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JULY/AUGUST 2007

Expedition E350
NEW FOUND EXCITEMENT

SKYKOMISH
Grass Strip, Small Town, Big Mountains

Expedition E350
Tastefully Rugged

by John T. Kounis
photos by George A. Kounis

On one of my first really long expeditions in a general aviation airplane, I invited three friends on a two-week, 3,500-nm trip with stops for sailing, island hopping, and scuba diving. Anticipation was running high until I got out my calculator and announced that each person could take only 20 lbs. of luggage. "My cosmetics case weighs that much!" exclaimed one of the passengers. I prevailed and my friend managed to scuba dive without her makeup on. The trip happened to include my birthday, and due to my strict enforcement of the weight limits, my friends resorted to smuggling a plastic, inflatable birthday cake onboard, which was funny but not as tasty as the real thing.

Many pilots have to choose between taking friends along or filling the tanks. While this isn't a problem for those with no friends, the rest of us are left with a dilemma. Pick the passenger you like the least. Is taking him or her really worth leaving 20–40 gallons of fuel behind? One airplane that doesn't force you to choose is the new Expedition, an airplane that is low on compromises and high on performance.

Launching the Expedition

For decades, Found Aircraft Canada Inc. has made strong utility airplanes that could tackle a wide variety of applications. The Found Bush Hawk has earned a reputation as a workhorse for hauling people and equipment to glaciers, lakes, and backcountry strips throughout Canada and Alaska. Though the company tested a nosewheel aircraft in the 1960s, operators at the time demanded tailwheel landing gear, so a nosewheel model never went into production.

But times—and pilots—have changed. More and more private pilots, as opposed to commercial backcountry operators, have been turning to Found for their personal aircraft needs. Feedback indicates that today's customers want something rugged,

yet refined, with more power. Many also prefer tricycle landing gear for easier ground operations.

Drawing on years of customer feedback on the Bush Hawk-XP, Found incorporated many design improvements into the next generation of Found aircraft: the Expedition E350, based on the Bush Hawk-XP. The aircraft boasts more horsepower, a wider cabin, popular Bush Hawk options such as vortex generators and extended wingtips that have been made standard, and a choice of tricycle or tailwheel landing gear. The E350 is the tricycle gear model, while the E350XC is the tailwheel model suited to backcountry operations.

The last Bush Hawk recently rolled off the line and the company is now concentrating on production of the Expedition. To produce the new airplane, Found launched a new division, Expedition Aircraft. "An expedition is an extended trip by a group of people," says Andrew Hamblin, director of marketing and sales, "and that is a perfect name for the airplane."

A gross weight increase from 3,500 lbs. to 3,800 lbs. yields a 1,550-lb. useful load or 962 lbs. with full tanks—enough for four 200-lb. people and more than 150 lbs. of gear. At 75% power, the aircraft has nearly an 800-nm range with IFR reserves while cruising at 160 kts. True to the Bush Hawk's backcountry roots, STOL performance is not compromised. Takeoff distance over a 50-ft. obstacle at gross weight is 1,215 ft. At 2,700 lbs., the 50-ft. obstacle takeoff distance decreases to 650 ft., delivering phenomenal short-field capability.

The tailwheel model comes standard with a basic interior suited to the aircraft's utility application. The nosewheel model is what Andrew calls "tastefully rugged," and comes with a more refined interior with fabric and fiberglass trim, more suitable to a traveling aircraft for families. Nevertheless, either interior can be ordered as an option.

The time and cost of certification, typically the bane of new aircraft manufacturers, were minimized since both aircraft have the same basic airframe and thrustline as the FBA-2C2 Bush Hawk and are therefore based on the same type certificate. The E350 carries the type designation FBA-2C3, and the E350XC is the FBA-2C4. Ninety-five percent of the parts are interchangeable, reducing parts and inventory costs.

