing," recalls Young. He went on the University of Illinois to get his Airframe and Powerplant license and continued to work on the projects.

When the F-6D, named 'Lil Margaret' rolled onto the scene at Oshkosh, it not only received the Grand Champion Warbird award it set new restoration standards. The project caught the eye of other potential warbird owners, and Vadeboncoeur soon found himself fielding requests for outside work. "I slowly just started to break away from Butch. My first project was a Vultee BT-13 restoration for a local resident. Then we did an owner assisted Stewart 51 project for Ken Wagon. Along the way Wagon picked up an interest in a full size Mustang and we helped pick out an airplane for him to purchase. We had the opportunity to move into some larger hangars at the airport. Fortunately the time was right to begin accepting projects and take on Wagon's Mustang, which was our first full-scale restoration." Vadeboncoeur continued to do some work with Schroeder, assisting with the return to airworthiness of his P-47 "Thunderbolt" and starting the restoration of his Corsair. Young continued to work with Schroeder, but would join Vadeboncoeur's newly created Midwest Aero Restorations as the workload grew. He remains an integral part of the team.

To date Midwest Aero has completed three full scale Mustang restorations and has a hand in several others. Currently they have two more projects underway. "Our first ground up restoration was 'Cripes A Mighty' for Ken Wagon. While we were doing that project we also did a fair amount of work for Bob May on his RCAF Mustang. We essentially did a fuselage restoration and finished it to the point that it was ready to go on the wing and then we shipped it back to North Dakota for Gerry Beck's people to complete."

Midwest Aero Restorations prides itself on the highest quality in restoration standards. This extends to equipping their Mustangs as the ultimate stock machines, if that is what the owner desires. Vadeboncoeur shared his philosophy of restoration with us. "I think, looking back, we've learned so much since the days when we did 'Lil Margaret' and of course, Dave and I joined the F-6 project midstream. Butch had already done a tremendous amount of work and he had picked some colors that at the time he felt were correct. The way the trend in restorations has gone, obviously it would have been done a bit differently today. We actually used a fair amount of documentation from 'Lil Margaret', since it was an unmolested airframe when it was started to complete 'Cripes A Mighty.' The things we learned from that airplane were applied to the next, and so on.

Midwest's current project is an ex-Guatemalan airframe that has been in storage for more than two decades. "The airplane that we are getting ready to turn out now was another basically unmolested Mustang and we have documented extensively. Those types of airplanes are just not out there anymore. So many of them have been disturbed in one way or another, with paint or other modifications that it is really hard to interpret the way it really had been. Everything we see that is interesting or unique and that we



can pretty much verify happened at the factory, we document. We take lots of pictures, recording any notes or inspection stamps, etc. – and we pretty much verify whether or not it was something that was done from the factory or had been modified post production. We take lots of pictures”

Vadeboncoeur is quick to point out that Schroeder started a trend towards historic Mustang restorations that continues unabated. “A lot of people say Butch set the bar with ‘Lil Margaret’ by making it as stock as he could with the information at hand. At the time he had a vision that was cutting edge. Others have stepped up and run with that vision, not only our shop, but others as well. I have to give him a certain amount of credit for paving the way. As time has gone on, the bar keeps getting higher and higher. I am not sure how much higher the bar can be set from an authenticity standpoint than we are doing right now. It may become impractical to operate the airplanes if we go too much further.”

Midwest’s projects are customer driven. Some choose a ‘super-stock’ end product while others select what may be a more practical approach to Mustang operations. “Obviously we like to restore Mustangs to their stock configuration, in some way. With Red Dog, our most recent project, the owner didn’t want a completely stock airplane, so we incorporated some of the modern conveniences, such as a Garmin 530, an autopilot ect.. to make it easier to operate. We came out of the traditional stock mold but we still did everything we could do to keep it original from a overall color scheme standpoint. Most airplanes that have not been restored as stock examples in the past have been finished in interior gray, with gray instrument panels, etc. We were able to keep the interior green and the instrument panels and sub panels black like we have done on all our original Mustang restorations. We applied our inspection stamps to add as much originality as



▲ (top) The most recent restoration to roll out of Midwest’s hangar is ‘Red Dog’ built for Dan Baun. USAAF Serial No. 44-74469 is a former Dominican Air Force P-51. Like ‘Daddy’s Girl’ this fighter was the recipient of the Reserve Grand Champion Warbird-WWII award at Oshkosh. Photo: Greg Morehead

▲ (middle) The first full Mustang restoration completed by the company was ‘Cripes A Mighty IV’, USAAF Serial No. 44-74813 which one the Grand Champion Warbird-WWII award in 2002. Ken Wagon of Wichita, Kansas commissioned the restoration. Photo: Paul Bowen



Photo: Greg Morehead

possible. What we created was a really function aircraft with intensive authenticity throughout the airplane. It has the perfect mix. Even when we don't go to the Nth degree to make the project authentic, there are many things we can do introduce the authentic look. We route the wires and plumb the hydraulics in the same way as the factory."

