Comprehensive Flight Test of Available Certified Propellers for the Extra 300

By Larry Schlasinger and Martin Albrecht

The Extra 300 series of unlimited aerobatic aircraft was originally certified with the MTV-9-B-C/C200-15 composite aerobatic propeller, which provided excellent performance, light weight, safe engine operation and low polar moment. Ten years ago, MT developed the Dash 25 wide chord MTV-9-B-C/C200-25 to increase thrust, provide better down line braking, boost cruise speed and increase controllability in high G maneuvers.

Shortly after MT developed the Dash 25 wide chord propeller, Flight-Resource STC certified it on the full line of Extra 300 series aircraft. Since this introduction, countless Extra pilots have seen the benefit of the new MT Dash 25.

Recently one of MT's competitors introduced their "new" foam core composite propeller to increase the Extra's performance. Their test data is flawed because they are comparing their new propeller to the old MT-15 design, not the new MT Dash 25; therefore, their test results do not show a fair comparison of performance to the latest MT innovation.

The test data for their new prop versus the new MT Dash 25 wide chord propeller is as follows:

Extra 300 Flight test Competitors Foam Core Composite vs. MT Dash 25 Wide Chord.
The propellers were tested on an Extra 330 SC, same plane, same day, same ISA conditions.

Cruise:

ft	rpm	MT Dash 25 Propeller KCAS	Foam Core Carbon Fiber KCAS
9500	2700	161	159
9500	2500	159	158
5000	2700	159	168
5000	2500	167	164

Climb Performance:

The MT climbed at Vy in 3 minutes 15.0 seconds at max take off weight from 2000 ft. to 9700 ft.
The competitor's prop only to 9300 ft.

Static thrust with the MT was also higher by 3-5%.
The MT has 1221 pounds of thrust. The competitors prop has 1177 pounds.

Both propellers are similar in weight and polar moment, so the competitor's prop has no advantage in this category.