



AirVenture 2016 –

AVIATION'S ANNUAL FAMILY REUNION News from the "*Greatest Air Show on Earth*"

By Henry M. Holden



AirVenture's entrance to the flight line.
(Photo: Steve Owen)

AMERICA'S BEST air show, EAA AirVenture Oshkosh 2016, the 64th annual fly-in from July 25-31 was an amazing week. Visitors had choices of homebuilts, warbirds, ultralights, vintage and aerobatic aircraft, airliners, and modern military hardware which were all well represented.

There were also some "Happy Anniversaries" celebrated. In addition to the 30th anniversary

of the homebuilt RV-6, other birthdays included the 100th for both the US Coast Guard and the Boeing Company; the F-16 Fighting Falcon celebrated 40 years of service and marking 50 years of its first flight was Mustang Aeronautics' Mustang II, the two-place aerobatic and sport aircraft.

In addition, marking 70 years of service; were the Cessna 120/140, which racked up some

7 500 sales; and the de Havilland DHC-1 Chipmunk, the former standard primary trainer for several air forces; and

the North American Aviation's Navion. Also celebrating anniversaries, in this case their 75th, were the Interstate Cadet, and the Stinson Grasshopper, also known as the L-Bird. The Spartan Executive, called the Learjet of its era, turned 80 this year, and the eight that flew into Oshkosh represented history's largest gathering of these aircraft.

SNOWBIRDS

Among the headliners were the Canadian Forces Snowbirds, returning to Oshkosh after 33-year absence. Officially designated as 431 Air Demonstration Squadron, they were created in 1971, and have a nearly 40-year connection to EAA.

They were the first military team to perform at Oshkosh in the 1970s. They have not appeared since 1983, as their primary commitment each year is to Canadian air shows. They made a public practice over the grounds on the Friday, with full performances on the Saturday and Sunday of the AirVenture show.

The Snowbirds fly Canadair CT-114 Tutor jets in approximately 60 air shows each year. During the show, the nine Royal Canadian Air Force pilots fly at speeds ranging from 110 to 465 mph and in formation with distances as close as 1.2 metres of wing overlap. The Snowbirds' show included more than 50 different formations and manoeuvres over each 35-minute performance.

Super Seawind N71RJ just finished an extensive "annual" that took 19 months and about 1 500 man-hours, during which a number of significant changes and safety improvements were made.



US COAST GUARD

The Coast Guard, although first formed in 1790, began flight operations in 1916 with a Curtiss seaplane. Search and rescue was the mission, later growing to coastal security, drug interdiction and safety as its core duties today.

On the Thursday of the show, a large contingent of Coast Guard aircraft, both fixed-wing and rotorcraft, arrived with plane-side interviews throughout the day from Coast Guard pilots and aircrews. A special evening programme at the Theater in the Woods highlighted the Coast Guard's renowned 100 years of aviation history.

BOEING'S 100th

The 100th anniversary of The Boeing Company, the world's largest commercial and military aircraft company, brought an exceptional collection of airplanes and presentations during the week.

Many of the aircraft were displayed on EAA AirVenture's main showcase ramp, which was dubbed "Boeing Centennial Plaza" for this year's event. Those aircraft included current commercial and military aircraft, as well as historic Boeing airplanes. (See the July issue of *World Airnews* for Boeing's 100 years of innovation).

MARTIN MARS MAKES A SPLASH

The Martin Mars is the largest operational flying water bomber. As a true flying boat, it could not land at Wittman Regional Airport, but instead landed at the



AirVenture's west ramp this year dubbed Boeing Centennial Plaza. It's ironic that a Lockheed C-5A took center stage. (Photo: Michael Steineke)

Lake Winnebago seaplane base.

The Martin Mars has a height of 6.7 metres, a length of 36.5 metres, and a wingspan of 61 metres, approximately the wingspan of a Boeing 747.

"Only six of the massive aircraft were built," said Wayne Coulson, CEO of Flying Tankers of Port Alberni, British Columbia.

Flying Tankers, has owned the two remaining examples since 2007, and uses them as water bombers for forest fires throughout the western United States, and Canada, and Mexico.

The Martin Mars first flew in 1942, as a long-range US Navy troop and freight transport between the continental United States and Hawaii. The conversion to a water bomber gave the aircraft the ability to carry 7 200 gallons of water, enough to cover four-acres of land in a single pass. It can ingest more than a ton of water per second as it skims across the water's surface.

On Friday evening the aircraft was damaged making a precautionary landing on Lake Winnebago. The Mars crew noticed an engine problem during a flight and returned to Lake Winnebago to land. A rock, beneath the water, which has a maximum depth of 6.4 metres, tore an 80 mm hole in the lower hull of the aircraft. The damage was repaired but remaining demonstration flights were cancelled.

VAN'S RV-6

Van's Aircraft's RV-6, the most successful amateur-built aircraft of all time with more than 2 500 certified and flying, celebrated the 30th anniversary of its 1986 introduction at EAA.

