

We were the first domestic 421C operator to convert our McCauley 3 blade propellers to the MT 4 blade system. I would like to carefully preface my assessment by stating that our particular 421 is more highly modified than most, and that I was brand new to the aircraft at the time of the conversion. Our Cessna 421C (Serial number 823) was equipped with vg's and spoilers at the time of the installation and the very next trip we took in the aircraft was to Air Impressions to have aft strakes installed. So, in the interest of full disclosure, I was unable to fully test the efficacy of the propeller installation BY ITSELF in all flight regimes before the addition of aft strakes (which introduces its own set of variables to the performance equation).

Having said this, here is what I DO know:

The MT props are quiet. Perhaps the one metric we fully explored was the effect of this installation on cabin dB. Using a high end decibel monitor, we conducted before and after readings with the old and new props. We noted an immediate 4 to 8 dB reduction in noise (depending on monitor location) in the cabin. Subjectively the quality of the sound changed as well. The only way to describe it is deeper and less obtrusive. Even in a 35" 1900rpm climb, passengers are fully able to carry on normal conversation. The sound quality in the cabin is quieter than most turboprops, and more akin to the cabin ambient noise one would find in a business jet.

Second of all: Vibration. The GTSIO is legendary for its smoothness, but the composite nature of the MT props made an obvious difference in the felt vibration of the reciprocating engines. The propellers flex in ways the metal McCauleys do not.

On the merits of these improvements alone, the owner of this aircraft considers the MT's worth the price of admission.

Admittedly, the noise aspect is a secondary consideration to most operators, and people are most interested in the bottom line performance increase. Here is what I know from our installation. On a standard day at sea level, near gross weight, with McCauley props, we enjoyed a 1000 fpm rate of climb at 130 KIAS up to 10,000 feet. We flew out of Deland (With our new MT Props) at ISA +10C with an indicated rate of climb of 1200 fpm to 5000 feet and 1100 fpm thereafter to 10,000 feet at 130 KIAS. So I can attest (anecdotally) to the improved efficiency of the MT props in initial climb.

To answer the question of top-end speed? Sadly I have no good "before" data to compare to our existing performance figures. Our aircraft has a higher than normal basic empty weight as a result of extensive interior modifications (custom cabinetry, thick leather, divan, galley, Wi-Fi, avionics) so we have never enjoyed the optimistic POH cruise speeds published by Cessna. Furthermore, on the only flight that we conducted without the aft strakes we operated in the low to mid teens. At these altitudes we saw "book minus 5 knots" TAS. I am confident that we have never been the fastest 421C ever produced. The MT props did not propel us (pun intended) into the record books nor did we expect them to. I am confident they have not adversely affected our top end.

I had no control over the timing of the propeller / strake mod installations, but I truly wish I could have collected more before-and-after data for the community. Are we faster? Well, not faster than book, but are we slower? Nah.

Lastly, and I know many of you here will agree, there is such a thing as "the second kind of cool." Setting aside the performance gains, our plane looks very very cool. On the ramp at the FBO, the propellers are invariably a source of comment. It is the first thing the ramp guys notice, and the first thing people want to talk about when we deplane. Those four blades, painted to match our custom paint scheme, with prismatic "Chrome Illusion" tips and the "High Glow" chromed Kevlar spinners lend a "ramp presence" to our aircraft that gets the jet drivers to stop and take a look. How much is cool worth?

I also want to note the high quality of service we received (and continue to receive) from the MT installation shop. We were very pleased with the professionalism and speed of our installation. The folks in Deland accommodated us in every way possible (and we are fairly discriminating customers). John Nielsen and Larry Schlasinger from Flight Resource did everything they could to accommodate our schedule and operational needs, and while they did not in any way solicit my endorsement, I felt compelled to mention their efforts.

If you have any questions at all about our operation, or about these props, I'll happily answer any questions you may have.

Cheers all, keep the shiny side up.

-Tim Stanley – Cessna C421