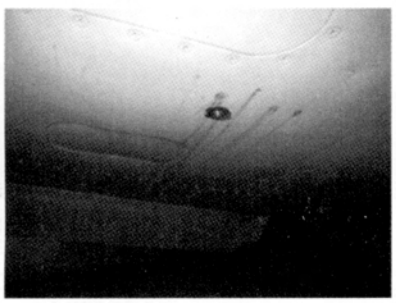
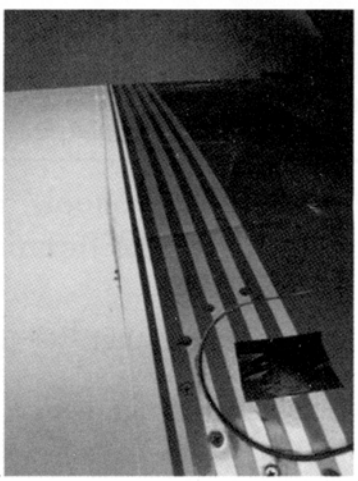
"There are 2 kinds of Mooney, ones that leak and ones that don't leak yet". I've heard that many times but our experience was only with dry ones. The Mooney that I will speak about is a 99' M20R Ovation and is the first one that has an issue with its fuel tank among the 6 Mooneys we've operated in our aeroclub in France since 1988. We've had 4 M20J and 2 M20R Ovation I.

The Ovation started to leak one and a half year ago on the top of the right wing and under it as well. It started with small spots around rivets and ended with fuel trails at the wing skin junction and also with a peeling wingwalk.
As the plane is maintained by a Mooney Service Station in Europe that we trust, we naturally ask them to fix the leaks.



Within a year, the plane has gone 3 times to the shop and cumulated 3 months of downtime and the leaks were still not fixed, and the tank was increasingly leaking. We were really disappointed and were not able to trust them anymore, even if they told us that this repair was still under warranty.

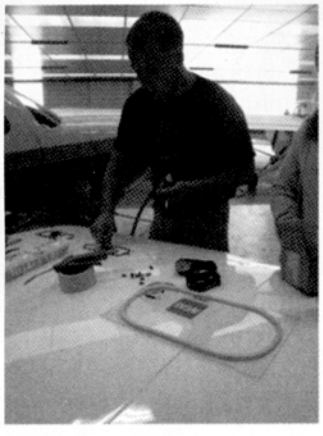
The FAA inspector mentionned that the plane would not be airworthy at the next annual inspection if the leaks are not fixed, because the cabin smells fuel, so we had to fix it to avoid grounding the plane.



I started to browse the internet and learned that tank sealing is not an easy task and it must be done by people familiar with the process. I found out that there are Mooney fuel tank repair specialists in the US. One of them is Willmar Air Service in Minnesota. I sent an e-mail and got a quick answer. They agreed to come over to France to do the work. A few weeks later I picked up Paul Beck of Willmar Air Service at Charles de Gaulle airport in Paris. He flew over with his own tools and sent cargo hazmat materials weeks before.

Despite a long trip from Minnesota he starts to take a look at the plane straight away and was optimistic.

I learned from him, that the key to fix this problem is to precisely identify the origin of the leak. For exemple, if it weeps under the wingwalk, that means that the leaks starts far away from that point, because there is no fuel storage under the wingwalk. To identify the fuel itinery from the tank to the outside, Paul has designed special tools to see inside the tank while applying vaccum and pressure to the tank. This way he can put the sealant exactly where it must be. By the way, he uses 2 different sealants depending on the size of the spot. When you see him at work, you understand that he is an expert at doing it.



48 hours after, we test flew and stressed the plane. Everything was fixed, except a new spot which appeared on 2 rivets in the landing gear area. Paul reopened the wing and found the origin of the leak and successfully fixed it.

Two month later, the plane is still dry...

I had a great time dealing with Willmar Air Service and especially with Paul who is a really nice guy to work with and to talk to. He is the only A&P repairing tanks at Willmar Air Service and works exclusively on fuel tanks. This explains why he is so quick and efficient to seal tanks.

When Paul opened the wing for the first time he found a real mess in it. The Service Center in Europe sprayed an inappropriate thick sealant into the wing tank and as a result it created bubbles and holes causing the fuel to run between the skin of the tank and the sealant itself.

To summarize, it took 4 working days for Paul to fix it, vs. over 3 months downtime for nothing with the previous SC. Even if the trip from the US was costly, it was worth the price to use Willmar to do the work. I can highly recommend them to everyone having fuel tank issues on Mooney.

And my last word is: never let a regular service center work on your tank, ask a specialist.

Patrice Portmann.