Life with the 5-blade MT prop

PROP SHOP

I'll back away from commenting on the hardware for a moment and use the question to make an observation about the MT Propeller company and its people. I have some experience running a company, Oregon Aero Inc., and the need to inspire everyone who works with me to practice the highest level of product quality and customer support. A reputation for quality products and service takes decades to earn and can be destroyed in seconds. The integrity of the company behind a product is an issue I'm very interested in.

Several months after we installed the propeller, I had the opportunity to visit with Gerd Mittasch, president of MT Propeller, at his booth at the NBAA convention. He very casually asked me if I still liked the propeller and did I have any observations or suggestions. In my experience, there are few aircraft part manufacturers willing to make significant changes to any product once it has achieved certification. The effort and cost of changes can be staggering, so the inclination is to try to recover as much of the initial cost associated with the design by selling as many as possible before you even consider changing or improving the product. I know this because we faced the same challenge in our company.

In truth, the propeller was such a fantastic improvement in every parameter that it was difficult to suggest there might be any way to improve it. As we talked, I realized that I did have a couple of observations, nothing I thought needed immediate action but things I had noticed. I suggested that there might be a material advantage in the stainless steel used on the leading edge as it was a little soft and easily picked up small debris. I also noted that on the front of the blade surface, at the tips, behind the area protected by the leading edge, the stainless steel seemed to be subject to erosion during the use of reverse thrust. The damage here took the form of small, shallow craters in the surface of the blade. The MT maintenance manual calls for repairing both the leading edge dents and the small craters by filling them with five-minute epoxy. This proved to be a simple and effective fix.

I didn't suggest that we could improve the propeller, but I did notice them as observations.

I should also come clean about an earlier problem unrelated to workmanship or quality control at MT but something that did cause them concern. The spinner is made of tough, lightweight composite construction. MT had a chrome coating applied to the spinner by a vendor. Apparently there was a quality control issue at the supplier, and the coating began to come off in small sheets. When I called to report this problem, a new painted spinner was sent to me immediately while they worked out the issues with the supplier. The painted spinner performed perfectly and gave me no trouble at all. Eventually MT sent me a new chrome spinner which has been a huge improvement over the original. I still have a problem with getting tiny freckles in the chrome, probably from inacts or some type of electrostatic discharge. This issue hasn't been an operational problem, and you must get up very close to the spinner to detect the imperfections. I understand they have a new polished aluminum spinner that will be a no-cost warranty replacement for anyone having any spinner problems.

This is only a microscopic issue compared to what happened next. I knew from doing the original certification test flying of the propeller that the current blade design was not the original blade design but a second and improved blade. Mittasch had been satisfied with the original design. He never tried to sell even one of the original designs to recover development costs. This sort of commitment to quality is almost unheard of. It gets better.

A little less than six months after I mentioned to him that the leading edges were soft and the front of the blade could use more protection, he called me and asked if I'd like to come to the POPA convention a few days early so they could install my new blades for testing. "What new blades?" I asked. The new blades with the hardened nickel alloy leading edges that sweep out to cover half the width of the blade cord at the tip, he replied. While they were testing with the design, they also flushed the blade heaters into the surface of the blade to improve the aerodynamics at the root. I never said I was unhappy with the propeller. I only answered his questions with my observations. This is a measure of both the man and his company. None of us is perfect, but I have a strong sense that doing business with this company will be as satisfying as the products they make.

This gets us to the original question: Am I satisfied with the propeller? In a word, YES! But I should qualify that. I loved the original to such an extent that after the first test flight that I called Chris Finnoff to give him the good and bad news about the experimental propeller. The good news was it was everything MT said it was, smooth as glass, quiet inside and out, offering a huge improvement in acceleration and climb with the added bonus of a couple knots of speed. The bad news was he wasn’t going to get back, and they couldn’t just keep the old propeller.

The newest design maintains all the improvements of the earlier one with the bonus of no dents or erosion whatsoever after 200 hours of operating off asphalt, grass and good runways. These new blades are incredibly durable with the added surprise of a solid five-to-seven-knot increase in indicated airspeed at altitude. Thus, I suppose, is another one of these propellers? The answer to that is an unqualified, YES! It’s probably the best money I’ve spent on this airplane.

I’m not selling this propeller, merely reporting my experience. If you see yourself in here somewhere and enjoy your PC-12 as I do, I’m pretty certain you’ll find this improvement a real joy.

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Listen.

"The Whisper Prop"
5-Bladed PC-12 Propeller

Key Advantages:
- Significant noise reduction – inside and out
- Reduced ground roll distance
- Improved climb performance
- Vibration-free prop – reduces fatigue
- Scimitar, light-weight natural composite blade
- Precision German design and engineering
- FAA and EASA certification

New Nickel Option Includes:
- Nickel wide-cord, leading edge
- Improved boots, flush-mounted, providing better airfoil efficiency
- Black color is standard
- Improved cruise performance
New – Spinner in polished aluminum
(Available as no-cost option)