

MT Composite Propeller on My G58 Baron

By Craig Sommerfeld

In 2007, I purchased a new G36 Bonanza and changed the propeller to the Flight Resource 3-blade MT composite, with wonderful results. I wrote an article about that experience in the December 2008 *ABS Magazine*. As our business grew, we traded the Bonanza for a 2007 G58 with only 117 hours total time. Just after taking delivery, we saw the press release about Flight Resource obtaining the STC to put 4-blade composite props on this plane.

I called John Nielsen, one of the owners of Flight Resource, and asked if he would be willing to provide the same buy/try satisfaction guarantee as they did for my Bonanza. He said, "Of course we will." He even offered to do the installation at a much reduced fee at their shop in Chetek, Wisconsin. Since I have a summer cabin only 40 minutes from there, I made arrangements to order the props and have them installed to test fly during one of our trips "up north."

This install would be one of the first on a Baron, and they wanted to get some real life flight data on a new G58. We would run back-to-back flight tests to evaluate the MT props to the standard Hartzell.

When the props were ready, I flew up to Chetek. Larry Schlasinger (founding partner and technical specialist) met me at the ramp and made me feel like an old friend. His hangar group is filled with a Cessna 206, Aviat Husky, Vans RV-8, two Cessna 185's, and a Yak 52. All were wearing MT props.

The first thing we did was fill the G58 to maximum gross weight (not hard to do with wet wingtip tanks) and fly some baseline flights to record climb and cruise speeds, temperatures, and general noise/vibration.

Then the Baron went into the shop for the prop swap. I want to comment on the immediate visual difference of the quality of the MT prop system. Wonderful workmanship and built much stronger than needed, but that seems to be the general theme of German production (yes, I am of German heritage and make my living producing machined devices).

The MT props went on and fit perfectly. The longer, more tapered spinner is perfect for this plane. The sweet, sexy look of the four sweeping scimitar blades painted in a rich Rolls Royce Silver is un-describable... just look at the pictures!

After the cowls were replaced and fingerprints wiped away, we pushed it out for a test flight. First impression is the unbelievable smoothness, even at lower idle rpm's. Then when you push the power forward to take off, there is a very different feeling of thrust that comes on faster and stronger than with the Hartzell. The Vr flag on the airspeed tape appeared much faster than before. With gear and flaps up, power at full, and rpm to 2500, I saw climb rates nearly 200 fpm better than the metal props, and much quieter and smoother.

Level at 8,500 feet and at the same weight as the Hartzell tests, we tried different power and RPM settings to evaluate max power and max endurance cruise speeds. The MT again won this contest with an 8-knot TAS improvement and with the added benefit of 15 degrees lower CHTs, even though the outside air temperature was now 45 degrees higher than when we did the same tests with the Hartzell.

In cruise, the MT props are literally turbine smooth and much quieter (6 dB(a)), equal to half the interior sound pressure as measured by a sound pressure meter..

Landings with the MT 4-blade prop will require me to modify my technique to take advantage of the speed at which they react to power changes, and how well they work as speed brakes. When you are landing in gusty crosswinds, this fast reaction to power changes will (and did) save some hard landings.

The bottom line: faster, lighter, smoother, and better looking....Yeah, I will keep them!