Exploring the Expedition

The Expedition starts out with a welded 4130 steel fuselage, based on the Bush Hawk design. "Our welding shop is one of our strengths," says Andrew; the durability of Bush Hawks in the field attests to that fact. For corrosion proofing, the inside surfaces of the tubes are coated with boiled linseed oil, then the frame is pressurized to 80 psi (for easier crack detection), sealed, primed, and painted with a two-part epoxy. All aluminum parts are coated with two-part epoxy primer before installation. Carbon fiber replaces aluminum and fiberglass in much of the secondary structure, such as the doors and belly pan, improving strength and decreasing weight. The use of carbon fiber reduces noise too, since panels like the belly pan do not "oil can" in flight. The carbon fiber components are not primary structures, so they can be painted any color.

"If you pay over $400,000 for an airplane, you should be able to choose what color you want," says Andrew, "so there is no standard paint scheme." Bush Hawks and Expeditions are delivered in a wide range of colors and styles. Yellow is the most popular color; other styles have included metallic silver or red with a Hawk's Head painted on the nose. The top of the cowling on the test airplane was painted flat black to minimize glare.

The fuselage and flight controls have been streamlined for drag reduction. Among the changes, the doors and door seals have been redesigned to be flush with the fuselage, flush door handles have been installed, and smooth skins have replaced the Bush Hawk's corrugated flaps and aileron skins.

The redesigned cowl sports round cooling inlets, similar to those on most modern aircraft including Cirrus, Columbia, Piper, and Cessna, as well as LoPresti after-market cowls. "Up to 25% of the drag on a light GA airplane can come from cooling," explains chief engineer Bill McKinney. "Older airplanes cool the engine through a large opening in the front and a large cowl flap on the bottom that produces a vortex, generating a lot of drag. By shrinking the inlets and moving them forward, closer to the propeller, they are in a higher pressure area, increasing cooling efficiency and reducing cooling drag." Cowl flaps are electrically activated by a switch on the panel; deflection is indicated by a digital LED indicator.

The cabin is 50 inches wide and 50 inches tall—it feels BIG. The rear seats accommodate three across with ample leg room. During photo shoots, our photographer riding in a Bush Hawk commented that he had a lot of space between the front and rear seats to spread out his gear and maneuver from side to side. The Expedition cabin is even six inches wider than the Bush Hawk he used.

Cargo can be loaded through four doors that can easily be removed with quick releases to accommodate bulky items. The doors swing 180 degrees to lay flat against the fuselage, greatly improving egress, especially on floats. The rear seats can be removed without tools, creating a cavernous, 98.5-cu-ft. cargo area. (As a comparison, a 2007 Ford Explorer has a maximum cargo volume of 85.8 cu. ft. with the rear seats folded down.) Once removed, the rear seats are designed to fit into the float compartments. The squared-off fuselage permits items as large as a 55-gallon drum to be carried both vertically and horizontally. If the rear seats are installed, you can access the 36.7-cu-ft. baggage area behind the seats by folding them forward. There is no outside baggage door, although it would be a nice improvement for loading small items. The rear baggage area is limited to a generous 250 lbs. plus 25 lbs. for the 4.2-cu-ft. hat shelf. Empty weight is 2,250 lbs., which is about the same as a Cessna 206, but the maximum gross weight is 200 lbs. more, at 3,800 lbs.

There is a lot of flexibility where you load passengers and cargo, but you must plan your load carefully. With a baggage area that is 38 inches deep and rear seats that can slide ten inches fore and aft, four people and 200 lbs. of baggage could

The Expedition has its roots in the Bush Hawk XP. The tricycle-gear E350 offers easier ground operations while still delivering STOL performance and good prop clearance.


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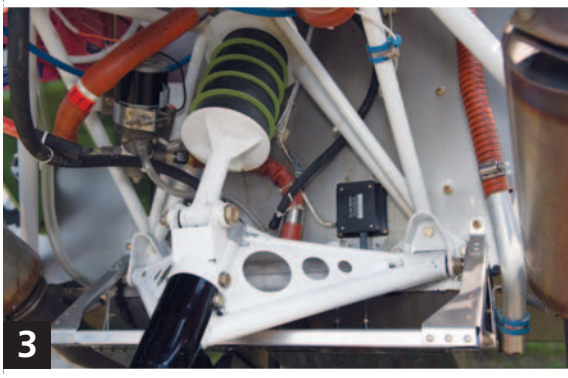
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1. The nosewheel casters through 300 degrees; differential braking is used for taxiing. The rounded cooling inlets in the cowl minimize drag and increase cooling efficiency.

