

Mooney Construction versus the Competition

Written by [Jim Kerr](#) in [Why a Mooney?](#)

I find it interesting that Cirrus is building plastic (err. composite) planes with life-limited airframes and then they try to convince the public that their product is superior to a Mooney. Yes, that's right; the Cirrus and some other composite airplanes have a 10,000 hour or finite life limit of some-sort on the airframe/wings. When you reach the time limit on the airframe it is grounded forever. The sales reps say 10,000 hours is practically forever, so it isn't a big deal. In reality they are probably right. Composite airframes simply will not hold up in the sun, weather, etc. as well as the tried and true metal airplane. They will likely be long gone before they ever see 10,000 hours.

I'm sure my first paragraph will not bode well with our composite friends, but the truth of the matter is they have spent good money on an airplane that will not withstand the test of time. There are many Mooney's out there with thousands of hours and are going strong at 50+ years old. A metal airframe will pretty much last forever if it is given reasonable care.

As a previous Cirrus SR22 owner, I'm willing to bet that there will not be many Cirrus, Diamond, etc. airplanes that make it to 50+ years old. Certainly not as many as there are Mooney, Beech and Cessna's. There are two primary reasons I make this claim: 1) Composite materials cannot easily be refurbished and they break down under stress; 2) mechanics in the field do not have the skills or equipment to properly inspect these structures or access to the facilities required to repair them. Sadly, many of these planes will likely be scrapped over time and the owners will suffer through huge

depreciation losses as savvy buyers start to figure this out.

Accordingly, the fit and finish isn't there either. Simple parts like \$1200 nose gear fairings that crack after one somewhat hard landing; \$1500 cabin door pins that bend in seconds if someone closes the door wrong preventing the door from latching; technological upgrades are very difficult, if not impossible, due to the way they formed the instrument panels; you can't refurbish a composite airframe like metal, so nicks and dings will be a fact of life for these owners...

I'm sure there will be owners like me who are meticulous, but I'm talking about the masses. I've seen Mooney's that sit on a ramp their entire life and even have suspect maintenance, yet they are still airworthy and going strong. This will not be the case with the plastic planes. Of course, the NewCo's know this. They don't want them to last forever. They want to sell new planes, not maintain old ones. In the auto industry they call this planned obsolescence.

The Composite Airframe

Before the critics start throwing stones at me...No I am not making this up. The FAA test data supports this fact. The Cirrus Type Certificate is an excellent example. Not only do they avoid spin certification by using a parachute that if used will kill the airplane, they also can't paint their planes! Or I should more accurately say they can only paint 20% of their plane. 80% of the bird is legally required to be white. Why? Because heat is not the friend of composites. They need to be painted with highly reflective paint to keep the surface as cool as possible or it will start to cure again and weaken the structure. So much for parking on the ramp!

Mooney Construction

I recently visited the Mooney factory in Kerrville, Texas. I can

honestly say I walked away with more respect for these birds than I had before I arrived. Composites are simple quick builds, which is cheaper and faster to construct. Mooney's are not quick builds. The labor that goes into creating these planes is remarkable. Every airplane is literally custom built from the ground up out of aluminum sheets and steel tubes.

The core of all Mooney's is the safety/passenger cage. This is a steel tube constructed roll cage that completely surrounds the passengers. This structure not only makes the plane safe, it also makes the plane strong. Very Strong!



Take note of the triangle shapes built into the cage. A triangle creates the strongest possible man made structure. This cage is why there are very few fatalities in Mooney accidents. The NTSB reports clearly show that if you land somewhat under control in a Mooney, the chances are you will walk away.



The next key structural component of a Mooney is the wing and spar. Unlike the plastic airplanes that have a plastic laminated spar, the Mooney has the strongest spar in the industry. This is why there are very few, if any, in flight breakups of Mooney's. In fact, I've heard stories of pilots that have flown into severe T-Storms and back out the other side with virtually no damage to their airplanes. I don't recommend flying into a T-Storm, but if you did so in a Mooney you'd probably survive and be darn glad you weren't flying a plane with a plastic spar!



I challenge you to look very close at the above pictures and give serious thought to how strong and safe the Mooney is. Then think about how much stronger it all is when it is held together with rivets

and aluminum.

And if strength or safety is not your thing, speed may be. The Acclaim S is hands down the fastest GA airplane out there at a 237 Knots cruise speed! Or if speed is not your thing, maybe it's efficiency. You can go farther on less fuel than any other comparable GA airplane out there... Oh yeah, insurance and maintenance is also less expensive...



We Mooney drivers are very fortunate to have such an incredible and capable airplane. We are so passionate about our birds that we even have a name — Mooniacs. We all honor and respect Al Mooney because he put his heart and soul into designing this incredible M20 airframe. And we are all benefiting from the fact that he engineered them to last forever. And they often do. 252Q has already outlived one of its owners and she's well on her way to outliving me!