"The RV-6, more than any other design, opened so many people's eyes to what is possible in the world of homebuilding," said Charlie Becker, EAA home-built community manager.

"Here you had a design that's an amazing combination of speed, comfort, and performance at both the high end and slow end of the performance range."

"The RV-6 hardly seemed a candidate for aircraft immortality," recalled Richard VanGrunsven, founder of Oregon-based Van's Aircraft whose initials formed the model name of the aircraft. "At the time, there were some kit airplanes that were more spectacular or got more public notice that this did," he said, adding: "The RV-6 was more a

general-purpose aircraft – not the fastest, and not the most aerobatic. It just offered a better balance of qualities than the other airplanes did. It offered a better enduring design."

The RV-6's success paved the way for the expansion of Van's product line.

The company's model line is now up to the RV-14 (there is no RV-13) and includes the four-place tricycle gear RV-10 and single-seat RV-11 motor glider (currently under development).

ENHANCED ASCEND 172'S DEBUT

After unveiling the remanufactured Ascend 172 single engine aircraft at last year's AirVenture, Yingling Aviation continues to close the gap between new and renovated airplanes. A number of customer-inspired enhancements are built into the 2016 version that was on display.

N26FP is outfitted with a Lycoming 180 horsepower O-360-A4M engine with 0 hours TSOH and a fully-overhauled Sensenich propeller. It also features a Garmin G500 EFIS and a GTX 345 ADS-B Out and In transponder, as part of an extensively upgraded avionics package.



OSH 16-7 In celebration of Boeing's 100th anniversary and WomenVenture 2016, Alaska Airlines flew in its newest Boeing 737-900ER from Seattle. It was commanded by a female crew, and the cabin filled with female employees from Alaska Airlines, Boeing and Virgin America, and female students from Ralsbeck Aviation High School in Tukwila, Washington. (Credit: Andrew Zuback)

ONE OF A KIND

Steve Wightman, a Massachusetts pilot/aircraft builder flies the only turbine-powered Seawind in the world. Wightman began flying model airplanes, as a teenager, and later served in the US Army as an aircraft repairman and crew chief. Among his many Type Ratings, the seaplane rating sent him down a new path.

Seaplane training made Wightman realize he wanted a plane that could land anywhere. He soon discovered a modern-looking amphibious flying boat-design that was made of composite material so it would not rust.

Wightman became interested in the Seawind after he learned of its capabilities: a four-place aircraft that could cruise at 174 knots). Its 1 000+ pound payload included 110 gallons of fuel for a range of at least 1 000 statute miles with reserve.

Wightman spent six months of weekends building his airplane. At that rate he knew he would never finish it, so he contacted a build-assist company, Planemakers, in Sarasota, Florida. The company transported the partially-assembled kit to its headquarters, and with the



The New Cessna Denali

company's experienced builders, specialised tooling and resins, and resin-friendly temperatures, the plane was soon ready for the recommended 300 hp. IO-540 six-cylinder engine.

Wightman said: "With leaded gas headed toward extinction, I wanted a long-term solution for my Seawind." Wightman decided to install a PT6A that could burn up to 150 hours of AvGas. Pratt & Whitney also had an excellent support network that provided training, parts, fuel and maintenance facilities for Wightman.

Wightman's Super Seawind, N71RJ, first flew on March 15, 2012. It just finished an extensive

The 70-year old de Havilland DHC-1 Chipmunk, flew at AirVenture and was the standard primary trainer for Royal Canadian Air Force pilots and several other air forces. (Photo: Jim Koenig)



"annual" that took 19 months and about 1 500 man-hours, during which Wightman and Jay Drury, made a number of significant changes and safety improvements including removal of the 50-pound, 35-gallon centre fuel tank. Wightman now plans to use his airplane to help rescue pets as part of the Pilots n Paws programme.

CESSNA INTRODUCES THE DENALI

Last year, Textron promised to deliver a new single-engine turboprop. This year it introduced a mock-up of its all-new Cessna single-engine turboprop, Denali. The clean-

sheet design is engineered to cruise at speeds of 285 knots. It has a payload of 500 kgs, and a range of 1 600 nm with one pilot and four passengers.

The cockpit will feature the Garmin G3000 touchscreen avionics suite, with high-resolution multifunction displays, split-screen capability, weather radar, a terrain warning system and ADS-B capabilities.

The aircraft will be powered by a new engine now under development by GE. The FADEC-equipped, 1 240 shp-rated turboprop engine will feature single-lever power and propeller control and a 4 000-hour TBO and equipped with McCauley's new 105-inch diameter composite, five-blade constant-speed propeller.



A-26 INVADER'S EMERGENCY LANDING

A Douglas A-26 Invader made an emergency landing on the second day of the 2016 AirVenture show at Oshkosh. The crew had already executed a go around after hearing a "pop" while cycling the undercarriage, and orbited to try and assess the problem. Eventually the decision was made to land on runway 36. However, almost immediately after touchdown, the nose gear collapsed and the aircraft skidded to a stop severely damaging the nose and both propellers in addition to other minor damage. No one was injured in the landing.