2. The unique split cowl design permits either half to be removed for maintenance.

3. Polyurethane pucks are used for shock absorption on the nose gear.

4. Four doors provide easy access for passengers and cargo. The front doors swing nearly 180 degrees. Flap extension does not inhibit operation of the rear doors.

5. The circuit breaker panel has room for a large number of push/pull circuit breakers.

6. Glass fiber wingtips, which were optional on the Bush Hawk XP, are standard on the Expedition.

7. Dimmer controls, the Avionics Master switch, Fuel Pump, and other switches are on a backlit switch panel on the ceiling

8. The "six-pack" instruments and an MVP-50 digital engine monitor come standard. Annunciator lights for Stall Warning, Over/Under Voltage, Aux Fuel Pump, and "Check Engine" are across the top. Wing flaps and rudder cowl flap controls and indicators are to the right.

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SAFETY HAS TO BE A PRIORITY FOR A COMPANY THAT BUILDS AIRCRAFT TO LAND ON GLACIERS, LAKES, AND BACKCOUNTRY SPOTS THAT WOULD BE A STRETCH TO CALL "AIRSTRIPS."

exceed the aft limit if the seats are all moved aft and you load too much at the rear of the baggage area. Cargo tiedown anchors are installed throughout the airplane, and you can install additional cargo hooks on the seat tracks to prevent cargo from shifting. Even with just one or two of the rear seats removed, you have a nearly eight-foot-long space for carrying items like skis, mountain bikes, and surfboards far enough forward to remain within CG limits.

Safety has to be a priority for a company that builds aircraft to land on glaciers, lakes, and backcountry spots that would be a stretch to call "airstrips." The slow 51-knot stall speed minimizes the total energy on landing (a 10% reduction in speed has more than a 20% reduction in energy). The welded steel tube airframe provides structural integrity in case of a crash, and the four doors provide rapid egress—a critical factor, particularly for float planes. Flap extension does not inhibit opening of any door. The front seats are articulating and reclining with four-point harnesses, and the rear seats have three-point harnesses. For fire protection, header tanks for the fuel injection system are under the floor, sealed away from the cabin.

The tricycle-gear Expedition sits on tapered steel tube main gear; another steel tube connects the left and right gear legs for shock absorption. Rather than using a nose strut, which can be prone to maintenance issues, the nose gear uses polyurethane pucks for shock absorption that the company claims work well as low as -40° F. The result is a firm, stable feel on landing and while taxiing. The nosewheel is not steerable, so steering is accomplished with differential braking. To prevent the nosewheel fairing from getting to close to the propeller, the castering nosewheel is limited to about 300 degrees of travel. This limitation is not noticeable when taxiing, since it is impossible to use more than 180 degrees of travel while going forward, but you will need to use the towbar when pushing the airplane backwards to keep the nosewheel straight.

The standard tires are 6.00 x 6 mains and a 5.00 x 5 nosewheel. The company anticipates approval in 2008 of 29-inch Alaska Bushwheels paired with an oversized nose fork that can accommodate an 8.50 x 6 nosewheel as an option. Aerocet 3400 and Wipline 3450 amphibious floats, as well as Aerocet 3500 and Wipline 3450 straight floats are also approved.

A larger Lycoming IO-580 rated at 315 hp replaces the Bush Hawk's 300-hp IO-540. Dual exhaust further increases rated power up to 3%. Total fuel capacity is 100 gallons, allowing up to 5 1/2 hours endurance at 75% power, and 7.5 hours at low power settings.

Many features demonstrate the company's attention to real-world needs. One of the

FBA-2C3 EXPEDITION E350

BASE PRICE: $459,000 U.S.

