

# The Handsome, All-Terrain Bush Plane

*Plane & Pilot*

*James Lawrence*



Larry Labor followed a life path many pilots can identify with: After learning to fly in his youth, college, career (pharmacist) and family all conspired to keep him from the joys of the sky for decades.

As retirement loomed, the former ultralight pilot dreamed the dream of wings again. "I was interested in low and slow flight," he tells me as we stand in a chilly fall breeze at his home base, northern Vermont's pristine Island Pond Airport. "'Low' means under 5,000 feet and 'slow' means in the 62 to 80 mph range," he continues. "But I wanted the potential for more performance than that."

In his search for the right LSA, he met Tony Watkin, owner of BushCaddy ([www.bushcaddy.com](http://www.bushcaddy.com)), a sport aviation manufacturer that lives just over the U.S. border in Summerstown, Ontario. Watkin produces a fleet of rugged, all-metal, classic-style bushwhacking aircraft: Five are Experimental Amateur Built kits, and one is an S-LSA/E-LSA model. It's called the Sport.

The company offers a surprising bounty of engine packages, too, from Rotax, Lycoming, Jabiru and Rotec, to the new Italian MW Fly engines (with six hp ratings from the same block—see sidebar).

Labor wanted a step up in performance from ultralights and backcountry flying muscle, too. And the Sport's affordable price of \$89,900 (Canadian) didn't hurt, either.

Perhaps the biggest draw of all: The "convertible" nature of the Sport. "We have lots of lakes up here," Labor says, highlighting the S-LSA's ability to convert from taildragger to tricycle-

gear mode in two to four hours, and both configurations come with the purchase. The Sport can be rigged for float and snow-ski flying, as well. "Now every lake becomes a new airport," he beams. "In winter, you can land on the ice, talk to the fishermen and share a cuppa coffee."

Labor drove up to the BushCaddy factory to spend a whole day with Watkin. "I fully enjoyed seeing the intricacy of the jigs, most of which are CNC computer-controlled, and the entire building process."

Sold on the airplane, he heard of a low-time, factory-built version of the R80 kit (forerunner of the Sport). He made the deal, and here we stand on the 2,600-foot-long, golf-green-like runway of Island Pond. Newly retired, Labor has logged 70-plus hours in the good-looking, all-aluminum bird.

### **A Talk With The Maker**

Earlier, I had talked with Watkin, who shared some of the finer points of BushCaddy's airframe. "We use a 6061-T6 extruded-cavity aluminum frame and skins, which are highly corrosion resistant, along with some 2024-T3 and 4130 chrome-moly steel structural elements. But predominantly, the aircraft is aluminum."



*BushCaddy owner Larry Labor has logged more than 70 hours in his new LSA. Labor's 75-year-old friend, Phillip Gervais, is also a pilot and has no intention of giving up flying.*

The robust airframe is built with lots of stringers and longerons. "The original design was created for float operations up in Canada," said Watkin, "which can be very hard on an airplane.

"But even after a significant amount of use," he said, "our inspections don't find issues. That's very rewarding. With some aircraft, there's not a lot of structure to attach skins to, and they can tend to oilcan in flight.

"Our airframe stays very rigid. It's built like a tank," Watkin added.

He added that he's not knocking the competition. "But our task is to build strong for bush flying and float flying." That's no easy challenge when your all-up weight is restricted to 1,320 pounds.

Even so, the Sport comes in empty at 750 pounds, a respectable number given its challenging mission: Many S-LSA tip the scales at more than 800 pounds.

Some comparisons: Cessna 162 Skycatcher (830 pounds) and Czech Sport Aircraft SportCruiser (740 pounds), both all aluminum; Tecnam P2008 (780 pounds) and Flight Design CTLS (790 pounds), both carbon-fiber composite.

The Sport gets some help in the weight department from its standard no-flaps configuration (available as options).

"It lands extremely well without flaps anyway...and sideslips like an absolute demon," Watkin explains.

Standard tanking for the 100 hp Rotax 912 setup is 20 gallons: 10 in each wing, which gives a range under 400 miles. Labor's airplane has 24 total gallons. EAB kit versions come with varying fuel capacities depending on owner preference.

### **Caddy Shack**

"It's a very stable platform to fly in," Labor tells me. He prefers left seat, so I put on my copilot hat, and we settle in. The seats are comfortable and very nicely upholstered. The Sport is configured in tricycle-gear mode, and the view on the ground is fine.

Its analog panel is roomy, well laid out and abetted with a Garmin GPSmap 496, Icom IC-A200 radio and a Garmin GTX 320A transponder. An optional "high-end" glass panel is available.

The interior is attractive, clean, tidy and decently appointed with carpeting throughout the cabin. Hydraulic toe brakes do a great job with the castoring nosewheel: Taxiing is a breeze, and the toe pedals are well positioned.

