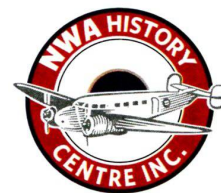




REFLECTIONS

The Newsletter of the NWA History Centre
Dedicated to preserving the history of a great airline and its people.

NORTHWEST AIRLINES 1926-2010



FOUNDING FATHERS

by Robert DuBert

starring

LEWIS HOTCHKISS BRITTIN

Director, St. Paul Association and founder of Northwest Airways

WILLIAM BENSON MAYO

Chief Engineer, Ford Motor Company

WILLIAM BUSHNELL STOUT

Founder, Stout Metal Airplane Company
and President, Stout Air Lines

and

HENRY FORD

SUPPORTING CAST

Edsel Ford Eddie Stinson Bill Mara Paul Henderson James McDonnell

with

Charles Dickinson Edward Budd Camille Stein Robert Stranahan Frederick Rentschler

and members of

The Detroit Athletic Club

If this were a documentary film, that's how the introduction to the screenplay might read. The founding of Northwest Airways, later to become Northwest Airlines, was *not* inevitable. It was the fortunate result of the individual and joint endeavors of a group of business leaders and an unfolding chain of events occurring over the span of just a few years, whose outcome no one could have predicted in advance. Some executives of the Ford Motor Company played key roles, and with events unfolding simultaneously in Detroit and the Twin Cities, it is impossible to tell this story in a strictly chronological order without some "backing and filling." So please bear with me as I serve as your *explorer*, to *focus* on the *galaxie* of people whose *fusion* of effort gave Lewis Brittin (no *country squire* he) the business *edge* he needed to get our airline off the ground.

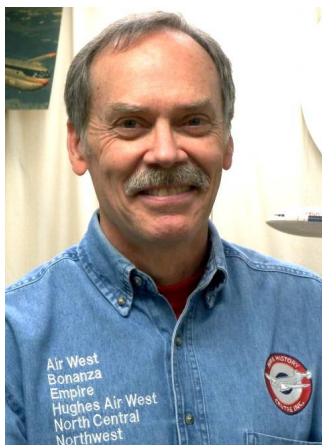
CONNECTICUT YANKEE Lewis Hotchkiss Brittin was born in Derby, Conn. on Feb. 8, 1877. Orphaned at an early age, family support enabled him to attend Harvard University, where he studied engineering for two years before dropping out for lack of funds. He volunteered for the US Army, serving in the Massachusetts Volunteers Heavy Artillery regiment during the Spanish-American War. Brittin seemed destined for a military career, and served in World War I in the Quartermaster Corps, rising to the rank of Lt. Colonel. He was discharged in the post-war demobilization, but found a job as an industrial engineer in Mexico, building factories for the Sierra Madre Land and Lumber Company. After a few years, he returned to the US for a position as a manager for the National Lamp Division of General Electric,



Photo: Minnesota Historical Society Archives.

a fateful turn of events which brought him to the Twin Cities on a business call. Impressed by his skill, knowledge and drive, leaders in St. Paul recruited Brittin to become industrial director of the Northwest Terminal, a wholesale distribution center which linked factory and warehouse facilities to a railroad hub. He continued his education by taking night courses at the University of Minnesota, where he studied traffic management and commercial law. In short order he was appointed vice president and development director for the St. Paul Association of Public and Business Affairs, a chamber of commerce precursor whose aim was to encourage the growth of business activity.

In 1923, when Brittin and St. Paul officials learned of industrialist Henry Ford's interest in building new factories in rural locations near waterways, a concept Ford called Village Industries, Brittin took the lead in inviting Henry Ford and other Ford executives to consider a site in St. Paul on the banks of the Mississippi River, where there was a dam and powerplant which had been built years earlier by the Army Corp of Engineers. *cont. p. 4*



Bruce Kitt Photo: Joe Callaci.

From the Executive Director AN IMPORTANT MESSAGE

The state of the NWA History Centre has been a recurring topic in previous columns and I would like to report where it stands today.

There are three critical problems the NWAHC must solve: financial stability, the need for an updated business plan that addresses the NWAHC's current situation, and how to broaden the NWAHC's awareness to a wider public audience. The combination of these three problems has put the NWAHC in a downward spiral that jeopardizes our very existence. The Board of Directors has investigated many leads, and we have learned that there is no single quick, magic solution that could be in place yesterday; the steps we are pursuing are long-range in nature and will be more of a step 'A', followed by a step 'B', and so on. These actions are explained below:

Step 'A': The NWAHC has been introduced to a University of Wisconsin-Superior faculty member who teaches marketing and air transportation management. He is also a former NWA employee. I have met with him and explained the NWAHC's mission (and problems) and he has agreed to have a group of students work on our public relations needs as a class project this fall. The NWAHC will be treated as a client: we will meet with his students and introduce our 'company' and its needs, most likely related to increasing visitors and fund-raising. An advantage of focusing on public relations is that it is concerned with communicating with target audiences using free media (mentions in news stories, columns, blogs, social media, etc.) rather than paid advertising. There will be a progress meeting and the project will culminate in a final report to our Board in December with a suggested plan of action for the NWAHC. If we find the process helpful, he is willing to do similar projects with other classes or individual students that could develop marketing and business plans for us. We are exploring a similar arrangement with another institution as well.

Step 'B': The NWAHC has been approached by the Crowne Plaza Hotel, our next door neighbor in the Appletree Square complex, with a very unique business proposal. Briefly, the Crowne Plaza is rebranding itself as an aviation-themed hotel. Because of the Crowne Plaza's brand recognition, their room capacity and their proximity to MSP, 25% of their rooms are devoted to the airlines on a nightly basis, for crew layovers, passenger accommodation, training classes, etc. They are capitalizing on this aviation tie-in and rebranding themselves as the **Crowne Plaza Aire**. The entire hotel is being remodeled along aviation and space themes; each floor is identified with a specific theme, the restaurant and lobby are being redone and there will be commissioned artwork that further ties in with the new theme. Having gone to that level of identifying with aviation, what could be more natural than inviting a neighboring aviation museum to move into the hotel?

Continued on the next page

The NWA History Centre is currently closed to visitors, pending our relocation. Please monitor our website and facebook page for our reopening announcement.



