



Caravan

Cessna's Swiss Army Knife with Wings!



J.D. Lewis and LeRoy Cook

Caravan: Cessna's Swiss Army Knife with Wings!
by J.D. Lewis and LeRoy Cook

Aviation Supplies & Academics, Inc.
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(425) 235-1500 • email asa@asa2fly.com
Internet: www.asa2fly.com

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Published 2008 by Aviation Supplies & Academics, Inc.

Printed in the United States of America

2011 2010 2009 9 8 7 6 5 4 3 2

ASA-CARAVAN

ISBN 1-56027-682-7

978-1-56027-682-1

Photo credits: Cover photos courtesy Cessna Aircraft Company; pages iv–v, 1, 8, 13, 29, 31, 32, 36–37, 51, 62, 75, 85, 99, 105, 109, 119, 169, 195, 226, 239, 243–246, courtesy Cessna Aircraft Company. Pages vi–vii, courtesy Steve Stafford; pp. 16, 40, 101 Mark Anderson; pp. 22, 174, Roberto Gomes; pp. 53, 222, Yingling Aviation; pp. 61, 95, 182, Christian Diego; pp. 64, 138, CaravanPilots.com; p. 68, Jesús Andreu; p. 70, Bob Crowe; p. 86, Air Nikon; p. 92, Kim Steingass; p. 93, Joshua Cox; p. 96, Federal Air; p. 111, Don Paddock; p. 114, Grant Wagstaff; pp. 116, 176, Orpheus Island Resort; p. 118, Steve Kuhlman; p. 129, Todd Svarckopf; p. 131, Jim Vomastic; pp. 149, 164, Eric Swanberg; p. 156, MAF; p. 159, Samaritan's Purse; pp. 169, 171, 242, Skydive Hawaii; p. 177 Vallarta Adventures; p. 180, Patrick Staunton; p. 181, Jim McDonald; p. 192, Frasca International; p. 201, Greg Harville; p. 231, Jim King; p. 229, Jennifer Manna; p. 235, Ken Wilson; p. 239, Andreas Müller (top), and Wallace Shackleton (bottom); p. 240, Sun Valley Aviation; p. 241, Tom Arthur. Illustrations on pages 203–219 by Lovaz. Photos other than the above © the authors.

Library of Congress Cataloging-in-Publication Data:

Lewis, John D. (John David)

Caravan, Cessna's Swiss army knife with wings! : 208 tips inside for every 208 pilot / by Lewis & Cook.

p. cm.

ISBN-13: 978-1-56027-682-1 (pbk.)

ISBN-10: 1-56027-682-7 (pbk.)

1. Cessna 208 (Turboprop transport)—Miscellanea. 2. Private flying—Miscellanea. 3. Airplanes—Piloting—Miscellanea. I. Cook, LeRoy. II. Title.

TL703.C47L49 2008

629.133'343—dc22

2008023590

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The Caravan is Born!

The advent of the largest single-engine airplane in the history of the Cessna Aircraft Company began just before Christmas of 1982 when Cessna unwrapped the B-I-G secret of its “skunk works” division: the Caravan! It was indeed a very merry Christmas that year for both Cessna and aviation in general for a new aerial workhorse—the DC-3 of our era—was born!

The Caravan was an enigma. Innovative yet conventional. New school yet old school. Single-engine yet propjet. Originally designed to be the ultimate bushmaster airplane, the Caravan has been turning heads ever since its first flight, not just due to its enormous size but also because it was the first time that a major airplane manufacturer had horse-powered a single-engine production airplane with a turbine engine. That was truly revolutionary!

Actually, it was amidst the energy crisis of 1975 that Cessna first had its vision of a turbine-powered utility-type single-engine airplane. In a word it optimally fit Clyde Vernon Cessna’s earliest visions of aircraft designs based on strength, durability and performance.¹

Not only was the Caravan revolutionary, it was brave. To introduce an all-new utility aircraft in the financially rugged ’80s, as the aircraft manufacturing industry was losing altitude, was, well, gutsy! These were the times of layoffs. Even as the leader in general aviation aircraft manufacturing, Cessna’s workforce spiraled down from 18,000 to 3,000 by the mid-80s. It makes sense that such a rugged utility airplane would come out of these rugged, utilitarian times! Remember, it would still be 12 long years from the Caravan’s introduction until President Bill Clinton signed the historic General Aviation Revitalization Act into law—and, fittingly, with Cessna’s own chairman Russ Meyer looking over the president’s shoulder in the worth-a-thousand-words photograph.

