

Fred George

Senior Editor

fred.george@penton.com



Nextant 400XTi

New Life for Hawker 400A/400XP

THE BUYERS' MARKET FOR LIGHT JETS IS STRONGER THAN AT any time in decades, with upward of 200 aircraft available. Well hidden among all that inventory are a scant few Nextant 400XT and 400XTi aircraft that are true bargains, priced at less than \$3 million for the first 2011 models and up to \$4.7 million for 2015 units. The newer XTi aircraft have more-space-efficient interiors, super-sound-proofing and plush passenger seats, among other upgrades.

Most of these aircraft originated as Flight Options Beechjet 400A/Hawker 400XP aircraft that were "remanufactured" by Nextant Aerospace with reconditioned airframes, overhauled rotatable components, new primary wiring harnesses and Rockwell Collins Pro Line 21 avionics. Most notably, Nextant installs new 3,052-lb.-thrust Williams FJ44-3AP turbofan engines that boost climb performance, burn one-third less fuel in cruise and have considerably higher TBOs compared to the original Pratt & Whitney Canada JT15D-5 powerplants. Fill the tanks and this aircraft comfortably can fly 1,700 to 1,800 nm at Mach 0.70.

Similar to Bombardier Learjet 45-series aircraft, the Nextant 400 XTi has a flat floor and a non-circular fuselage cross-section that provides more head and shoulder room. Nextant guts the interiors and installs new acoustical insulation, a more volumetrically efficient interior shell and LED lighting. One of the most popular cabin layouts involves a right-side three-place forward divan and redesigned left-side galley, four new club chairs aft of the door and an upgraded lavatory with optional belted potty seat. The result is one of the quietest, most comfortable and space-efficient cabins in the light jet class.

All of the cabin luxury kit offsets the weight savings associated with the FJ44 engine upgrade, so typical BOWs are close to 11,000 lb. That yields a meager 600-lb. tanks-full payload. But most operators seldom carry more than three or four passengers. Each additional passenger costs about 100 nm of range.

While the 400XTi's runway performance is not best in class, it's improved over the Beechjet 400A/Hawker 400XP, being most apparent when departing hot-and-high airports. Taking off from *BCA's* 5,000-ft. elevation, ISA+20C airport, the 400XTi can depart at MTOW, a 470-lb. improvement over the original aircraft.

The aircraft can climb directly to FL 430 in 30 min., but most operators initially level off at FL 410 until burning down 2,000 lb. of fuel. Then, they'll climb as high as FL 450. Assuming long-range cruise, first-hour fuel burn is about 1,200 lb., second hour is 900 lb., third and fourth hours are 800 lb. and fifth hour is 700 lb. Normal cruise speed is Mach 0.73, but many operators push up the throttles to cruise at Mach 0.76 to Mach

0.78 redline on shorter range missions. Long-range cruise is Mach 0.69 to Mach 0.71, depending upon aircraft weight.

The semi-super-critical airfoil has 20 deg. of sweep and only 241 sq. ft. of area. That yields a hefty 67.6 lb./sq. ft. wing loading for a comfortable ride in turbulence. Nearly full span Fowler flaps enable the aircraft to have respectably low V speeds. Manually actuated spoilers provide roll control and heavy roll control forces at high speeds. But operators also say the aircraft could use more roll control authority at low speeds in gusting wind conditions.

The wing's drag divergence Mach number is a respectable Mach 0.84 and transonic pitching moments are moderate, according to *BCA's* September 1982 report. The aircraft can cruise as fast as Mach 0.78, making it quite competitive with the fastest current production light jets.

Wheel brake life never was one of the aircraft's assets. But operators say they fly at lighter weights because they

need less reserve fuel. Also, the FJ44 turbofans produce much less idle thrust on the ground than did the JT15D-5s, so pilots don't have to ride the brakes during taxi to control speed. The result is up to 500 landings between brake changes.

Refueling the aircraft is not easy. Each wing has a fuel port, plus there's a third port, high in the right, aft side of the fuselage, that is used to refill the five fuselage tanks. However, fuel transfer from the fuselage tanks to the main wing tanks is automatic.

Aircraft without vapor cycle air-conditioners are uncomfortable during ground operations in hot climates. If the aircraft you're considering only has the standard air cycle machine, consider retrofitting it with vapor cycle air-conditioning, operators advise. Auxiliary electric heating is popular among folks who operate at cold weather airports.

Aftermarket services from Constant Aviation, the sister company to Nextant Aerospace that provides product support, is excellent, according to operators. Williams' TAP Blue power-by-the-hour program costs about \$160 per engine. Aircraft enrolled in TAP are eligible for 5,000-hr. TBOs.

Principal competitors for the Nextant 400XTi are the Cessna Citation CJ3, which has comparable range and better runway performance but a smaller cabin cross-section; the Embraer Phenom 300, which has a larger cabin and better runway performance but slower cruise speeds; and the Bombardier Learjet 40/70XR with its larger cabin, higher cruise speeds, better runway performance and more range.

The choice depends upon your budget. If you're in the market for a commodious cabin, rock-solid reliability and 400+ kt. block speeds, but you can afford to give up a little runway performance, it's tough to beat the value of the Nextant 400XTi. **BCA**