THE NWA HISTORY CENTRE

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1925-2012

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Donations are gratefully accepted, are necessary for the continued operation of the NWA History Centre and are tax-deductible. Enquiries:

donations@nwahistory.org



Continued from the preceding page:

This has been an ongoing conversation for the past seven months that has progressed to the point where the proposed museum space has been identified, ideas have been shared on how to make this cooperative venture work for both the Crowne Plaza Aire and the NWAHC, and preliminary design plans are being discussed, with input from the Minnesota Historical Society's Field Service department. To say we're excited is an understatement. For the first time in its existence, the museum will be above-ground and it will place the NWAHC in a public setting that will be easier to find—and with easily accessible parking! In conjunction with the University of Wisconsin-Superior's MBA students, there is every expectation that the fortunes—and future—of the NWA History Centre will be on a more stable footing for success and growth.

To implement these plans, **effective Thursday, September 1, 2016, the NWAHC temporarily suspended the operation of the museum.** The Crowne Plaza Aire has projected December 2016 or January 2017 as our move-in date. To minimize the NWAHC's expenses until then, the Board has decided to vacate the suite currently used to house the archives. The NWAHC operates on a lean budget with no waste to cut; reducing rent offers the only area of potential financial relief. The archives will move into the museum display area and the displays will be compressed into the remaining space. Based on the Crowne Plaza Aire opportunity, this will be a temporary suspension until the NWAHC reopens in its new location. This move reduces our rent payment by one-third, a sizeable savings for the NWAHC, and will allow the NWAHC to stretch its cash funds. Our current landlord, Rice Real Estate, deserves a special thank you for their willingness to work with the NWAHC during these vexing times.

These opportunities are a welcome relief from the flow of discouraging news the NWAHC has battled for the past year. While the museum is being packed, moved and made ready for its new location (again), the volunteers will also be busy getting material ready for the upcoming October 8th Airline Collectible Show and Sale, and undertaking a few in-house projects. Volunteers recently helped assemble two F/A uniforms for yet another D. Cooper hijacking special, this time by the Travel Channel. It is encouraging to realize that the NWA History Centre is becoming a recognized "go-to" source for Northwest Airlines history. I wish someone would do specials on Hughes Airwest, North Central, and/or Southern to round out our growing reputation!

The new partnership with the Crowne Plaza Aire represents an entirely new chapter – and way of doing things – for the NWA History Centre. I'm optimistic that this next phase in our history will be an opportunity for a wider range of people to become involved in the NWA History Centre as visitors, volunteers, and members. We will keep you updated, and I thank you for your ongoing support. CAVU. →

THE NWAHC WELCOMES OUR NEWEST BOARD MEMBER CHUCK HUNTLEY

Chuck, a native of Monroe, North Carolina, comes from an aviation-minded family. His father Marvin, a private pilot, named his son Charles Lindbergh Huntley in honor of his boyhood hero (but he goes by Chuck), and one of Chuck's cousins was a flight attendant for Piedmont Airlines. Chuck served in the United States Air Force, as a member of the Security Police and also in the ground services transportation department. In 1970, a transfer to the Air Defense Command base attached to Duluth Airport brought him to Minnesota, where he has remained ever since.

On release from the military, Chuck applied for a job with North Central Airlines, but was rejected! A 30-plus year career in the computer industry followed with companies in the Twin Cities, where he worked in customer service and management. His volunteer activities at the not-for-profit organization **Angel Flight Central** led to a position with the Minnesota Department of Transportation's Aeronautics Department as a volunteer instructor, preparing presentations, developing training programs and assisting the department with outreach programs for young students.

Although officially "retired", Chuck currently serves as a Wing Leader for Angel Flight Central, a Kansas City-based 501(c)(3) organization whose mission is "To serve people in need by arranging charitable flights for medical care or other humanitarian purposes", in short, "Free Flights for People in Need." The flights are operated by volunteer pilots, who provide the aircraft and fuel. Chuck serves as a director of development for the local "North Star Wing", organizing fund-raising activities and appearing as a speaker and presenter. He brings a wealth of business acumen and organizational skill to the NWA History Centre.

Thank You, and
Welcome aboard, Chuck!



angelflightcentral.org

Right: Chuck Huntley at the HC
with the Northwest Orient gong.
Photo: Robert DuBert



Right: Marvin Huntley with his airplane.
Photo courtesy Chuck Huntley.



Cont. from p.1 On April 25, 1923, Henry Ford, his chief engineer William B. Mayo and others from the Ford Motor Company arrived in St. Paul to survey the situation. Ford liked what he saw, but the powerplant needed major upgrading. Mayo's primary expertise was in power for industrial plants, and soon Mayo and Brittin were jointly supervising the construction of a major new auto assembly plant for Ford. *Below: Postcard of the St. Paul plant.*



CAPE CODDER William Benson Mayo was born in 1866 in Chatham, Mass., on Cape Cod, the son of Andrew Mayo, a fisherman and part-time carpenter, and his wife Amanda. William attended grade school but declined high school, against his parents' wishes, to become an apprentice to an outdoor sign painter in Boston. At age 22, he took a job as an office boy with the Boston office of Hoovens-Owens-Rentschler, a Hamilton, Ohio-based manufacturer of steam engines used to power the pumping stations of municipal water supplies. Here, his fascination with heavy machinery grew and he rose to become a top salesman for the company. He married Susan Dana in 1891, and five years later was promoted to a job in the H-O-R New York office. In 1906, when Mayo was offered an executive position in the head office in Ohio, Mrs. Mayo objected. As their son remembered years later, "It was quite a job in those days to get a woman to move into the Middle West." In Hamilton, one of Mayo's jobs was to mentor the sons of company founder Albert Rentschler—Gordon, Frederick and George, all graduates of

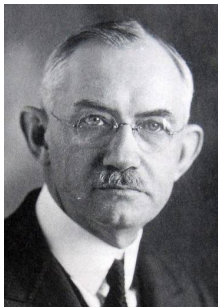


Photo from Henry's Lieutenants, Bryan Ford.

Princeton University—as they trained to become part of the family business. Mayo became a sort of godfather to the three, and placed Frederick in sales. Frederick became interested in aviation, and his future would eventually become intertwined with H-O-R subsidiary Pratt & Whitney, at that time a manufacturer of machine tools in Hartford, Conn.