The idea for an all-purpose, turbine-powered, rugged, bush-type utility plane officially hit the engineers’ drawing boards at Cessna on November 20, 1981.² The “Dream Team” who designed the Caravan includes some heavyweights in both U.S. and Canadian aviation. For starters, Cessna’s legendary director and industry leader Dwane Wallace, nephew of Clyde Cessna and nicknamed “Mr. General Aviation” by his peers, helped see to it that the Caravan was designed with very long-range fuel tanks and very strong and forgiving landing gear for remote bush operators.³ Cessna had the foresight that a rugged utility single-engine turboprop would be more successful than a sleek and sporty 350-mph six-place pressurized executive airplane. Actually, a few were trying to make such an aircraft: the “Laser 300” built by OMAC, which was a canard pusher

with a PT6A-135A in the back, the “Smith PropJet” built by Mike Smith, which combined a fiberglass fuselage, a Baron wing, and a PT6A propjet engine, and the “Lightning” by Beech Aircraft, which used the Baron fuselage and wing and a Garrett TPE-331.⁴ The fact that you may not have ever heard of these other planes is a clear sign that Cessna went the wise route with their simple-but-not-Spartan design.

EVOLUTION OF A REVOLUTION

Around this time, Cessna enlisted the help of recently retired president of de Havilland of Canada Russell Bannock and Dick Hiscocks, the recently retired vice president of engineering at de Havilland. Bannock and Hiscocks had urged de Havilland for some time to develop an airplane like the Caravan to replace the old Beavers and Otters. But de Havilland was not interested in such an endeavor. Needless to say, Hiscocks and Bannock were elated to lend a helping hand south of the border as Cessna turned a dream into a reality. Perhaps now you can see why the Caravan seems to have some of the rugged bush plane features reminiscent of the Beaver and Otter here and there.

Other notables on Cessna’s now famous Caravan construction crew include: John Berwick, chief engineer, Larry VanDyke, project engineer, and Phil Hendrick, principal engineer.

Cessna started by metamorphosing the Cessna 206 Stationair. First, they widened it to carry three passengers abreast. Then they stretched its tail feathers to haul 55-gallon drums and 4x8-foot sheets of plywood. The only limitation was the size of the cargo door. No problem. They widened it to a mammoth 50-inch square door! “From there [the cargo door], the rest of the aircraft took shape,” said Phil Hendrick.⁵

“Basically, when we designed the Caravan, we designed a pickup truck with wings, said Chief Engineer John Berwick, “We really designed it specifically to handle the tough conditions where we knew the smaller cargo operators were going.”⁶ Although Cessna started by altering a 206, and a 207, engineers eventually found it easier to just get out a clean piece of paper and start from scratch. Their goal was simple: build a box that could hold 10 people and fly a NACA 23000-series wing with a turbine engine.

Originally, engineers had fitted the modified fuselage with the 450-hp PT6A-112 turbine, used on the Conquest I; however, wanting a more rugged engine for bush flying, they ultimately went with the PT6A-114, an 875-horsepower engine de-rated to 600 shp. This 350-pound turbine engine was an ideal choice because it would happily consume fuels common around the world, including flying limited distances even on avgas or diesel for emergency situations.

There’s so much that makes this airplane unique. For example, this Kansas-born plane had a wizardly short yellow-brick road from drawing board to first flight. “In

less than one year, we went from go-ahead to first flight. That was unheard of at the time, and it still is!” said Phil Hendrick.

FIRST FLIGHT AND RAVE REVIEWS

The Caravan prototype, N208LP, piloted by W. K. “Bill” Bergman, made its landmark first flight on December 9, 1982. It departed McConnell Air Force Base, which is adjacent to Cessna’s Pawnee Division’s airfield in Wichita, Kansas.⁷ For sure, many perplexed pilots were clicking their flight boots together that historic day but finding that they were indeed still in Wichita, Kansas, which the locals call the “Air Capital of the World” due to all the aircraft manufacturers (Beech, Lear, Boeing, and Mooney at one time). Incidentally, the LP in N208LP, from what one Cessna engineer told us, was code for “Large Plane.” However, others contest that it stood for “Land Plane” since the “Sea Plane” version of the Cessna was planned to be next.



The Caravan prototype N208LP seen here during a flight over the Air Capital of Wichita, Kansas, home of the Cessna Aircraft Company. (Photo by LeRoy Cook)

And when the Caravan first started hitting the covers of aviation magazines in the mid-'80s, it was an instant hit, receiving rave reviews by all. J. Mac McClellan of *Flying* magazine flew the Caravan and described it with this high-flying accolade:

