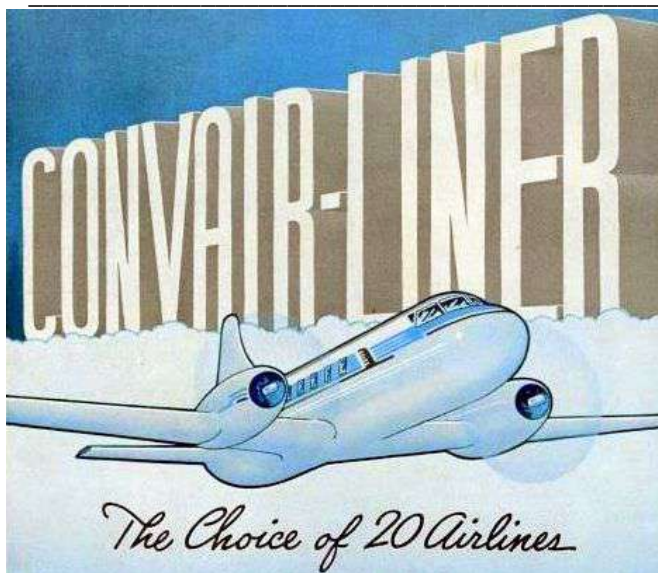




REFLECTIONS

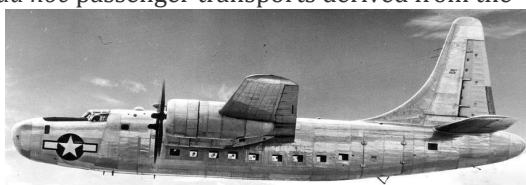
The Newsletter of the NWA History Centre
Dedicated to preserving the history of a great airline and its people.

NORTHWEST AIRLINES 1926-2010



A Convair advertisement from *FLYING* magazine, 1949.

GENESIS During World War II, the Consolidated Vultee Aircraft Corporation built *ad hoc* passenger transports derived from the company's B-24 Liberator bomber and its naval variant, the PB4-Y Privateer. At the war's end, the company, renamed Convair, used that wartime experience to develop a civilian airliner, hoping to take advantage of the predicted post-war increase in demand for airline travel. The 4-engine long-range market was dominated by Douglas, Lockheed and Boeing, so Convair focused on creating a twin-engine, short-to-medium range aircraft that could profitably serve smaller cities and potentially replace the airlines' large fleets of obsolete DC-3s. The result was the Convair 240, powered by two Pratt & Whitney R-2800 "Double Wasp" 1800 hp piston engines, which received its Type Certificate from the Civil Aeronautics Authority on Dec. 7, 1948. Seating 40 passengers, it was the first twin-engine airliner with a pressurized cabin, and with a cruising speed of 270 mph, almost 100 mph faster than the DC-3 it was designed to replace.



The RY-3 transport, derived from the Privateer. US Navy photo.

Before the war, Northwest Airlines reportedly had expressed interest in the Douglas DC-5 twin-engined airliner, but Douglas cancelled the project. After the war, Northwest urgently needed to modernize and enlarge its fleet. The Martin 202, similar to the CV-240 but unpressurized, was about 14 months ahead of the 240 in its development. With CV-240 launch customer American Airlines holding the first 100 delivery positions, Northwest executives may have felt that timing left them with no alternative

THE CONVAIRS

For its crews, more than an airplane—a special time in their lives.

By Robert DuBert

The Convair-Liners were a series of twin-engined, pressurized airliners introduced after the end of World War II. They were initially rejected by the management of Northwest Airlines, a decision which proved catastrophic. Yet nearly 40 years later Convairs joined the Northwest fleet as part of the merger with Republic Airlines, a deal which created what was at the time the world's fourth-largest airline. Special is an overused word but those who flew Convairs for North Central, Republic and Northwest have such fond, heartfelt memories of that aircraft that "special" indeed applies. Why this is so is the subject of this report.

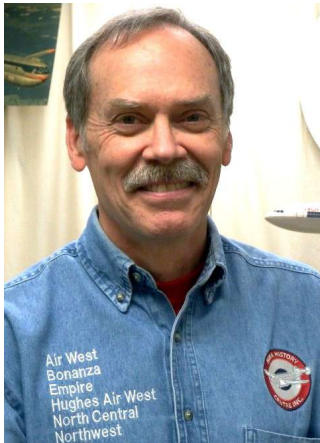
but to place their order for a fleet of Martin 202s in 1947. Four years and five fatal crashes later, that decision would haunt the company for years (REFLECTIONS December 2013).