NEW EVOLUTION PHENOM 100

Embraer Executive Jets introduced an evolution of its entry-level Phenom 100 business jet, the Phenom 100 EV, at AirVenture. The Phenom 100 EV will enter the market in the first half of 2017 with a new avionics suite, the Prodigy Touch flight deck, based on the Garmin G3000, and modified Pratt & Whitney Canada PW617F1-E engines, offering more speed with superior hot-and-high performance.

PIPER AIRCRAFT

Piper Aircraft is preparing to certify the Lycoming IO-360-B4M fuel-injected engine on its popular Archer TX trainer, which has become the perfect gateway aircraft for fledgling pilots. The company is also offering a diesel option providing customers with a third engine option for the currently piston-powered aircraft.

"Offering three engine options provides the customer with unprecedented choice," said Piper's President and CEO, Simon Caldecott. "We are excited that the first customer to receive the fuel injected Archer TX will be the University of North Dakota." →



Royal Canadian Forces Snowbirds in the Diamond Formation. The Snowbirds fly Canadair CT-114 Tutor jets in approximately 60 air shows each year at speeds ranging from 110 to 465 mph (Photo: Steve Owen)

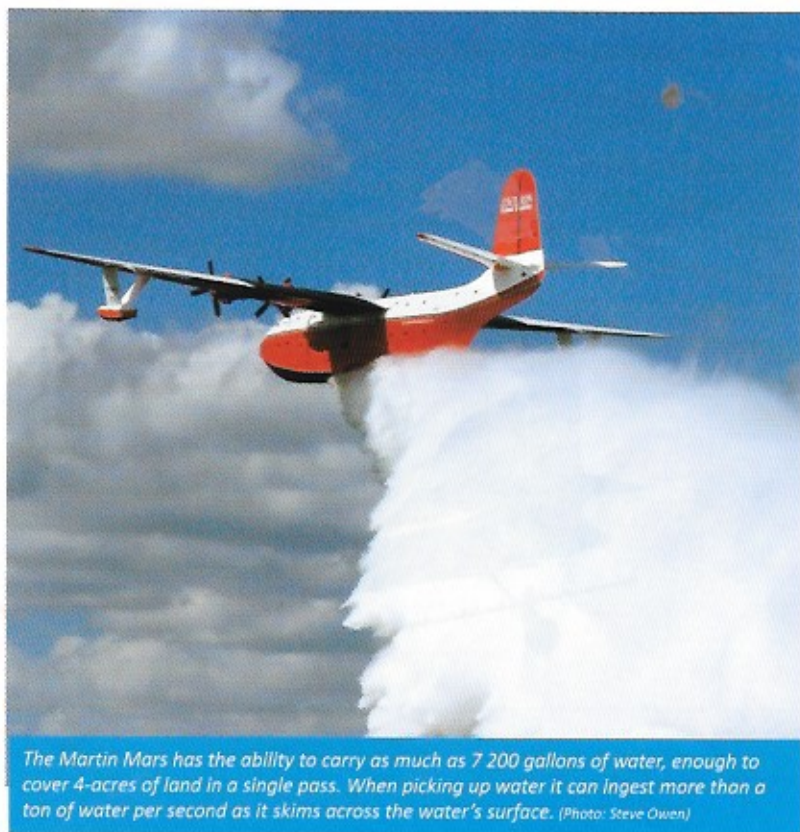
OSHKOSH WINS AGAIN

MORE THAN 563 000 aviation enthusiasts attended this year's EAA AirVenture and although this does not compare with the figures of 20 years ago when some one million attended, it was nevertheless an increase of nearly one percent over that the total for last year.

Ten thousand aircraft of all shapes and sizes arrived at Wittman Regional Airport, in Oshkosh, and other airports in east-central Wisconsin of which 2 855 were show planes (up 7% over 2015): 1 124 homebuilt aircraft (up 11%), 1 032 vintage airplanes (up 7%), 371 warbirds (up 6%), 135 ultralights and light-sport aircraft, 101 seaplanes, 31 rotorcraft, 41 aerobatic aircraft, and 20 non-categorised aircraft.

There were 891 commercial exhibitors, up 10% on the figure for EAA AirVenture 2015, and more than 75 000 people attended the 1 050 sessions of forums and workshops.

A record 2 369 visitors registered from a record-tying 80 nations at the International Visitors Tent. Top countries represented were Canada (578 visitors), Australia (340), and Argentina (167). There were also 750 media representatives on-site, from six continents. →



The Martin Mars has the ability to carry as much as 7 200 gallons of water, enough to cover 4-acres of land in a single pass. When picking up water it can ingest more than a ton of water per second as it skims across the water's surface. (Photo: Steve Owen)