The new Expedition E350, has greater power, cruise speed, and range than Found Aircraft Canada's previous models. Its 1,550-lb. useful load and 160-kt. cruise speed make it well suited to traveling with family, friends, and gear. Both tricycle gear and conventional gear models are available, increasing the airplane's versatility and suitability for a wide range of applications.

SPECIFICATIONS

POWERPLANT	315-HP LYCOMING IO-580-B1A
RECOMMENDED TBO	2,000 HR
PROPELLER	HARTZELL 82-IN 3-BLADE, CONSTANT SPEED
LENGTH	26 FT 2 IN
HEIGHT	10 FT 3 IN
WINGSPAN	38 FT 9 IN
WING AREA	185 SQ FT
WING LOADING	20.5 LB/SQ FT
POWER LOADING	12.1 LB/HP
LANDING GEAR	FIXED, TRICYCLE
SEATS	5
CABIN WIDTH	52 IN
CABIN HEIGHT	50 IN
STD EMPTY WEIGHT	2,300 LB
MAXIMUM GROSS WEIGHT	3,800 LB
MAXIMUM GROSS WEIGHT (FLOATS)	3,800 LB
MAX USEFUL LOAD	1,500 LB
MAX PAYLOAD W/FULL FUEL	912 LB
FUEL CAPACITY, STD	98 GAL USABLE
OIL CAPACITY	12 QT
BAGGAGE CAPACITY:	
BAGGAGE COMPARTMENT	36.7 CU FT / 250 LB
AFT CABIN WITH SEATS REMOVED	98.5 CU FT / NO WEIGHT LIMIT SPECIFIED

PERFORMANCE

TAKEOFF GROUND-ROLL	725 FT
TAKEOFF OVER 50-FT OBSTACLE	1215 FT
RATE OF CLIMB, SEA LEVEL	1,250 FPM
MAX LEVEL SPEED, SEA LEVEL	170 KT
CRUISE SPEED @ 75% @ 8,000 FT	160 KT
FUEL BURN @ 75%	18.5 GPH
ENDURANCE @ 75%	4.75 HR (WITH 45 MIN RESERVE)
MAX RANGE (55% POWER)	962 NM
LANDING OVER 50-FT OBSTACLE	1,394 FT
LANDING GROUND-ROLL	610 FT

LIMITING AND RECOMMENDED AIRSPEEDS (KIAS)

V_X	70
V_Y	85
V_A	118
V_{NO}	153
V_{NE}	189
V_{S0}	51
V_{S1}	60

ALL SPECIFICATIONS ARE BASED ON MANUFACTURER'S CALCULATIONS. ALL PERFORMANCE FIGURES ARE BASED ON STANDARD DAY, STANDARD ATMOSPHERE, SEA LEVEL, GROSS WEIGHT CONDITIONS UNLESS OTHERWISE NOTED.

FOR MORE INFORMATION, CONTACT EXPEDITION AIRCRAFT, RR 2, 95 AIRPORT RD, PARRY SOUND, ON P2A 2W8, CANADA, (705) 378-0530, WWW.EXPEDITIONAIRCRAFT.COM.

most common complaints on airplanes with 28-volt electrical systems is that you can't run automotive accessories from the lighter outlet. The Expedition on the other hand utilizes a 10-amp converter to power a 12-volt lighter outlet on each side of the panel.

The airplane owes much of its docile flying characteristics and STOL performance to the thick, one-piece, cantilever wing. The high-lift wing is a NACA 23016 airfoil that has proven itself on a wide range of airplanes from the DC-4 and DC-6 to the P-38 Lightning. The maximum thickness is 11 inches, so it is strong enough that it does not need to be strut-braced, improving visibility, ease of loading, and drag. It takes ten days to make a wing in the large jig that dominates the center of the factory. Glass fiber wingtips increase the wingspan from 36 ft. to 38 ft. 9 in. Vortex generators are standard, and reduce stall speed by 2–3 knots. Hard points are built into the bottom of the wing for attaching cameras or antennas.