DEVELOPMENT After the failure of the M-202, Martin in 1950 introduced the improved, pressurized M-404 version and Eastern and TWA placed orders for a total of 65 aircraft. Convair met the challenge in 1952 with the Model 340, which included 4 more passenger seats, uprated engines (1900 hp), a longer wing, more range, optional weather radar and improved overall performance. The CV-340 was very successful, with 209 delivered to the airlines and a further 102 built for the military. However, later in 1952 Convair faced a more formidable challenge from the Vickers Viscount, a 48-seat airliner powered by four Rolls-Royce Dart turboprop engines, which offered superior cabin comfort and a touch of jet-age glamour for the passengers. Trans-Canada Airlines ordered 50 Viscounts; Capital ordered 65. Stung by the loss of these two potential customers, Convair introduced the CV-440 in 1956, essentially an improved 340. Cabin noise was always a problem with the Convair, and the 440 featured rectangular engine exhaust outlets and improved insulation to alleviate the problem. A lengthened nose could accommodate the 36-inch antenna dishes of the newest C-band weather radar, and an optional configuration for 52 seats was offered. Convair also offered modification kits which airlines could install on their 340s to upgrade them to near-440 standards. When production ended in 1959, a total of 1086 Convair-Liners had been built, and with Boeing and Douglas jetliners soon to debut it seemed that the product line had reached the end of its developmental potential.

HERE COMES HERMAN In January 1956, North Central Airlines was a small local service airline with a fleet of 18 DC-3s,

cont. p 4

From the Executive Director



Bruce Kitt

Photo: Joe Callaci.

I begin this message with profound thanks to those who responded to our appeal for support; we now have some financial leg room. The NWAHC reached approximately 60% of its goal plus 113 new members. Not a bad accomplishment for a 45-day appeal. Thank you!

The NWAHC Board's first task will be to update the museum's business plan. We have reached out to the local chapter of SCORE (Service Corps of Retired Executives), a non-profit organization that provides free business mentoring services to small businesses, and have been matched to a counselor with extensive non-profit experience. We will be meeting with him in March. Additionally, we have contacted the Minnesota Historical Society's Local History Services office and asked for their help. They likewise responded with an offer to work with us; we'll begin working with their staff next month also. Our primary goal remains to keep the NWAHC's extensive collection intact.



Being guardedly optimistic, the NWAHC will continue to welcome visitors and tour groups. We are still planning to host the Saturday, October 8, 2016 MSP Airline Collectible Show, Sale and Get Together. We'll continue to operate our normal schedule as we work through ideas to keep the NWAHC going. We'll keep you apprised throughout the year.

The NWAHC Board announces, with deep regret, that Susan Rostkoski has resigned effective March 31st. The travel bug and other plans have become too strong to resist and she has decided to heed their call. Susan has stayed on beyond her original go date and we thank her for her years of service on behalf of the History Centre. We'll miss her. cavu. ➔

NWA History Centre Visitor Information

Open Tuesday-Friday 11AM-5PM Saturday 9AM-1PM.
Closed Sunday and Monday and major holidays.
Admission FREE (special events may incur a charge).

Advance reservations preferred for visits by groups of 8 or more.
Please call 952-698-4478.

Free parking. Metro Blue Line—American Blvd. Station.

Like us on Facebook.



THE NWA HISTORY CENTRE

Founder Henry V. "Pete" Patzke
1925-2012

8011 34th Ave S, Suite C26
Bloomington MN 55425-1637
952-698-4478

nwahistory.org
facebook.com/NWA.History.Centre

Executive Director **Bruce Kitt**
Admin. Director **Jerry Nielsen**
Directors **Drew Dunwoody, Fay Kulenkamp, Bill Marchessault, Vince Rodriguez, Jeff Schwalen**
Collection Manager **Bruce Kitt**

The NWA History Centre is an independent not-for-profit 501(c)(3) corporation registered in the state of Minnesota.

REFLECTIONS is published quarterly by the NWAHC and is a benefit of membership. Submissions are welcomed, and subject to editing for content and length.

Editor **Robert DuBert**
BobNWFA@aol.com 734.678.7600

Reporters **Anne Kerr, Carol Hall, Don Swanson.**

ANNUAL MEMBERSHIP

Email **\$30** (correspondence and digital edition newsletter via email.