In 1913, H-O-R, responding to a request for proposals from the Ford Motor Company, bid for a contract to build five gas-fired steam power generators for Ford's new Model T factory in Highland Park, Mich., with Mayo, now a vice president, negotiating directly with Henry Ford. In 1915, Ford bought the H-O-R generators and hired William Mayo as his chief engineer (For the next 17 years, Mayo would serve as Ford's "special projects" man, usually placed in charge of new ventures, including, as we will see, aircraft production). This time, Mrs. Mayo, apparently fed up with moving, initially refused to budge, so William temporarily moved into one of the clubhouse guest rooms of

the Detroit Athletic Club (a posh downtown private club for Detroit's "power élite") to begin his new job (Mrs. Mayo eventually relented and moved to Detroit). Eight years later, Mayo was placed in charge of the design and construction of the new Ford plant in St. Paul, where his proven expertise in industrial powerplants served him well. On May 4, 1925, the first Model T rolled off the St. Paul assembly line, a banner day for the community, the Ford Motor Company, William Mayo and Lewis Brittin.

Meanwhile, during the plant's construction, Brittin had met Henry Ford's son Edsel and aircraft designer William B. Stout, formerly of St. Paul but now on the Ford payroll in Detroit, and the two, along with William Mayo, would expose Brittin to their dreams for the potential of commercial aviation.



The first Model T off the St. Paul line. Photo: TheRangerStation.com

IMAGINEER William Bushnell Stout is the most interesting character in our roster of founding fathers. Born in 1880 in Quincy, Ill., the son of an itinerant Methodist minister, the Rev. James Stout and his wife Mary, 7-year old Bill Stout found himself in the Twin Cities in 1887 when his father was called to a church in St. Paul. Later, Bill attended the Mechanical Arts High School, Hamline University and the University of Minnesota, where he studied engineering but didn't graduate due to an eye infection he contracted during final exams.

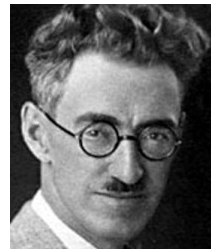


Photo: The Detroit Historical Museum.

Largely self-taught and something of a scatterbrain, Stout loved to tinker, create and invent. Using the pseudonym *Jack Kneiff*, he wrote articles about making toys, gadgets and do-it-yourself home improvements for local newspapers. He enjoyed making model airplanes, but studied aeronautics from conceptual, theoretical points of view (calling himself an "imagineer").

These activities led to his being appointed aviation and technology editor for *The Chicago Tribune* in 1912, where his work included promoting model airplane clubs for high-school students, one of whom was James McDonnell of Little Rock (remember that name). In 1917, Stout moved to Detroit to work for the Packard Motor Car Company as chief engineer to oversee the production of Liberty aircraft engines for the war effort. Always curious, he followed developments in aviation, automotive and motorcycle design. During the war, German aircraft builder Hugo Junkers had successfully designed and built aircraft with a cantilevered single-wing (monoplane) design, constructed entirely of metal (first aluminum, then duralumin, a lightweight aluminum/copper alloy with the strength of steel) with corrugated fuselage and wing "skin" panels for strength. Stout became an enthusiastic advocate of these design concepts, and mocked wood and fabric biplanes, whose plywood frames were subject to moisture-caused delamination—he said they had "venereal disease." Sadly, he tended to claim Junkers' ideas as his own, ignoring Junkers' patents; this failing would have consequences. Putting theory into practice, in 1921 Stout formed his own company, Stout Engineering Laboratories, to produce experimental aircraft prototypes for the military. His chief financial backer was

Robert Stranahan, president of the Champion Spark Plug Co., who offered words of sage financial advice which Stout would bring to bear for future projects: "You need a number of wealthy backers. Nothing else will work. You can't sell stock to the public, and with no collateral you could never get a bank to finance you." When military contracts didn't materialize, Stout decided to devote his efforts to the design and building of a commercial airliner. He renamed his company Stout Metal Airplane Company and, in meetings at the Detroit Athletic Club where he pitched his proposals, Stout recruited 65 investors, including automakers and industrialists Horace Dodge, Walter Chrysler, the Fisher Bros. (Body by Fisher), Charles Nash, Harvey Firestone, Ransom Olds, Edward Budd (whose company built auto frames and railroad cars) and William Mayo, who convinced Edsel and Henry Ford to invest. Many of these DAC members would provide funding for future Stout projects, including, as we shall see, two airlines.

Stout's first airliner, the Air Sedan, was unsatisfactory, but on April 23, 1924, he introduced the model 2-AT Air Pullman, powered by a Liberty engine, capable of carrying 8 passengers or a half-ton of freight. Like Junkers' aircraft, it was a monoplane of all-duralumin construction, with corrugated wing and fuselage panels, but with an internally-braced, high-wing rather than the low-wings favored by Junkers. The 2-AT was the first American-built, all-metal airliner certificated in the US, and the first American airliner to offer an enclosed cockpit and cabin. Recognizing the need for more investment to fully develop the aircraft, Edsel and Henry Ford built a factory and airport in Dearborn, offering it for Stout's use for the annual rent of \$1. Henry Ford, desiring total control over the enterprise, ultimately purchased Stout's company outright, and on Aug. 1, 1925, in a deal negotiated by William Mayo, the Stout Metal Airplane Company became a division of Ford, with Edsel Ford as president, Mayo as operations manager and Stout as chief designer. Ford was in the airplane business! The Fords soon organized a company airline, the Ford Air Transport Service, to promote the 2-AT, using a fleet of them to transport auto parts and company personnel between Dearborn, Chicago and Cleveland, creating the first "just in time" parts supply system for Ford plants. *(By now, you may be forgiven for wondering what all this has to do with Northwest Airways. Patience, gentle reader, patience.)*

Below: William Mayo, Bill Stout, Edsel and Henry Ford, with a Ford 2-AT.
Photo: The Henry Ford museum.



AIR MAIL Readers of this newsletter are familiar with the US Contract Air Mail Act enacted on Feb. 2, 1925, which sought to outsource the carriage of the US air mail to private contractors.

One result of the act was to encourage the formation of private airline companies, who would bid from a list of short feeder routes, the government continuing to fly the major New York-San Francisco transcontinental route. Asst. Postmaster General Col. Paul Henderson, who had overseen the installation of navigation beacons between Chicago and Cheyenne along the transcontinental air mail route, was in charge of the route awards.



Paul Henderson.
Photo: Richard
Clark, for
findagrave.com

Stout and Mayo met with him to consider Ford's participation, and Henderson advised that, rather than rely on the 2-AT, Ford should develop a multi-engined version for more capacity and reliability. Shortly afterward, Henderson left government service to become general manager for National Air Transport, a small Chicago-based airline, and his successor, W. Irving Glover, awarded contract air mail (CAM) routes 6 (Dearborn-Cleveland) and 7 (Dearborn-Chicago) to the Ford Air Transport Service in January, 1926. CAM-9, between Chicago and the Twin Cities, was awarded to the eccentric entrepreneur Charles Dickinson, who began operating the service on June 7.