“Exotic as a packhorse, the Caravan I may be the best-handling Cessna single.”⁸ Likewise, Peter Lert of *Air Progress* opined, “I’ve seldom been as enthusiastic about an airplane as I am about this one. It’s not the average personal machine we report on in these pages nor is it meant to be... but, twenty or thirty years from now, it may well occupy the same place in the history of aviation—not to mention the back country airstrips and nighttime freight ramps of the world—as the DC-3 does now.”⁹ Nigel Moll who reviewed the Caravan Amphibian for *Flying* magazine, reported, “The flying was spectacularly undemanding, so well executed is the seagoing version of this big, friendly airplane,” which “dwarfs just about everything on the ramp, including the fuel truck.”¹⁰ And finally, John W. Olcott and Richard N. Aarons of *Business and Commercial Aviation* magazine concluded that “the Caravan I is fun to fly” and that “Cessna appears to have an aircraft that possesses all the qualities of a winner. Utility operators should be flying versions of this pleasant-handling rugged workhorse well into the 21st century.”¹¹

Matt Amsden, manager of Caravan marketing/communications, explained how the idea of the Caravan concept evolved during a TV interview with *Discovery Wings*: “The original concept of the airplane was bush use—use out in the outback to deliver heating supplies and people and to provide services basically where there are no roads.” Amsden continued, “And what happened is when the airplane was originally conceived, Federal Express came to us and said we would also be interested in that airplane for a freight use, so they were developed kind of at the same time in both the bush use and for freight.”¹²

THE FEDERAL EXPRESS YEARS

“If you have followed the history of the Caravan I at all, you know that Federal Express figures prominently in the success the aircraft has enjoyed since its announcement in 1983.”¹³ Or, as another *Caravan News* newsletter put it, “At first, it was the Caravan and Federal Express. The opening chapter of the Caravan success story could be entitled ‘The Federal Express Years.’”¹⁴ For sure, 1985 to 1995 was the “FedEx Decade” in the history of the Caravan.

Although it began as a bush plane, the Cessna Caravan soon caught the eye of Fredrick W. Smith, founder and chief executive officer of Federal Express. Smith started FedEx in 1971—despite earning a C on his Yale term paper for his novel idea of the world’s first overnight air delivery network. Smith, who later grew his C-grade term paper into a \$32-billion global transportation company with over 600 aircraft,¹⁵ first saw the Caravan when it graced the April cover of *Flying* magazine in 1983. He thought it would make a good cargo plane for his feeder operations. So Smith, at the invitation of Cessna CEO Russ Meyer, paid a visit to the Cessna manufacturing facility in Wichita, Kansas to have a better look and discuss possibilities.

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From transporting live edible eels to flying the New York Times, the robust Cessna Caravan does it all: bush flying, geophysical exploration and mapping, patrol, air ambulance, military, sightseeing, corporate, commuter airline, skydiving, cargo, missionary and humanitarian flying—you name it, by land or sea! It's easy to see why Cessna affectionately calls the Caravan "a Swiss Army Knife, with wings!" Authors Lewis & Cook combine their experience and skills to produce this first-class review of the Cessna Caravan. Here's what others are saying about this book:

The Cessna 208 has been a unique and valuable component of the FedEx Express system for many years. No other aircraft could have done the job as well.

—Fred Smith, FedEx Founder/President/CEO

The best investment any Caravan enthusiast can make!

—Michael Goulian, US National Aerobatic Champion

Got Caravan? If not, you probably will want one—or at least want to fly one—after reading Lewis & Cook's new book, *Caravan: Cessna's Swiss Army Knife With Wings*. Lewis & Cook have written the definitive text on Cessna's sky-workhorse and winged-playhouse, the Caravan. Dig into these chapters and you'll learn more about this wonderful airplane than you ever thought possible. Lewis & Cook do an excellent job of explaining not only the mechanics of the machine but also how to fly it, and fly it right! With an engaging style of writing, you'll enjoy their practical insights born from many hours piloting the Caravan and those always-interesting anecdotes that make books like this one a must-read for anyone interested in this popular airplane.

—Rod Machado, Author/Flight Instructor/Speaker

A fantastic book about a fantastic aeroplane!

—Dick Smith, Australian Entrepreneur/
Aviator/Film-maker/Explorer

As a movie stunt pilot who had to takeoff and land a 208 on just 400 feet of dirt up in the mountains north of L.A. for a new Will Ferrell movie, I first read CARAVAN cover to cover...and then read it again. Thanks, Lewis & Cook!

—Steve Stafford, Studio Wings, Inc.

"...In this new book, Lewis and Cook give we Caravan enthusiasts all the info we've been longing for. Learn why you think "de Havilland" when you see the big turboprop and how FedEx moved the airplane from a curiosity to a mainstay in just a few years. We've all known LeRoy Cook and his prolific writing for years. Now he partners with Caravan expert J.D. Lewis to present a thorough yet highly readable tale of this influential airplane..."

—Tom Haines, Editor in Chief, AOPA PILOT magazine

As a Caravan pilot myself, I would highly recommend this book as a "must read" for all current and future Caravan pilots. It is a valuable resource of knowledge on what can be considered one of the most rugged, reliable and versatile aircraft to ever be produced.

—Joe Manchin III, Governor of West Virginia



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