USPS mail (print edition newsletter) **\$35**

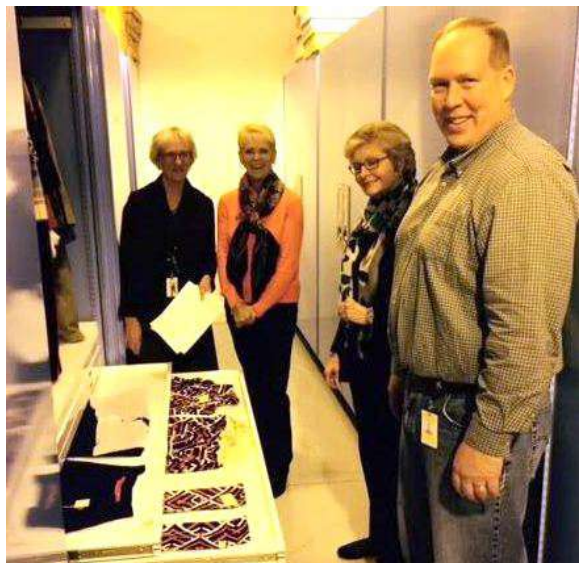
Donations are gratefully accepted, are necessary for the continued operation of the NWA History Centre and are tax-deductible. Enquiries:

donations@nwahistory.org



BEHIND THE SCENES AT THE NWAHC: RECURRENT TRAINING

The core mission of the NWAHC is the selection, cataloguing and preservation of an archival collection of items related to the history of the airlines in the NWA "family tree." This process involves curation (selection, classifying, organizing, database creation) and conservation (repairs, cleaning and proper storage). Some of the most attractive and popular displays in the HC gallery are the flight attendant uniforms, and retired flight attendants **Flora Dreyer** and **Karen Jensen** are the curators and conservators for our collection of uniforms for all employee groups. In museum parlance, uniforms are included in a classification called Textiles. Recently, Dreyer, Jensen and HC Executive Director **Bruce Kitt** met with curators and conservators at the Minnesota History Center in downtown St. Paul to learn more about the proper conservation of textiles.



Left: **Dan Cagley** (right), Collections Manager at the Minnesota History Center, with (L-R) **Linda McShannock**, MNHC Textile Director, **Karen Jensen** and **Flora Dreyer**.

Right: **Ann Frisina** (center right) is a Textile Conservator for the MNHC. She reviewed proper cleaning procedures for textiles, which include using a top-loader washer, ORVUS non-ionic professional detergent, and gentle wash and dry cycles.

Right: The Minnesota History Center is operated by the Minnesota Historical Society. It includes the Gale Family Research Library, open to the public, which contains many of the vintage corporate archives of Northwest Airlines.



Left: **Linda McShannock** demonstrated the correct materials and procedures for folding and storing textiles.

Right: **Flora Dreyer** and **Karen Jensen**, back at the NWA History Centre, in the storage cage which holds the dozens of employee uniforms currently in the NWA History Centre collection.

Photos: Bruce Kitt.



Remember *Product Placement*, the use of the imagery of one product to sell another (REFLECTIONS June 2014)? Retired NW flight attendant John Rotella, who lives near Syracuse, is a passionate Ford Motor Company enthusiast. He sends this advertisement for the 1962 Mercury Monterey, which includes a photo taken at Detroit Metro. In the background is a Northwest 720-051B.



Mercury asks: In which size car do you want your air-smooth ride?

Cont. from p. 1

operating a route network entirely within Minnesota, Wisconsin and Michigan, plus Chicago and South Bend. Aware of the need for growth, the airline's president Hal Carr aggressively pursued new opportunities, and in 1957-1959 North Central received several route awards from the Civil Aeronautics Board, many transferred from American and Braniff, which extended the airline's network into the Dakotas, Iowa and Nebraska. Although the airline acquired additional DC-3s. Carr also saw the need for more capable, longer-range planes to serve the growing network. An opportunity arose in 1959 when Continental Airlines offered some of its CV-340s for sale, and Carr purchased five at the bargain price of \$325,000 each, reportedly sealing the deal in person with Continental president Bob Six as the two rode in an elevator at the posh Brown Hotel in Denver where the two were attending a conference. Over the next ten years, North Central purchased 18 more CV-340s and 12 CV-440s, all used and from a variety of sources, and installed 440 modification kits (including the larger noses and C-band radar) on all the 340s not already upgraded, creating a uniform 35-strong fleet (For a complete fleet list of the North Central Convairs, see p.13 of the digital edition).



Four North Central Convairs at ORD, 1966. Photo: Jon Proctor.

JET POWER As early as 1954, Convair had proposed a stretched version of the CV-340, called the Model 15, powered by four (!) Rolls-Royce Dart turboprop engines. The project was cancelled after lack of interest from the airlines. But the years 1957-1960 saw the development of three separate programs for converting the Convairs to turboprop power. The model re-designations can be confusing, but below is a summary:

Engine: Napier Eland 504, 2835 hp.
Conversion contractor: AiResearch.
Designation: CV-340 → **CV-540**
First airline customer: Allegheny.
Project cancelled after nine aircraft converted.