PASSENGERS Meanwhile, Stout's investors, flush with profits from the sale of Stout's company to Ford, were offered the opportunity to invest in a new Stout concept—an airline specifically designed for passengers, offering reliable, comfortable service where people would come first rather than being an afterthought to the airmail. Launched on Aug. 1, 1926, with a fleet of 2-ATs (later replaced by Ford Tri-Motors), Stout Air Lines linked Dearborn, Grand Rapids, Cleveland and Chicago, with a number of American "firsts": the first city ticket office (in a Detroit hotel), dedicated downtown-to-airport ground transportation using Stout-designed "Aerocars" and uniformed flight escorts (America's first flight attendants, who served onboard meals of sandwiches and coffee). The 2-AT's enclosed cockpits obviated the need for the usual pilot attire of leather coat and goggles, and at Henry Ford's suggestion ("Uniforms give dignity to their profession"), Stout's pilots and flight escorts were outfitted in blue jackets, trousers, ties and hats similar to those worn by the officers on ocean liners.

TRI-MOTOR Following Henderson's advice, Stout set to work designing a larger, three-engine airliner, and the Stout/Ford 3-AT rolled out on Thanksgiving Day, 1925. It was grotesque and barely airworthy, nearly crashing on its first and only flight.



Henry Ford was furious. Turning to Mayo, he said, "This plane is a mechanical monstrosity and an aerodynamic absurdity. From now on, keep Stout out of the design room. I bought a lemon and I don't want the world to know it." Two months later, the 3-AT was completely destroyed in a factory fire of mysterious origin. Stout was ordered to focus on his airline and other promotional and public-relations activities. Ford quickly built a new, larger aircraft factory and assigned a group of Ford engineers to salvage the project, a team which included young James McDonnell, newly-graduated from the Massachusetts *cont. p.6*

Cont. from p.6 Institute of Technology with an engineering degree, and who in his teens had been a member of one of Stout's high-school model airplane clubs! On June 11, 1926, the new Ford Tri-Motor, called the 4-AT, had its first test flight. Opined test pilot Maj. Rudolph Schroeder, "This plane's got what it takes." Ultimately, Ford would sell a total of 199 Tri-Motors—the 4-AT and the slightly larger 5-AT—but sales overseas were stymied—Hugo Junkers sued Stout for patent infringement, and a Spanish court seized a Tri-Motor newly sold to a Spanish airline, bringing a halt to Ford aircraft sales in Europe.

DETROITER Enter Eddie Stinson and Bill Mara. Stinson came from a family of fliers; his sisters Katherine and Marjorie were both licensed pilots and operated the Stinson School of Aviation in San Antonio. After obtaining his pilot license in 1915, Eddie Stinson served as a test pilot for a variety of employers, including Charles Dickinson and William Stout. Deciding he could design and build better airplanes than those he had tested for others, Stinson founded his own company in Northville, Mich., about 25 miles northwest of Dearborn. In charge of sales and marketing was Bill Mara. The 27 year-old Mara was an excellent salesman, a smooth and debonair complement to the hard-drinking, rustic Stinson. As an officer of both the Detroit Board of Commerce and the Detroit Athletic Club, Mara's network of social and business contacts was unsurpassed. Stinson, financed by an investment group recruited by Mara, set out to design a plane for commercial operators. On Feb. 21, 1926, the Stinson SB-1, tactically named the *Detroiter*, was unveiled. A 4-seater (pilot plus 3 passengers), it was less expensive to buy and operate than the Stout/Ford products, and aimed at airlines just getting started. Now what Stinson and Mara needed were customer orders.



THE FOUNDING OF NWA Careful readers will recall that Charles Dickinson's airline had been flying the CAM-9 airmail route between Chicago and the Twin Cities since June 7, 1926, but by August his threadbare operation was near collapse, so Dickinson notified the post office that he would cease operation on Oct. 1. He alerted Lewis Brittin at the St. Paul Association to his predicament, and Brittin, alarmed that the Twin Cities might lose air mail service, approached three airlines—Stout Air Lines, National Air Transport (where Paul Henderson was general manager) and Robertson Aircraft Corp.—about taking over the service. They turned him down. The postmaster general invited Ford Air Transport Service to apply for the route—no record of a response. With time running out and with no option but to start an airline from scratch, Lewis asked his secretary Camille Stein to place a call to Henry Ford in Dearborn. Ford was unavailable, but William Stout took the call. In his oral memoir on file at the Benson Ford Research Center in Dearborn, Stout recalled the conversation:

"Col. Brittin called me from St. Paul for Northwest Airlines (Dickinson's operation) had suddenly folded because Charles Dickinson, who was a little mentally questionable anyway, was under doctor's restrictions. Brittin called me and said, 'Bill, I'll give you the airline if you will come up and run it.' 'We haven't the funds to run one airline (Stout Air Lines) the way we ought to,' was my reply, 'but if you get on the train and come to Detroit, I'll hold a meeting at the DAC (Detroit Athletic Club) and we'll raise some money and see what we can do.' 'I can't', said Brittin. 'I haven't enough money to buy a ticket.' 'All right (replied Stout), I'll subscribe \$1000 and send it to you tonight as the first subscription for your new Northwest Airways. Take part of that money and buy a ticket and come on down and we'll take it from there. So he did, and we got the crowd together and raised the money." Stout continued, "So I was the first stockholder in Northwest Airways. The people I got together were George and Earl Holley, A.T. Waterfall and my old faithful Detroit group."

(Note: the Holley Bros. were a manufacturer of carburetors, and Waterfall was president of the DAC in 1927. William Mayo undoubtedly assisted with crafting the deal as well.)



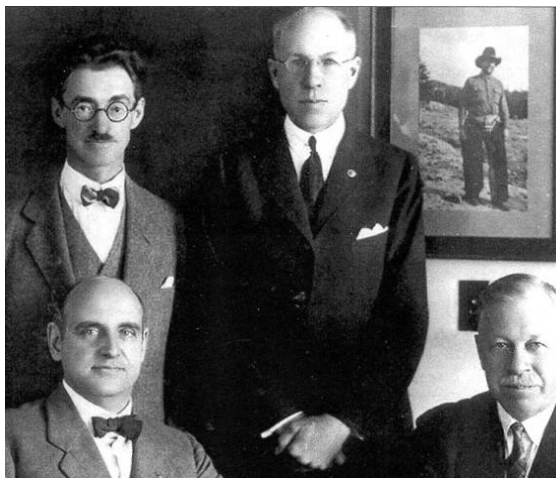
Above: Stinson VP Frank Blair, Eddie Stinson, Bill Mara and Lewis Brittin, in front of a Stinson Detroider under construction for NWA. Photo from Stinson Aircraft Company, John Bluth.

