

A three-bladed propeller is shown against a blue sky with white clouds. The propeller is dark-colored with a light-colored tip on each blade. The central hub is a light-colored composite material. The text is overlaid on the propeller and sky.

**I N T R O D U C I N G**

**H A R T Z E L L ' S**

**T H R E E - B L A D E D**

**C O M P O S I T E**

**A E R O B A T I C**

**S Y S T E M**

Simply put, Hartzell's new certified composite aerobatic propeller system is designed to help pilots achieve their very best aerobatic performances. Three new composite blade airfoils maximize low-speed thrust with minimal or no weight penalties ... so even with its built-in oil accumulator system and an extra



blade, Hartzell's composite system weighs only about five pounds more than a comparable two-bladed aluminum prop. And better low-speed thrust means better climb and vertical penetration ... so the new system makes it much easier to top-off a line from vertical to horizontal. A major benefit of the system's three-wide chord blades is an added braking effect which permits more time to be spent on downlines. The system consists of three Kevlar composite blades built-up over foam cores, a nickel leading edge that functions as an erosion shield, an aluminum hub and spinner, plus an integrated oil accumulator system to prevent engine overspeed.

 blade, Hartzell's composite system weighs only about five pounds more than a comparable two-bladed aluminum prop. And better low-speed thrust means better climb and vertical penetration ... so the new system makes it much easier to top-off a line from vertical to horizontal. A major benefit of the system's three-wide chord blades is an added braking effect which permits

But beyond exceptional performance gains ... operators of the new system will also enjoy many service and maintenance benefits. Hartzell's composite technology has been proven in years of service in the demanding commuter-regional airline industry where Hartzell blades routinely achieve 3,000-4,500 hours between overhauls (more than twice the average life

*"The new Hartzell three-bladed system improves engine response rates while dramatically reducing polar moments of inertia on the crank."*  
*Monty Barrett  
Barrett Performance  
Aircraft Engines*

*"This Hartzell Composite Three-Blader is the best prop I've ever flown behind. Period."*  
*Patty Wagstaff  
Three-Time U.S.  
Aerobatic Champion*

of the typical aluminum blade).

In aerobatic service, the exclusive unlimited service life granted by

*"Performance on the EDGE 540 aircraft has improved 10%, increasing rate of climb by 300 fpm, and improving vertical performance."*

*Bill Zivko  
Zivko Aeronautics*

the FAA to all Hartzell composite blades should prove particularly useful. Where aluminum blades suffer from erosion and, ultimately, a finite service life, composites can be repaired indefinitely. The system's shorter blade diameter further limits service difficulties from reduced tip erosion. During



determine the prop's torsional inputs on the crankshaft showed tremendous reductions in stress on the engine during strenuous aerobatic operation. The end result is a subsequent reduction in expensive engine work. With more thrust, better climb, faster acceleration, and reduced torque loads on the engine, the Hartzell system can definitely make a positive impact on your flying.

For more information on the new Hartzell aerobatic system, call

**513-778-4392**  
and ask for  
**Brad Huelsman.**



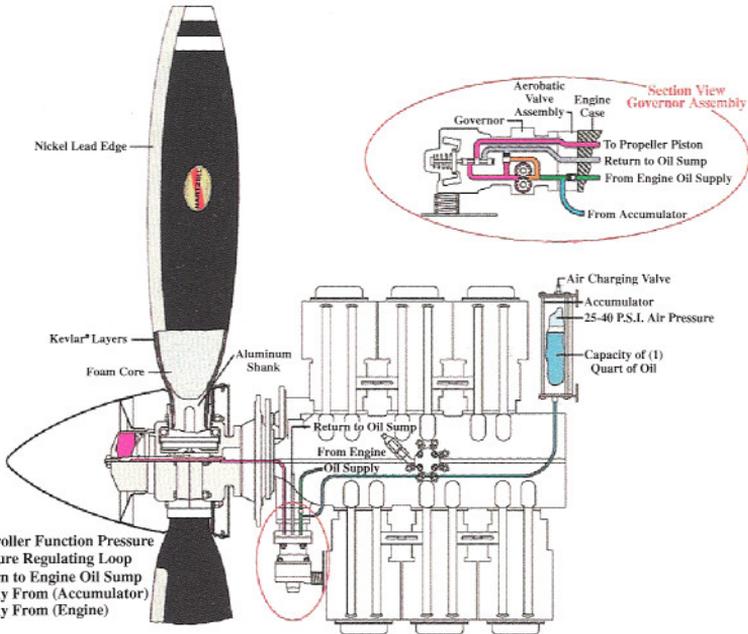
extensive flight testing that included multiple vibration surveys, the prop demonstrated a significant reduction in overall vibration. And specific testing to

*"I've incorporated the new Hartzell in all my latest designs. It delivers the best combination of weight and performance available today."*

*Jon Staudacher  
Staudacher Aircraft*



	<b>3-BLADED COMPOSITE</b>	<b>2-BLADED COMPOSITE</b>
Hub Model	HC-C3YR-1A	HC-C2YR-1A
Blade Model	7690C	7690C
Spinner Model	C-3570(P)	C-3568(P)
No. of Blades	Three	Two
Blade Material	Composite	Composite
Hub Material	Aluminum	Aluminum
Propeller Diameter	78 inches	76 inches
Spinner Diameter	14.3 inches	14.4 inches
Basic Propeller Weight	60.0 lbs.	40.5 lbs.
Spinner Weight	5.2 lbs.	5.5 lbs.
Accumulator Valve Body Weight	5.0 lbs.	5.0 lbs.
Total Propeller System Weight	70.2 lbs.	51.0 lbs.
Polar Moment of Inertia	17.4 in.*lb.*sec <sup>2</sup> .	10.6 in.*lb.*sec <sup>2</sup> .
Engine Model	IO 540 Series	IO 360 Series



# HARTZELL

Hartzell Propeller Inc., One Propeller Place, Piqua, Ohio 45356

513-778-4200 Fax: 513-778-4391

© 1995 Hartzell Propeller Inc.