Smooth skins have replaced the corrugated skins on the flaps and ailerons. The high-lift electric fowler flaps increase lift all the way up to their maximum deflection of 30 degrees, delivering strong STOL performance.

The basic "six-pack" IFR instruments, an Electronics International MVP-50 glass panel digital engine monitor, an IFR-approved Garmin GNS-430 GPS/Nav/Comm, GTX-327 transponder, and GMA-340 audio panel are standard. Beyond that, the expansive panel is designed for versatility, so it can be customized to accommodate a wide range of avionics options and instrument placement. For example, the MVP-50 can be installed in four locations. This versatility took more work than it appears. Designer Chris Jackson says, "They've thrown a lot of variations at me, and they haven't stumped me yet." To accommodate some of the possibilities, airframe tubes needed to be moved so they wouldn't obstruct deep radios and different combinations had to be tested for overall fit. For better readability, the panel is tilted eight degrees.

The Found Aircraft company has a small, capable, and enthusiastic team. The overwhelming impression I had after touring the facility was that there was a buzz of excitement fueled by innovation, and everyone was happy to be a part of it. For example, Chris was hired in 1998. "Even then there was a sense that something special was going on," he says. About his job designing panels, electrical systems, and some sheet metal design, he adds, "From a tech geek's point of view, this is heaven." This prevalent attitude translates to pride and attention to detail that is clear in the final product.

Flying the Expedition

The Expedition we flew was just finishing final flight testing and was still outfitted

with three airspeed indicators and a large rack of test equipment in the back. Since final tweaking was not yet complete, our performance measurements are preliminary. Performance will likely improve once engineers determine the correct speeds and make final refinements.

As a Cessna 185 pilot, the only surprise for me during the preflight is that there is no strut to stand on when I checked the fuel, so a small stepstool is required. After preflight and pre-start checklists were complete, the Sky-Tec high-torque starter turned the engine over surprisingly fast. If the engine didn't start, I almost thought I could taxi by leaving the starter engaged. Clever placement of the air vent intake behind the propeller meant that cool air blew on my face during taxi.

For our test flight, we had 550 lbs. of people and gear plus 83 gallons of fuel, for a total load of 1,050 lbs. This resulted in a total weight of 3,200 lbs., 600 lbs. below gross. I routinely fly my Cessna 185 at this weight, so I expected similar performance. But on the first takeoff, acceleration and climb were so impressive that they startled me. By the time I pushed in the power and rotated, we were already accelerating well past V_X of 60 KIAS and I had to pull the nose up to a steep deck angle that ended up at a dramatic 20 degrees. At lighter weights, the deck angle increases so much that the slip indicator (the ball at the bottom of the turn & slip indicator) ceases to work well. (On the test airplane, additional slip indicators had been attached to the panel tilted back at various angles for test pilots' use during extreme deck angles.)

In a maximum performance takeoff from a grass strip at 800 ft. elevation on a 91°F day, the airplane lifted off in 400 ft. Under the same conditions, my Cessna 185 requires roughly double that distance, which seems to contradict the fact that the published performance numbers of the two airplanes are similar. Andrew explained that you simply cannot compare book figures between a 1980 airplane and a 2007 airplane. The measurements in 1980 could be made with a test pilot lifting off as soon as possible. However, the measurements for the Expedition and the Bush Hawk were required to be made with rotation at 10% over stall speed and acceleration to 20% over stall speed at 50 ft. AGL. With the restrictive takeoff technique imposed on late-model airplanes creating somewhat pessimistic performance figures, it's likely that a proficient pilot can extract better-than-book performance out of an Expedition.

After takeoff, we pitched to Vy of 85 KIAS and the climb rate settled in between 1,200 and 1,600 fpm. It was bumpy, so precise climb rate could not be determined, but the published figures indicate a climb rate of 1,500 fpm with standard atmosphere. Since we were about 35°F hotter than standard, observed performance was in line with book figures. With the cowl flaps closed throughout the climb, the engine did not break a sweat despite the high temperatures, and cylinder head temperatures were in the 300–334°F range. Cooling capabilities clearly exceed the requirements, so the company is currently modifying the cowl design to reduce drag and perhaps eke out an extra knot or two of cruise speed.