While Brittin was on the train to Detroit, Bill Mara drew up a business plan prospectus for Brittin to present to the DAC members, a plan which included the purchase of three SB-1 Detroiders at \$12,500 each (including extra charges for advance delivery positions). Ultimately, twenty nine investors pledged enough money to inaugurate the company, and on Sept. 1,

1926, Northwest Airways was incorporated in Detroit as a Michigan-based corporation, with these officers:

- President Harold H. Emmons**
(attorney with the Detroit law firm of Emmons, Oren and Sleeper).
- Vice President Frank W. Blair**
(president, Union Trust Co. of Detroit, vice president, Stinson Aircraft Co.).
- Secretary William B. Stout**
(president, Stout Air Lines).
- Treasurer Eugene W. Lewis**
(president, Industrial Morris Plan Bank of Detroit).

Members of the original board of directors included **William Mayo** and **Col. Paul Henderson**.



Northwest Airways officers, clockwise from upper left: William Stout, Lewis Brittin, Harold Emmons, Frank Blair. Not shown: Eugene Lewis. Photo from Stinson Aircraft Company, John Bluth.

Returning to Minnesota, Lewis Brittin, now general manager of Northwest Airways, assembled a local operating staff which included pilots Charles Holman, David Behncke and Chester Jacobson, mechanic James LaMont, administrator George Miles, and, from the St. Paul Association, secretary Camille Stein and clerk Julius Perlt. Since the Stinson Detroiters couldn't be delivered until November, Brittin arranged for the temporary rental of two small aircraft. On Oct. 1, 1926, on schedule and in compliance with its contract with the post office department, Northwest Airways began flight operations.

After a slow start (only 106 passengers total in 1927), Northwest Airways grew, adding Ford Tri-Motors to its fleet. But the long-distance financial management from Detroit rankled Brittin and local business leaders; Brittin famously removed the large Ford logos from the Tri-Motors, saying Ford didn't own them anymore, a counterproductive move since the Ford brand was synonymous in the public mind with reliability and stability. In 1929, Richard Lilly, president of the First National Bank of St. Paul, aggressively raised cash pledges from Twin Cities business leaders and presented the NWA board with a (somewhat hostile) takeover offer. After an all-night meeting, the board approved Lilly's plan and recommended that all Detroit shareholders accept the buyout. Northwest became a Minnesota-registered corporation, with Richard Lilly as the president and Lewis Brittin as vice president and general manager. Founding board members Mayo and Henderson remained, temporarily. If the Michigan investors were upset by this turn of events, they should have been crying all the way to the bank; their investments had performed well and the stock market crash and Great Depression were only months away.

EPILOGUE William Mayo remained optimistic about the potential of commercial aviation. At his urging, Ford engineers designed an enlarged, 32-passenger version of the Tri-Motor, called the 14-AT. It never flew—on its first attempted takeoff, the tailwheel collapsed. Mayo retired from Ford in 1932 at the age of 66, and died in 1944 of a heart attack, in the Henry Ford Hospital in Detroit.

Below: The Ford 14-AT. Photo: airliners.net



With the onset of the Depression, and the continuing injunction against Ford aircraft sales in Europe, orders for Ford Tri-Motors suffered a sharp decline. With Mayo gone, Henry Ford lost interest in the aviation business. The last Ford 5-AT was delivered in 1933, to Pan American Airways. The Ford Air Transport Service was shut down. Ford's aviation activities over ten years had lost over \$10 million. Ford temporarily reentered the aircraft manufacturing business during World War II, mass producing B-24 bombers at Willow Run.

William Stout sold Stout Air Lines to National Air Transport in 1930 and left the Ford Motor Company that same year. NAT became one of the merger components of the United Aircraft and Transport Corp., which included Frederick Rentschler's Pratt & Whitney, which had become a manufacturer of aircraft engines. William Mayo's protégé had come a long way (and

Northwest Airlines would become a major P&W customer).



The M-10000.

Stout was hired by the Pullman Car & Manufacturing Co. in 1933, where he applied his aircraft design concepts to the production of streamlined passenger trains. His revolutionary, all-duralumin M-10000 series for the Union Pacific and Illinois Central Railroads were among America's first "streamliners."

Edward Budd, an enthusiastic investor in Stout's aviation projects, introduced a competing design for the Chicago, Burlington & Quincy Railroad: all stainless steel, with corrugated roof and body panels for lightweight strength. For the next 50 years, the aircraft-inspired railcars of Budd and Pullman-Standard would comprise most of America's passenger trains.



Col. Paul Henderson left the NWA board in 1931, becoming a vice president for Transcontinental Air Transport and United Airlines. He died in 1951 and is buried in Arlington National Cemetery, Arlington Va.

After finishing the Tri-Motor design project, James McDonnell left Ford for a position as chief designer with the Hamilton Metalplane Company, where his team designed the H-18 Metalplane, similar in concept to the Stout 2-AT but smaller and more refined. Northwest Airways operated a fleet of nine larger H-47 variants, and they provided excellent service for NWA during the early years of the Depression. One H-47 survives, and appears regularly at airshows. Hamilton merged with Boeing in 1929. Eventually, McDonnell started his own company, the McDonnell Aircraft Corporation. Before merging with the Douglas Aircraft Company in 1967, McDonnell produced military aircraft, including the F-101 Voodoo and F-4 Phantom.



Right: The sole surviving HA-47, on display at EAA Oshkosh in 2010. Photo via wikipedia.

The Ford Assembly Plant in St. Paul closed on Dec. 11, 2011, and the buildings were demolished in 2013. Redevelopment plans for the site await finalization.

The Detroit Athletic Club continues to be an exclusive gathering place for Detroit's élite. As of 2015, the club had 4400 members. The initiation fee is \$3500, and monthly dues are \$337.

Northwest Airways became Northwest Airlines in 1934. It eventually grew to become the world's fourth-largest airline (by revenue passenger miles). Acquired by Delta Air Lines in a merger deal in 2008, the Delta and Northwest operating certificates were combined on Dec. 31, 2009. On Jan. 30, 2010, NW 2470, the last flight to bear the Northwest NW designator code, departed Los Angeles for Las Vegas and, when it arrived, Northwest Airlines ceased to exist. ➔

Many thanks to the staff of the Benson Ford Research Center for their helpful assistance with the research for this article.