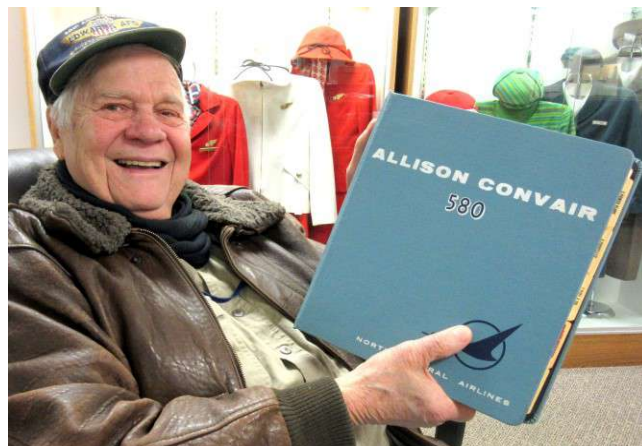
Engine: General Motors Allison 501-D13, 3750 hp.
Conversion contractor: PacAero Engineering Corp.
Designation: CV-340/440 → **CV-580**
First airline customer: Frontier.

Engine: Rolls-Royce Dart, 2959 hp.
Conversion contractor: Convair.
Designation: CV-240 → **CV-600**, CV-340/440 → **CV-640**.
First airline customer: Central Airlines.

SOUTH OF THE BORDER In 1963, the United States Agency for International Development (USAID) contracted with North Central Airlines to furnish technical and management assistance to the airline Lloyd Aéreo Boliviano (LAB). About 20 NC employees

were assigned to the project, including Chief Pilot Art Hinke and Asst. Mgr. for Pilot Training Capt. Randy Sohn. In his unpublished memoir, Sohn relates: "One of the activities Art Hinke and I performed was the evaluation of several different aircraft for potential purchase by LAB (to be funded by the USAID). We accomplished a rather complete analysis of the potential costs associated with each, among them the Allison turboprop conversion of the CV-340/440 airframe." On returning to North Central in 1965, Hinke and Sohn submitted the report to an interested NC management. Sohn remembers that while he and others from "the operation side" recommended the Allison, NC VP-Maintenance Les Keely favored the less powerful Rolls-Royce Dart CV-640 option, in part because it was a simpler, less expensive conversion that NC mechanics could perform "in-house." Ultimately, the operation side prevailed and North Central signed a contract with PacAero for the conversion of all its 35 Convairs, with the first to enter service in 1967.

TRAINING With the Allison engines providing 97% more power than the piston engines they replaced, the CV-580 became a really powerful aircraft, with a cruising speed 75-100 mph faster than the 340/440, and with different systems to monitor in the cockpit. Capt. Randy Sohn relates that North Central 580 pilot training required "a completely different operating philosophy" aimed at creating "a turbine mindset." The 580, for the pilots, was to be considered more as a transition to the DC-9 (on order for later in 1967) rather than a simple upgrade of the 340/440. NC check pilots Art Hinke, Bill Evans, Bob Murphy, Bob Hicks and Randy Sohn first went to Denver for 580 training at Frontier Airlines, which had a fixed-base (no hydraulic legs) 580 flight simulator. The other pilots were trained "in house." NC did acquire a simpler Cockpit Procedures Trainer to familiarize pilots with controls and instruments, but the actual flight training was done "online", in flights on actual aircraft (with no passengers), usually in the middle of the night. The training was demanding and thorough, and Sohn recalls that 10 pilots washed out, unable to adapt; "They had a 145 knot brain."



Capt. Randy Sohn at the NWAHC, with the CV-580 manual, which he wrote. Randy joined North Central from the USAF in 1960 and retired after serving as captain on the 747 and DC-10. Photo: Robert DuBert.

FLYING THE 580 The Allison engine's extra power made the CV-580 fast and the large 4-bladed propellers generated lots of airflow over the wings. Says Randy Sohn, this availability of instant power and lift "kept new captains out of trouble." But it was no sports car. In the film *Top Duck*, Capt. Bob Holman said it was "like a Mack truck with no power steering," a reference to the 580's notoriously heavy controls which lacked hydraulic

assistance. Randy Sohn remembers Julie Clark proudly flexing her muscles after successfully completing 580 training, and notes that the engine conversion process included the removal of half of the spoiler on the trailing edge of the ailerons, the possible intention being to prevent overcontrolling by the pilot due to abrupt control inputs. Sohn states that the 580 was “generally stable”; Holman noted that in flight “the aircraft wants to move around on you.” This tendency to yaw sometimes made new-hire flight attendants airsick, remembers flight attendant JP DesCamp.