We leveled off at 4,500 ft. to do some air work. Setting 25 inches of manifold pressure and 2,450 RPM produced 72% power and 140 KIAS (about 153 KTAS). The rudder is identical to that on a Bush Hawk, which normally cruises 15–20 knots slower, so it is very effective at the high Expedition cruise speeds. It took some finesse to ease off the rudder and just tap it slightly to coordinate turns.

The tapered wing reduces drag, while delivering better lift and STOL capability.

After acquiring a feel for the rudder, I tried some steep turns. Elevator forces are similar to my Cessna 185, so it required a hefty pull to maintain altitude. However, while pulling 2 Gs, it was impossible to trim nose up, presumably because the linkage and fittings were all brand new and rather tight. I finally learned to crank in some nose-up trim while rolling into the turn, before placing a heavy G-load on the airframe. Electric rudder and pitch trim will be standard on the production models, likely eliminating the problems with stiff manual trim.

Stalls in any attitude and configuration were docile. Chief pilot Ted Dirstein had me try a turning, climbing departure stall, one that typically kills pilots when they

EXPEDITION E350 – PROVEN PERFORMANCE

HORSEPOWER

EXPEDITION E350	**315**
Cessna T206H	310
Columbia 400	310
Cirrus SR22 GTS Turbo	310
Mooney Ovation3	310
Maule MT-7-260	260
Cessna T182T	235
Diamond DA-40	180

BEST CRUISE SPEED @ 75% POWER (ktas)

Columbia 400	198 (12,000 feet)
Mooney Ovation3	197 (8,000 feet)
Cirrus SR22 GTS Turbo	194 (12,000 feet)
EXPEDITION E350	**160 (8,000 feet)**
Cessna T206H	150 (10,000 feet)
Diamond DA-40	150 (6,000 feet)
Cessna T182T	148 (12,000 feet)
Maule MT-7-260	143 (altitude not specified)

TAKE OFF PERFORMANCE - GROUND ROLL @ GROSS WT (ft)

EXPEDITION E350	**725**
Cessna T182T	775
Mooney Ovation3	900
Cessna T206H	910
Cirrus SR22 GTS Turbo	1020
Diamond DA-40	1027
Columbia 400	1300
Maule MT-7-260	Maule does not supply this number

RATE OF CLIMB - SEA LEVEL @ GROSS WEIGHT (fpm)

Columbia 400	1400
Cirrus SR22 GTS Turbo	1304
Mooney Ovation3	1300
EXPEDITION E350*	**1250**
Diamond DA-40	1120
Cessna T206H	1050
Cessna T182T	1040
Maule MT-7-235	Maule does not supply this number

*1400 fpm @ 3300 lb

STALL SPEED @ GROSS WEIGHT - FULL FLAPS (KCAS)

Diamond DA-40	49
Cessna T182T	49
EXPEDITION E350*	**51**
Cessna T206H	54
Columbia 400	60
Cirrus SR22 GTS Turbo	61
Mooney Ovation3	66
Maule MT-7-260	Maule does not supply this number

*1400 fpm @ 3300 lb

BEST USEFUL LOAD (lbs)

EXPEDITION E350	**1500**
Cessna T206H	1255
Mooney Ovation3	1107
Columbia 400	1100
Cessna T182T	1025
Cirrus SR22 GTS Turbo	1004
Diamond DA-40	890
Maule MT-7-260	804

MAXIMUM RANGE WITH 45 MINUTE RESERVE (nm)

Mooney Ovation3	2400
Columbia 400	1300
Cirrus SR22 GTS Turbo	1000
Cessna T182T	971
EXPEDITION E350	**962**
Diamond DA-40	785
Cessna T206H	713
Maule MT-7-260	Maule does not supply this number

AVAILABLE FUEL WITH FOUR 200 lb PASSENGERS AND 100 lbs OF BAGGAGE (USG)