Vadeboncoeur indicates that adding these authentic touches really doesn't add much to the cost of the restoration. "It is really easy for us to add inspection stamps and things like that because we have ready access to them. The little details are where we excel. Again, our experience of tearing apart a number of Mustangs allowed us to find things that maybe other people have never had the opportunity to see or even know it exists."

In attempt to provide the best value for their customers, Midwest farms out a few components to other restoration shops that specialize in certain Mustang components. While Vadeboncoeur doesn't believe that sending parts out to other shops necessarily saves the customer money it does allow the project move at a quicker pace. This has allowed the company to complete a project every two years when it may normally take four or five years.

All of the fuselage reconstruction takes place in house, but the wings are generally sent to Odegaard Wings in North Dakota for rebuild. "We know that by sending them to Odegaard they are put in a good fixture during the spar replacement. We still do the final work here by installing the gear castings, triangle skins in the wheel well area, canted leading edge's and the close out strips. We do all of the work in the wheel wells so that can keep the paint color and quality consistent. We have also replaced some lower gun bay skins and we will generally install the skin over the gun bays. We have used Bill Yoak at Aerospace Specialities to do





control surfaces, such as flaps, elevators and ailerons. We have done them before, but when we are shorthanded it is just much more cost and time effective to send them to Yoak. He has been a real plus for us and we continue to supply him with work.”

The quality of the work that Midwest puts out the door has meant that they have had no problem finding new customers. “We have had to turn down work, because I certainly don’t want to mislead people to get them in the door and then not be able to deliver. It is hard for us to judge how long a project is going to take until we dig into it. We do all of our jobs on a time and material basis. If somebody quotes a job for complete restoration you have to be careful, both as a shop owner and a customer. We’ve heard of many instances where the customer and shop’s relationship fall apart often times due to quoting a job and not being able to fulfill an expectation.

Part of the difficulty in determining the cost and duration of a Mustang restoration is all the hidden problems that may be resident in the airframe. “When we open these airplanes up you just never know what you are going to find in them. We are finding more and more corrosion. As time goes on it is going to be something that more and more Mustang owners are going to have to deal with. Even many of the flyers may begin to have problems.”

One of Vadeboncoeur’s particular concerns is the corrosion that they have recently been finding in the horizontal stabilizers. This is an area that has not been examined in a lot of aircraft and



◀ (middle & bottom-opposite page) Midwest’s current two projects are USAAF Serial Nos. 44-74452 and 44-73343. They are shown here underway. *Photos: Greg Morehead*

▲ The level of detail incorporated into the restoration of ‘Red Dog’ is readily apparent. All the aircraft completed by Midwest contain the same depth of work. *Photos: Greg Morehead*

it can't really be found until they are disassembled...something that was not a regular practice in restorations of the past. "When they are drilled apart we can count on most of the ribs being toast." Young echoes this experience. "We find a lot of things that from outside appearance look okay, it seems fine. When we place it in a blasting cabinet and hit it with a little glass bead, all of sudden, 'boom' it just turns to dust.

Vadeboncoeur and Young are both convinced we are reaching a point with World War Two aircraft that each and every area has to be opened up to look for problems. "About three years ago, in the midst of the 'Daddy's Girl' project we really started to notice it," said Vadeboncoeur. "We were almost ready to paint the wheel wells when we I started looking at an extruded stringer. We had already cleaned it, but something just didn't look right. And I said, 'You know what? Let's mask some of this off. Let's go ahead and blast this with some glass and see what happens.' Poof, it went up. We ended up having to change out three of the stringers in the wheel wells." Intergranular corrosion comes from within, but Midwest's experience is that there is a trigger mechanism that expedites the process. "We have observed, for instance, that a stringer that runs from the wheel well all the way out to the outer wing, will only be exfoliated in the exposed areas. So you have to wonder if maybe at some point it was exposed, maybe unpainted? We are learning that if an extrusion has a gray, grainy textured look to it, that it is about ready to go and needs replacement. The standard Midwest procedure is to now glass bead blast each piece of stringer to make sure corrosion isn't lying just below the surface."

Many of the warbird restorations from the past up to the early 1990s did not take this approach. Most of the fuselages that pass through Midwest require longeron replacements. This is a common spot for intergranular corrosion. "Most of the projects that we have done we have replaced both longerons. I think in 'Red Dog' we were able to save one. It didn't exhibit any characteristics of exfoliation, so after consultation with the owner, we left it in." They have also been replacing the inboard spars. "The inboard spar is a big part of the wing and we have experienced some corrosion and chafing from the clam shell door that can exceed limits over years of operation in that location. We have the wing torn down to that point for the restoration anyway, so it makes sense to replace it. The extra expense is insignificant in the overall cost of the project."