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SCENES FROM THE ANNUAL MSP DELTA BLOCK PARTY, June 11, 2016.

The weather can be torrid and humid or freezing and rainy, but the annual Delta Block Party gives the NWAHC the valuable opportunity to present our message and mission to employees past and present, in a joyful, carnival-like atmosphere offering good food and drink and the delights of seeing old friends and colleagues. *Photos: Robert DuBert.*



Left: The NWAHC tent booth. We enjoyed a high-visibility location in the heart of the action.



Right: Vince Rodriguez, Elaine Mielke, Bill Marchessault and Dave McCarthy were among the NWAHC volunteers who staffed our booth.



Left: Bruce Kitt with two visitors. We handed out promotional material for the NWAHC, answered questions and enjoyed meeting the party-goers.



Right: Bob DuBert and Vince Rodriguez sought respite from the tropical heat through hydration.



Left: The grill, in the shape of an MD-90, built by Delta mechanics. Burgers and BBQ were on offer.



Right: Capt. Joel Gannon and his flight attendant wife Tammy. Former RC/NW and current DL employees, both are active in the Airloom Project for 747 ship 6301 at the Delta Flight Museum. See p.9 for information about this worthy effort.

NEWS and ANNOUNCEMENTS

DETROIT DUCKS (NC/RC Employees) SUMMER REUNION

Thursday, **Sept. 15, 2016** 12 noon-3:30p.m. (note the date!)

Karl's Cabin Restaurant and Bar, Plymouth MI 48170

6005 Gotfredson Road at N. Territorial Rd. (M-14 exit 15)

\$25 payable at the door. You'll enjoy a private buffet lunch,
with cash bar in the charming log cabin.

Reservations required. RSVP: 734-481-0027 or 517-596-3005.

Bring your NC/RC family and friends!

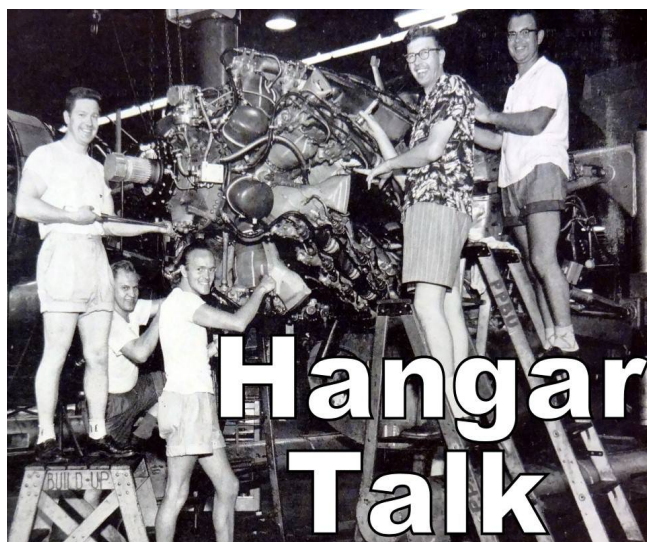


Photo: NWAHC Archives.

While the NWAHC is currently closed to visitors, the work of the museum continues:

The NWAHC was pleased to loan flight attendant uniform pieces from our collection to the SFO Museum for their current exhibition **FASHION IN FLIGHT**, a display of 70 stewardess and female flight attendant uniforms dating from the 1930s to the present day. The SFO Museum is one of the largest in-airport museums in the world. The exhibit runs through Jan. 8, 2017. For more info: <http://www.flysfo.com/museum/exhibitions/history-airline-uniform-design-fashion-flight> Photo: SFO Museum.



Don't miss our annual airline collectible show and sale, your best source for those Northwest and NC/SO/RW/RC-branded items you want for your collection and for holiday and birthday gifts. Oct. 8, 9a-4p. See page 12 for complete information.

BRUCE KITT ON THE GO Our executive director Bruce Kitt was a featured speaker at the annual meeting of the **Airline Historians and Archivists Association**, held this past July at Embry-Riddle Aeronautical University in Prescott, AZ. The event was attended by representatives from Alaska, Hawaiian and Southwest Airlines, the SFO, TWA and 1940 Air Terminal (HOU) museums, the Arizona State Library and others. Topics covered included museum collaborations, deaccessioning, emergency preparedness and community outreach. Bruce's presentation was entitled "Moving an Archives", a topic on which NWAHC volunteers are experts! On April 11, Bruce was the guest speaker at a lunch meeting of the Bloomington Rotary Club, where he reviewed the history of Northwest Airlines and described the activities of the NWAHC. You can view his entire presentation on YouTube: <https://www.youtube.com/watch?v=00WYhOuJMuo&index=5&list=WL> Photo: Bloomington Rotary Club, via YouTube.



A PHOTO BONANZA Your editor has been working on an archival project to convert hundreds of negatives from the **Hughes Airwest** publicity files in the NWAHC collection to positive images for our database. The project will take over a year to complete. Photo: NWAHC Archives.

AIRCRAFT NEWS Former NW 747-400 ship 6301 was recently added to the collection of the **Delta Flight Museum**, where it will house interactive galleries in a park-like setting on the museum campus. Current DL employees, many of whom are ex-RC and ex-NW, are working with museum staff on **The Airloom Project**, designed to honor employees, past and present, from all airlines in the Delta "Family Tree", with displays on the aircraft. For information on this project and how you can add your support: <http://www.theairloomproject.com/>

Image: Delta Flight Museum.

Cont. p.10



Our rich history celebrates the best of the airline industry.
The Airloom Project is dedicated to celebrating this success.