EXPEDITION E350	**98**
Cessna T206H	59
Mooney Ovation3	35
Columbia 400	33
Cessna T182T	21
Cirrus SR22 GTS Turbo	17
Diamond DA-40	Over Gross
Maule MT-7-260	Over Gross

CABIN WIDTH (inches)

EXPEDITION E350	**52**
Cirrus SR22 GTS Turbo	49
Columbia 400	48.2
Cessna T1206H	44
Mooney Ovation3	43.5
Cessna T182T	42
Diamond DA-40	42
Maule MT-7-235	42

With a 160-kt. cruise and a wide variety of avionics options, an Expedition is just as at home in busy terminal areas as it is in the backcountry.

make a low pass and then pull up abruptly into a climbing turn. When we stalled in a 60-degree bank, the airplane instantly rolled level and recovered into a climb as soon as the backpressure was released.

I hesitated when Ted suggested I apply full right aileron in a power-on stall; it seemed like a perfect way to enter a spin. But he finally convinced me—he is the chief pilot after all. The ailerons were effective throughout the stall and full aileron deflection produced no adverse effects. The ailerons have two degrees of washout, so they do not lose effectiveness in a stall. In fact, the ailerons can even steer the airplane out of a spin in most configurations (the flight manual still recommends the safer procedure of stopping the rotation with the rudder, though).

It seems that no part of aviation is wrought with exaggeration more than cruise speed, so I was curious to see if the claimed cruise performance of 160 knots would actually materialize. We climbed to 7,500 ft. to measure it for ourselves. Setting power to 23.7 inches / 2,610 RPM, the Electronics International MVP-50 digital engine analyzer indicated we were producing 75% power while burning 18.5 GPH. True airspeed settled in at 163–164 knots, verified by the Garmin GNS-430 GPS by averaging upwind and downwind groundspeeds—a tad higher than the 162 KTAS predicted by the flight manual.

AT THE END OF OUR PHOTO SHOOT, I FIREWALLED THE THROTTLE TO HEAD FOR THE AIRPORT, AND THE EXPEDITION PULLED BRISKLY AWAY FROM THE BUSH HAWK, LEAVING IT IN ITS WAKE.

The substantial performance improvement over the Bush Hawk became apparent during our photo shoot, when we flew an Expedition in formation with a Bush Hawk that was cruising at a high power setting of 24 inches / 2,400 RPM. At the end of our photo shoot, I firewalled the throttle to head for the airport, and the Expedition pulled briskly away from the Bush Hawk, leaving it in its wake, despite the fact that both aircraft were already cruising at about 120 KIAS.

The high flap extension speed of 115 KIAS helps you dissipate all that speed when you need to land. Unlike my airplane, which balloons on flap deflection, pitch change is neutral in the Expedition. Although I prefer manual flaps, the electric flaps deployed quickly, so it was not a handicap. Maximum flap deflection of 30 degrees reduces stall speed to 51 KCAS at gross weight. At light weights, stall speed decreases below 50 knots.

During our test flight, a 10-knot crosswind component blowing through trees beside the runway created unpredictable gusts and burbles. The Expedition handled it well with no surprises. With higher approach speeds required by the gust factor, the shortest landings we made that day were in the 600–800-ft. range. In calm winds, landings shorter than 500 ft. should be possible.

Availability

The Expedition will debut July 23–29 at Air Venture 2007 in Oshkosh, Wisconsin, at an introductory price of $459,000 (U.S. dollars). Deposits of $10,000 to secure a delivery position will be accepted at the show. Transport Canada and FAA certification should be received in the spring, and production should start soon thereafter.

Who Needs an Expedition?

During three days of flying the Expedition from Toronto's Class B airspace to the remote coastline of Georgian Bay, from grass strips to paved strips, and from 50-knot air work to the 160-knot-plus cruise, the Expedition showed unmatched versatility. It is truly a 160-knot STOL airplane, and performance shines at both ends of the spectrum. With a useful load of more than 3/4 ton, you won't have to enforce strict baggage allowances like I did when I first flew my friends on vacation. I would recommend the airplane to anyone who likes to travel with a bunch of gear and has more than one friend. ■