The sense in the warbird community is that many of the earlier Mustang restorations are probably due for a fresh rebuild. With many of the critical parts now being built new and with all of the knowledge gained by recent full tear down projects, the projects done during the 1970s and 80s are likely suspect. "Right now it seems that most of the aircraft that we are doing are the 1960s aircraft. These aircraft had their last significant tear down for a foreign military or early in their civilian career. There are lot of later airplanes out there that look nice on the outside, but maybe don't look so good in the wheel wells. Chances are they don't look so good in areas you cannot see either. There are some airplanes selling out there for high dollars and when they start selling at these price levels, how willing is a customer going to be to invest

in a full tear down? Eventually all of these aircraft are going to need it. In the last few years it seems as though there were two classes of Mustangs. There were the unrestored examples in the 700 to 900 thousand range that you could purchase and then put the half a million required to fully restore it and not be upside down. Now with the low end prices in the 1.2 to 1.5 million range, owners are paying top dollar for aircraft that will need to be restored at some point. Will the market support the additional cost?" Traditionally the market has.

Vadeboncoeur recommends that if a customer has a choice between starting with a project or a flying airplane in need of restoration, go with the flyer. "The viable projects are drying up pretty quickly. Projects are enticing in some ways because generally it is apart so you have an opportunity to inspect. You can see the fuel tank bay and the back side of the spar. That, in some respects, is a plus. On the other hand all of the little stuff that might be missing can drive the restoration company nuts. Trying to come up with all the missing pieces, while not impossible, can be difficult at best. With a flying airplane you have all the pieces, they may not be in the best of shape, but at least they are there." Even with a flying airplane a good inspection is a necessity, and even that is no guarantee of a surprise free restoration. "We did a pre-purchase on the airplane that eventually became 'Daddy's Girl.' The outboard wing spar had a big exfoliated area. No rhyme or reason. We had to look really hard to see that. With airplanes that have fuel tanks in the gun bays, you would have to pull the wing tip extensions in order to see in there. Some owners aren't going to be willing to allow that during a pre-purchase inspection."

In the powerplant department, Midwest has been recommending Roush Aviation for Merlin overhauls. "Roush is a bit more expensive than some of the others, but we are really encouraged by what they are putting into the development of the Merlin engine as a whole. The engine is in pretty good hands right now, and this is the first time anyone has come along to research and develop and fully PMA any kind of Merlin parts. I think that is a huge asset, and we support that because obviously without the engine to drive the airframe, we wouldn't be in business. We certainly want to always look at a reliable power plant to put in a fresh restoration and so far we have good success with them and their customer support. We have two of their engines in two airplanes and we have two more engines in their shop now for future projects. I know we were their first outside customer and we have probably been their most plentiful outside customer. Roush is convenient for us due to location as well."

Midwest Aero currently employs five and they are deep into the throes of restoring two Mustangs. Vadeboncoeur had the opportunity to take over the FBO at the airport two years ago and this has allowed the company to expand into the facilities hangars. Despite their obvious expertise in the Mustang they are interested in taking on other warbird projects as well. "Obviously we have a bit of Thunderbolt experience and small amount of Corsair experience, but we have never really done one from the ground up so it would be



fun to do something different. It might throw a wrench into our comfort level, but we sure would like to do another air force type, like a P-40 or P-47.”

The company has been fortunate to have a loyal customer base and help from within the Mustang community itself. Vadeboncoeur considers Vlado Lench one of his greatest assets. “I’ll say that we feel real fortunate that Vlado is so close to us and willing to lend his expertise, including doing all of the test flights and moving around of airplanes I know he enjoys flying them, but I am sure there is a certain amount of hassle factor in coming down and doing things for us. He is one guy we really feel comfortable having jump in an airplane after we have done X, Y or Z on it. I really value our relationship.

Vadeboncoeur also credits Butch Schroeder with planting the seeds that resulted in his success. “He gave me the opportunity to learn on his watch, and he obviously had the vision with ‘Lil Margaret’ that I now have.”

If all goes as planned, Midwest Aero Restorations will roll out another superbly restored stock aircraft next summer. 🇺🇸



Photo: Greg Morehead

▲ (top) Two of Midwest’s restorations are flown together over Danville. A 24 x 36 poster of depicting this flight is available from Warbird Digest. Visit [www.warbirddigest.com](http://www.warbirddigest.com) for more information.  
Photo: James Church