Continued from p.9

A former North Central DC-3 has been acquired by the **Aviation Heritage Center of Wisconsin**, which plans to fully restore it to flyable condition and serve as the centerpiece of the museum collection: <http://www.waupacanow.com/2016/07/06/north-central-airlines-dc-3-found/#>



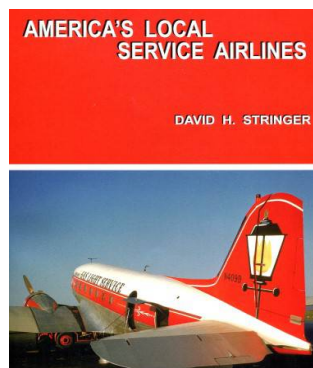
The **Yankee Air Museum** of Ypsilanti, Mich. has received a fuselage and door section from former NW 747-251 N623US, ship 6623. This aircraft was delivered to Northwest Orient in May 1979, withdrawn from use by Delta in 2009 and sold to Kalitta Air, an Ypsilanti and Oscoda, Michigan-based charter airline/FBO the following year. Startup carrier Baltia Airlines planned to use the aircraft to operate flights between JFK and St. Petersburg, Russia's Pulkovo International Airport (LED), but plans changed and the aircraft was scrapped. Kalitta salvaged the fuselage and door section for use as a training mockup and donated the unit to the museum, where conservators have encountered difficulty in reassembling all the pieces. *Photo: Robert DuBert.*

Two ex-NW DC-10s have been busy fighting the massive forest fires which have plagued the west all summer. Tankers 910 (N239US, ship 1239) and 912 (N243US, ship 1243) are owned and operated by **10 Tanker Air Carrier** of Albuquerque. For info on this heroic operation: <http://www.10tanker.com/>



Photo: Tehachapi News, via 10 Tanker.

MEDIA NEWS David Stringer's new book, **AMERICA'S LOCAL SERVICE AIRLINES**, was released in June. Based on a series of articles from the Journal of the American Aviation Historical Society, this beautifully produced volume includes the most complete and accurate histories of the many airlines which make up the Republic Airlines corporate family tree. David is a retired flight attendant (SO/RC/NW) and a professional airline historian and writer. He's the History Editor for **Airways** magazine, where he recently adapted articles by your editor about Northwest Airlines branding (REFLECTIONS, Spring 2013 and Dec. 2015) for the **Airways** October 2016 issue, currently available at Barnes & Noble and major newstands.



Gary Ferguson, editor of **CONTRAILS**, the magazine of the Retired Northwest Pilots Association, is pleased to announce that back issues are now available online, where they may be viewed by the public: <https://issuu.com/contrails>

For a gorgeous travelogue from the Stratocruiser era, see **High Road to the Orient**, produced by Northwest Orient, remastered in high-definition and published on YouTube by Periscope Films: <https://www.youtube.com/watch?v=XJdnAymPRzI>

Left: Scene from "High Road to the Orient."



west Orient from 1956-1960, is an active volunteer at the NWAHC and for five years was editor of REFLECTIONS. Her memoir, *Fujiyama Trays & Oshibori Towels*, is in its second edition. She has appeared as speaker for numerous events in the Twin Cities, and was the keynote speaker at the Airliners International 2015 Convention at the Delta Flight Museum in Atlanta. Congratulations, Anne! Now it's time to relax a bit. Above: a wall banner produced by the library in Anne's honor. Right: Anne reacts to a "roast" at her retirement party at the library. Photos courtesy Anne Kerr.

PASSAGES

Congratulations to **Anne Kerr**, who retired on Sept. 3 at the age of 82 after 18 years of service as a Public Service Associate at the Hennepin County Library System, following an earlier career in real estate. Anne was a stewardess at North-

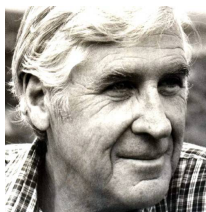


IN MEMORIAM

Robert K. Reardon 1924-June 8, 2016, St. Paul. Robert Reardon's career at Northwest Airlines and Delta Air Lines spanned almost 63 years, and he held records as the world's longest serving flight attendant and the world's oldest active flight attendant before his forced retirement in 2014. He has been the subject of numerous articles in the aviation online press, including tributes from Anne Billingsley Kerr, who flew with Bob during the 1950s: <http://www.ladyskywriter.com/category/robert-reardon>

Obituary: <http://www.aviationpros.com/news/12217975/obituary-robert-reardon-gave-new-meaning-to-the-golden-age-of-flying>

Right: Purser Robert Reardon on a 747 flight. Photo: Jeffrey Elder.



Robert Swanson 1920-July 17, 2016, Phoenix. Robert Swanson, a New York-based writer/composer of advertising jingles commissioned by many leading advertising agencies, was responsible for adding the sound of a gong to the audio tagline in ads for Northwest Airlines. In this NPR radio interview, his son Gary describes the origin of the gong idea (thank you, Trader Vic's!):

<http://www.npr.org/2016/07/26/487522821/remembering-robert-swanson-advertisings-king-of-jingles>

Obituary: <http://www.wsj.com/articles/robert-swanson-was-a-master-of-advertising-jingles-1469807396>

Left: Robert Swanson. Photo courtesy Swanson family via the Wall St. Journal.



Capt. Homer "Red" Sutter 1919-Aug. 11, 2016, Bloomington, Minn. Capt. Sutter enjoyed a 35-year flying career with Northwest Airlines and retired on the 747 in 1978. He was the subject of a feature article by Bob Johnson in REFLECTIONS: http://nwahistory.org/assets/14_sep_newsletter.pdf

He appeared briefly in the segment about NWA in the documentary *Lost Twin Cities 4*: <http://video.tpt.org/video/2365436746/>

Obituary: <http://www.startribune.com/obituaries/detail/150741/?fullname=homer-f-red-sutter>

Left: Capt. Homer Sutter.
Photo courtesy Sutter family.



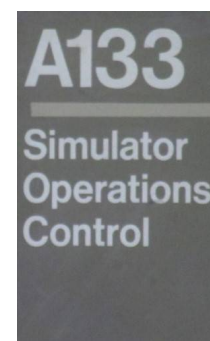
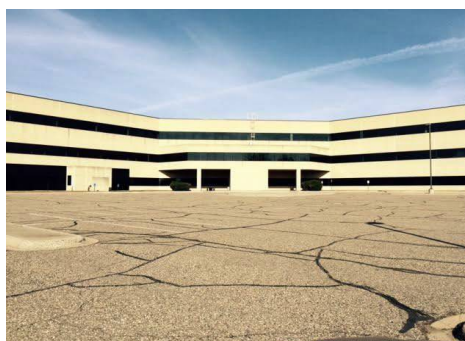
Joseph Sutter 1921-Aug. 30, 2016, Seattle. Engineer Joe Sutter was the head of the design and engineering team for the Boeing 747, and is widely praised for his tenacity and diligence in bringing the project to fruition at a time when Boeing management efforts and resources were concentrated on the Supersonic Transport (SST).

Obituary: <http://www.seattletimes.com/business/boeing-aerospace/joe-sutter-led-the-incredibles-who-pioneered-boeings-747-jumbo-jet/>

Right: Joe Sutter. Boeing Co. photo.

