

THE 5 BLADE MT PROPELLER

BY LOWELL SANDO

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We purchased the prop from Finnoff Aviation, the authorized US distributor. It was installed by Mather Aviation in Hayward, California, while N212PK (SN 668) was in for its annual. This was their first installation, and it went flawlessly.

LOOK AT ME!

The first thing you notice is this is not an ordinary prop. Like Anna Kournikova is not an ordinary tennis player. The blades are curved in all the right places. The square tips are purposeful looking. (What purpose is unknown!) After collaborating with Chris Finnoff, we chose to have the nose cone painted white.



When it arrived, the paint didn't match and screws stood out like...well, they stood out. It turns out you can't get paint off the shelf to match. It had to be mixed by the local paint guy. It is not clear how this will get resolved as the cone arrives pre-painted. Perhaps they will just apply primer. No matter, you can see how great it looks.

LISTEN TO ME!

At engine start, there is no shuddering as RPMs advance through 400RPM. After idle speed is reached, you have to double check the RPMs and look at the blades spinning because the normal, more or less excited, prop noise is missing. The line guys will look at the prop, then catch your eye in the cockpit and then turn back to the prop as if to say, "What is going on here? Where's the noise?" Nice when someone notices how quiet it is – even outside. Then you become aware of the lack of vibration while you taxi to lineup. We continued to notice the reduced prop noise and vibration throughout the test flight – in the cabin and the cockpit.

LET'S GO!

When you set flight idle, the plane moves somewhat more briskly to the runway than you are used to. Not dramatically; just a little quicker up the incline. When advancing the throttle, you'll be really impressed as power goes past 36psi. When you get to take-off power, you will be pressed firmly into your seat. You'll reach rotation speed faster than you anticipate, and it scrambles enthusiastically up to your first assigned altitude. Passengers who have some Pilatus time are likely to comment upon arrival that the plane seemed to get off the ground quicker and it is quieter. I am convinced Finnoff's claim of 15% less runway used for takeoff is accurate.

THE CLIMB!

No matter what your climb style is, you will notice enhanced climb performance: in faster rate of climb or increased climb speed, or both. Where we found really enhanced performance was after reaching 20,000 feet. As all PC 45 drivers know, the PC-12 has a hard time getting up to 28,000 feet especially when heavy. As an experiment on the last trip and at about 9,000 pounds gross, we set power to show 720 degrees ITT and set climb rate at 1,000 fpm. It kept 1,000 fpm all the way to 270, and the AOA indicator had just reached the upper diamond when we leveled off. That compares to about 400 fpm with the old prop. Amazing!

CRUISE!

You will notice less vibration in the cockpit, but with the Bose headsets probably not much noise difference. The cabin is a different story. In addition to the lack of vibration, it is noticeably quieter. An interesting phenomenon is that noise reduction quickly becomes "not noticed" while you remain aware of vibration reduction even after several flights. As to IAS, we really couldn't find any difference from the old prop.

DESCENT AND LANDING

We didn't see much difference in prop performance either, except there is perhaps a little tendency to float as you cross the numbers before going to idle. Putting it into Beta seems to slow it a bit faster, which would be expected.

SUMMARY

In my opinion, this is the best \$55,000 (or so) investment you can make to an otherwise great airplane. The MT Propeller prop is like getting a new engine with another 150 horsepower – only better. It's been on the plane for 4 months now with more than 16 long cross country legs. We continue to be impressed at the enhanced performance, reduced sound and almost zero vibration. I can't imagine how much "kick in the pants" you would get in an NG, but it sure boosts the 45!

*Lowell Sando
Morgan Hill, CA
N212PK*