Something unfamiliar draws my attention: the center-mounted stick with a Y-handle. That allows either occupant to fly and helps with easy cockpit ingress/egress. Plus, there's only one stick to rig, saving weight. There are dual rudder pedals and panel-mounted throttles.



I'm used to having the stick between my legs or a centric yoke on the panel, so I'm curious how it will feel flying with this center console-mounted, almost-level (angled about 20 degrees up from horizontal) grip in my left hand.

As we run up at the business end of the strip, my host tells me pilots he has taken up to introduce them to light sport are amazed how stable it is.

"Once you trim it up properly," Labor advises, "it's hands-off flying."

With the 100 hp Rotax 912 warmed up and ready to go, Labor demonstrates a STOL takeoff, holding the more-than-ample brakes until full power, then letting her go. We're off in just a few seconds and perhaps 250 feet—quite nice for a 1,100 feet MSL field elevation and near-gross weight.

Climbout at a cruise climb of 70 mph—all readouts on the panel are in mph—is in the mid-to-high 700 fpm. The Sport sees better than 1,000 fpm at best climb speed.

Forward view over the cowl is excellent. Headroom (I'm 5 feet 11 inches) feels like about four inches. An optional overhead skylight is available.

Visibility is good left, forward and right. My forehead is a foot back from the leading edge. Eye level to the side is slightly above the bottom of the wing; a slight duck of the head brings

the bottom wing surface into view. A bulge blister in the Plexiglas doors gives good down/back visibility.

General air work reveals the Sport's stable, forgiving personality. Stalls are essentially non-events: lower the nose, power on or off, and you're flying again.

Handling with that Y-handle proves a bit challenging. I never quite finesse my turns in the few minutes we fly. Still, I can accomplish some decent Dutch rolls. It shouldn't take but an hour or two to dial it in—every airplane in time teaches us the right touch anyway.

A smallish tendency toward adverse yaw in banks touches up readily, thanks to the big, effective rudder. Roll pressures are fairly light and nicely responsive. Overall handling is solid, dynamic stability is ever-present: It's a good, friendly airplane through and through.

Landing feels like riding the train into the station: It's on rails. The stable descent finishes with predictable feedback during round-out and flare, with an easy, gentle touchdown and no funny business.

Labor does flybys for my camera and demonstrates the Sport's short-field chops. When we're done, I bid adieu to northern Vermont, satisfied that I've found an affordable S-LSA that's ideal for pilots who dream of versatile land/snow/water backcountry flying.

And for you cold-winter pilots who might wonder, this bush baby's cabin heater works just fine!

### **Speaking Truth To Power**

If you've looked into LSA, you're likely aware that the Rotax, liquid-cooled, four-stroke family of powerplants lives under the cowl of around 80% of all models.



There are many contenders for the propulsion throne, however: those mentioned above, proprietary engines from airframe makers such as CubCrafters' 180 hp CC340, auto engine conversions, after-market mills such as the UL 260i, Viking and ICP M09, and more.

Now comes the AeroPower series of engines from Italian manufacturer MW Fly. BushCaddy's Tony Watkin added MW Fly to his stable of power plants to serve his diverse fleet.

Several versions are available from 95 to 150 hp, with 180 hp and 220 hp versions in development. The gestation of the fuel-injected, electronic-ignition, liquid-cooled, four-cylinder, horizontally opposed block has spanned 10 years.

Watkin likes it because, "the same engine package fits all our models: The mounting parameters are the same, which gives installation consistency."

That lets him offer any horsepower in the range to kit builders without having to change motor mounts or electrical, coolant or engine sensor connections.

Watkin is the Canadian rep for MW Fly. "We are developing the network here and in the U.S. so we can send a technician anywhere to help with troubleshooting fitting issues."

To date, MW Fly has sold 100 engines; 70 are flying worldwide.

The 185-pound dry weight and 115 hp version is equivalent to the Rotax 914, but costs \$16,900; the 914 goes for more than \$31,000.

Standard features include overhead cam, fully balanced composite crankshaft with ball bearings, needle bearings and splash lubrication—even with complete failure of oil pressure, the engine will keep running indefinitely.

The Italian company sees itself as a direct competitor to Rotax. The engine runs at a lower rpm (max: 3,950) than the Rotax (max: 5,800) and has a recommended TBO of 2,200 hours. MW Fly's engineers consider that a conservative figure: They expect to reach 3,000 hours.

One interesting wrinkle: the ADC variable compression feature. Engine compression goes to 5:1 at lower rpm settings such as startup and taxiing. That lets it operate more easily due to less internal resistance, which puts less strain on the engine, gearbox and battery.

There's no kickback on start-up and shutdown from the gearbox, for a smooth operating feel. When more power is needed, the compression automatically jumps to 10.5:1, but as engine co-designer Stefano Marella told me, "You don't feel the difference at all."

"Even though the 95 hp version is a bit heavier," says Watkin, "we expect better performance than with the Rotax 912. It's a very 'torquey' engine, so we can run a longer prop and displace a lot of air."