

# FLYING MORE PROFITABLE SKIES

A BLACKHAWK  
MODIFICATIONS  
CASE STUDY



## THE PROBLEM

### *Caravan Performance and Dropzone Profits*

Owners and operators in competitive markets constantly face the challenge of gaining an edge over other companies in airplane performance as well as operating and maintenance costs. This is all the more important in today's uncertain economic times, when demand for services may decrease, customers (seeking to maximize

their own returns) raise expectations about the performance and value of services delivered, and operational cost factors beyond the owner/operator's control (like fuel prices) increase. The owner/operator's future may hinge on the reliable delivery of high-yield services at a quality better than those offered by the competition.

## STANDARD CESSNA 208B

18 PASSENGERS X 12 LOADS

2 1 6

DAILY SLOTS

— VS —

USE HALF THE FUEL, CLIMB FASTER, & DOUBLE YOUR DAILY SLOT PRODUCTIVITY

## THE SOLUTION

### *Blackhawk Modifications Engine Upgrade Systems*

Blackhawk Modifications' engine upgrade systems help operators gain and keep a competitive edge by increasing performance and safety margins. They effectively increase an aircraft's capacity for carrying payloads and generating revenue. These upgrades also provide superior reliability and warranty provisions and help owners and operators better manage maintenance costs and aircraft availability.

Performance, reliability and availability are critical. Skydive Hawaii vies with other skydiving operators for the business of tourists, students and professional skydivers seeking a unique view of the Hawaiian Islands' beautiful scenery. Based at Dillingham Airfield in Waialua on the northwestern coast

of the island of Oahu, Skydive Hawaii is the only Cessna Caravan skydive operator on the islands. Flights are limited to a window of about six daylight hours.

In 2012, Skydive Hawaii purchased a Blackhawk Modifications XP42A upgrade for its Grand Caravan 208B, which replaced its 675-shaft-horsepower (shp) Pratt & Whitney Canada PT6A-114A engine with an 850-shp PT6A-42A. When Blackhawk's XP42A upgrade for the Caravan 208A gained FAA supplemental type certificate approval in June 2013, Skydive Hawaii became the first customer for that upgrade system. The benefits were clear as soon as Skydive Hawaii's upgraded aircraft went into service.

## BLACKHAWK CESSNA 208B

20 PASSENGERS X 22 LOADS

4 4 0

DAILY SLOTS



**58% LESS**  
FUEL USAGE PER LOAD

CLIMB FASTER

**12000** FEET  
IN ONLY  
**9 MINUTES**

Statistics based on a case study with Skydive Hawaii using the Blackhawk Modifications XP42A upgrade to their Grand Caravan. Flights are limited to a window of about six daylight hours.

“With the XP42A modification, our 208A is the fastest civilian skydiving aircraft in Hawaii,” Hinshaw said. “This Blackhawk Caravan upgrade is great.”

**Blackhawk’s XP42A upgrade of the Grand Caravan 208B upgrade enables Skydive Hawaii to carry more skydivers and instructors to altitudes.** The upgraded 208B reaches a regular skydiving altitude of 12,000 feet within 9 minutes — twice as fast as a standard 208B — while consuming 58% less fuel. The aircraft is still climbing at 1,300 feet per minute when it reaches that altitude. It also can descend from 12,000 in 2.5 minutes. All that means more flights each day and more efficient operating costs per passenger, giving Skydive Hawaii a major competitive advantage.

“We can go higher with no noticeable increase in fuel use,” said Skydive Hawaii’s founder and

president, Frank Hinshaw. “We can carry 20 passengers instead of 18 with our increased useful load and fly 22 loads a day instead of 12 because of the improved climb rate.”

An important segment of Skydive Hawaii’s business is serving skydivers who seek the adventure of high-altitude, low-opening (HALO) jumps from 20,000 feet or more. Aircraft performance, reliability and availability are critical to its success in the market. Blackhawk’s XP42A upgrade of the “short” Caravan 208A allows Skydive Hawaii to carry a full skydiving passenger load all the way to HALO altitude within 20 minutes while burning less fuel. The upgrade has boosted Skydive Hawaii’s daily HALO flight capacity by 50 percent

(compared to flights powered by the PT6A-114A) while reducing its cost of providing that service. As a result, Skydive Hawaii is considering an expansion from weekly to daily HALO service and a reduction of its price for HALO flights to spur even more business.

The XP42A upgrade system also improves takeoff performance, requiring less runway for takeoff rolls and improving the modified aircraft’s ability to clear obstacles. The upgrade’s greater power also increases the aircraft’s safety margin, providing more optimal performance during takeoffs and landings, officials add.

FLY MORE DAILY LOADS  
WITH MORE PASSENGERS PER TRIP



**THE XP42A UPGRADE SYSTEM**

*Your Faster, Higher, More Efficient Option*

In addition to the new PT6A-42A engine, the upgrade includes a factory-new, 100-inch diameter Hartzell propeller with four wide-chord blades or 104-inch diameter three-blade Hartzell propeller and a new, carbon-fiber composite, cowling and high-efficiency inlet duct produced by Blackhawk Composites.

The upgrade also includes a four-point engine mount-ring assembly and all new engine mount isolators; a new, 40-percent-larger oil cooler; a new engine hose kit; new

Blackhawk Hawkeye DigiLog engine gauges, as well as a flight manual supplement with full, flight-test certified performance, maintenance and repair manuals and full technical support for life of the airplane.

The PT6A-42A has a 3,600 hour time between overhauls with a qualified trend monitoring program; that can be increased to 5,000 for qualified skydiving operators. This, combined with the greater cost predictability of a new engine, helps Skydive Hawaii become a more profitable dropzone.

**MORE MONEY FOR YOU**

**(254) 755-6711**

[info@blackhawk.aero](mailto:info@blackhawk.aero)



[www.blackhawk.aero](http://www.blackhawk.aero)