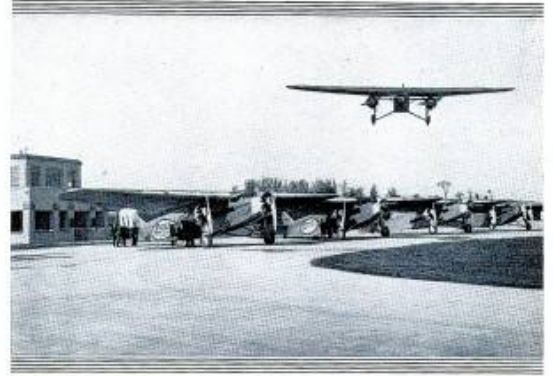
A Final Farewell to the former Northwest Airlines headquarters.

This past July, the Eagan, Minn. City Council approved the Minnesota Vikings' plan to create a headquarters and training complex on the 185-acre site of the former Northwest Airlines headquarters and NATCO training center in Eagan. Before the site was closed off to the public, Bruce Kitt and Robert DuBert toured the area, to capture images of the NWA Ghost Town.





1,000,000 MILES... STOUT AIR LINES!



On scheduled service Ford planes frequently fly in two or more sections to meet the demand for swift, comfortable transportation

The Ford Plane

AMONG incredible is the achievement of Stout Air Lines, operating the Detroit-Chicago-Cleveland routes. Up to the end of 1935, well over a hundred thousand passengers had been carried eight hundred and forty thousand miles without the slightest injury to a passenger, and with an extraordinary record both for reliability and the percentage of scheduled trips completed! Ford all-metal, tri-motored transports only are used on these lines.

The first operating route of Stout Air Lines was between Detroit and Grand Rapids, beginning in August, 1926, using Ford Liberty motorized ships. Since then new lines have been opened... schedules extended... rates cut almost in half!

Four round trips a day are flown between Detroit, Toledo and Cleveland. Out way fare is \$10. Two round trips daily are flown between Chicago and Detroit, one way fare being \$18. On this route stops are made at Battle Creek, Kalamazoo and South Bend. The demand for passage on these lines is so great that on one occasion, at least, it was necessary to run eleven sections of Ford tri-motored, all-metal transport planes.

Ford planes are used on these lines with the steady dependability of trains and buses. They are recognized by every one as a permanent form of swift transportation between the great cities which they serve.

FORD MOTOR COMPANY

Planes are always welcome at the Ford Airport at Detroit

The Ford plane is planned, constructed and operated as a commercial plane. Built of corrugated aluminum alloy, it has great structural strength, unexcelled durability, and is most economical to maintain in operation. The safety of its construction is demonstrated by statistics: All planes have three engines in order to insure reserve power to meet and overcome all emergencies. The aircraft may be Wright or Pratt & Whitney, six-cylinder, seating from 900 to 1275 passengers. Ford planes have a cruising range of from 280 to 500 miles and a speed range of from 115 to 145 miles per hour. Loads may be carried weighing from 2575 to 6000 pounds.

The capacity of these planes is 12 to 15 passengers and a crew of two (pilot and assistant). Planes can be equipped with a buffet, toilet, running water, electric lights, adjustable seats.

The price of the Ford tri-motored, all-metal plane is considerably low because of its highly scientific methods of construction and production. Price is \$20,000 to \$28,000 at Detroit.

Ford branches will be glad to give you information on the Ford tri-motored, all-metal plane in all models.

New de luxe club plane

Mechanical features are similar to those of the famous Ford 5-AT. Built of aluminum alloys, lighter than wood; powered with three Pratt & Whitney air-cooled motors, with total of 1275 horse-power; a capacity of nine passengers plus a pilot and mechanic. Cruising speed over 115 miles an hour, for hundreds of miles!

In addition, the de luxe club plane contains kitchenette, folding berths, radio cabinet, writing desk and book case. Seven overstuffed chairs and a two-place divan. Card tables and serving trays. Refrigerators and thermos cases. A lavatory with toilet, running water, towel racks, and closets for luggage, guns, fishing tackle or golf sticks.

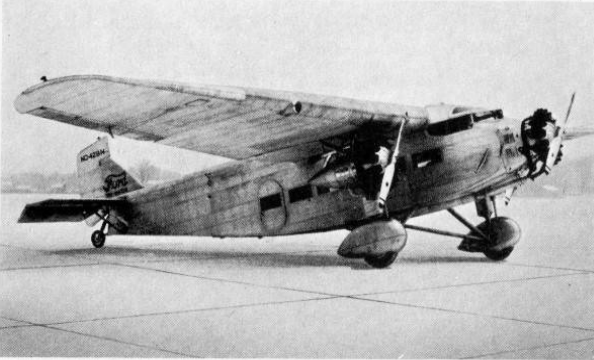
Walls and ceiling are sound-proofed.

The entire interior is beautifully trimmed and decorated in choice fabrics. Individual ventilation at each window. Dome and wall light and heat register in floor add to the comfort and luxuriousness of the plane. Tile walls in kitchenette and lavatory.

The pilot and mechanic in their forward control cabin have every mechanical device necessary for day or night flying in all seasons under all conditions.

Price on request.

Ford ALOFT IN LUXURY! Ford



Like an albatross of burnished silver... the new Ford de luxe club plane

PLAN TO ATTEND THE SHOW!

Admission \$5
Children under 12 Free

Free hotel shuttle from MSP airport.

All admission proceeds benefit the NWA History Centre.

Timetables, safety cards, models, t-shirts, logo-branded clothing, china, wings, glassware, posters, photos, post-cards and NWA History Centre sales from our surplus inventory!

For information and dealer arrangements, please contact:

Bill Rosenbloom

612-386-5080

bill@airlineposters.com

Hotel reservations at special show rate:

952-854-8200

MINNEAPOLIS

AIRLINE

SHOW/SALE

AND GET-TOGETHER

PRESENTED BY THE NWA HISTORY CENTRE

SAT., OCTOBER 8, 2016 9AM - 4PM

VISIT THE MSP AIRLINE COLLECTIBLES SHOW AND GET-TOGETHER ON OCT. 8th...A FUN AND EXCITING DAY FOR ALL AVIATION COLLECTORS, THE GENERAL PUBLIC, MUSEUM FRIENDS, AND RETIRED OR CURRENT AIRLINE EMPLOYEES!

AT THE BEST WESTERN PLUS BLOOMINGTON HOTEL
1901 KILLEBREW DRIVE, BLOOMINGTON, MN