...fastest twin-engine prop-jet in the world!

Image from 1967 timetable.

Retired Capt. Trig Johnston on flying the 580: “It was work to fly the Convair for the first 8 months—it took that long for me to figure out how to fly it. From then on, particularly after I checked out as captain, it was a dream to fly.” However, “Following our merger with Southern Airways, I was downgraded back to the Convair (from the DC-9) due to the integration of the pilot group. On my first 580 take-off during my recheck, I thought for sure the controls were still locked! The pressures on the control yoke to fly this beast were significant!”



Capt. Bob Banks and F/O John Hanson in a North Central CV-580, circa early 1970s. Having just completed captain's training, this was Banks's first revenue flight as a new captain. Both Banks and Hanson finished their airline careers as B-747 captains at Northwest, and each was no. 1 on the seniority list at the time of his retirement. Photo courtesy John Hanson.

Thanks to the power of the two Allison engines, the 580 had a maximum gross takeoff weight of 54,600 lbs., compared to 47,000/48,000 for the piston-engined 340/440. But with no increase in passenger seating, the 580 enjoyed such reserves of power that no one remembers it ever being weight-restricted, a big plus for pilots and load-planners (and non-revs!).

Retired Capt. John Hanson (see photo above) offers this perspective: “Flying the 580 was a delight. It had fully reversible

propeller pitch, which made it a very versatile airplane, especially when landing and taxiing on slippery surfaces. I landed a 580 more than once on runways that had been reported as 'braking action poor-to-nil' that were actually 'nil,' and the 580 would do a virtual ballet for me. I did that once in MKE, and through the use of differential thrust and reverse, managed to stop on the runway, taxi all the way to the gate and park. When the ground controller asked how I would rate the braking action, I truthfully replied, 'I don't know. We never touched the brakes.'” He also remembers that the cockpits were cold and noisy, so that pilots carried a sweater with them in all seasons except summer.

For flight attendants, the 580 was very different workplace from the DC-9s which began to join the fleet 5 months after the debut of the 580. Convair trips could contain anywhere from 5-10 (or more) flight segments per duty day, with short flights and quick turns. There were no serving carts, so all drinks and snacks had to be hand-run. The cabin climate control was not uniform, and JP DesCamp remembers lots of condensation from the air conditioning. Many flight attendants enjoyed the high degree of personal interaction with the passengers and the friendliness of the employees and passengers at the smaller stations, which were pluses of flying the 580. And since the 580 had only one flight attendant, some preferred being the “master

of her/his own domain” as opposed to working with others on the DC-9s. Flight attendants who worked the Convair by choice were sometimes affectionately dubbed “Convair Queens.”



Left: the passenger cabin of a Republic CV-580. Note the large windows! Photos: Keith Mock.



Passengers on the 580 enjoyed deeply padded seats with a 36-38 inch seat pitch (note: compare that with today's economy class seats, with their one inch padding and 30-32 inch pitch!). The old seats didn't have tray tables, so passengers balanced drinks and snacks on pillows on their laps.

The lavatory on the 580 was not vacuum-powered and one television reporter referred to it as a “flying outhouse.” Nevertheless, JP

DesCamp doesn't remember receiving a single passenger complaint about the aircraft itself.

One problem for flight attendants and ramp agents alike was the auxiliary power unit (APU) of the CV-580, which was located in the right landing gear wheel well, near the baggage

Cont. from p.5

compartment door. It provided heating /cooling on the ground but was painfully noisy and ramp workers avoided using it, with the result that the cabin became hot in summer and cold in winter. Some customer service agents at the hubs enjoyed working the Convair gates because passenger loads were lower and there was less stress. They could count on seeing the same crews and passengers on a regular basis. The Convair fleet shrank with the arrival of more jets, and with only 13 in the fleet at the time of the merger with NWA, the agents and crews became a tightly-knit social group. One Northwest agent in MSP said of the Convair operation, "The people are nice, the crews are nice. It's like a small family, a small airline within a larger one."

HOME ON THE RANGE Connecting the smaller cities in the system to the large city hubs was the principal mission of the 580, especially after the creation of Republic Airlines in 1979 and the evolution of a major hub-and-spoke system out of the linear route networks of North Central, Southern Airways and Hughes Airwest. Convair crews often spent overnight small-city layovers in what John Hanson calls "mom and pop motels." Trig Johnston adds that these motels (especially in northern Michigan) might be akin "to a visit to one's grandparents in their hunting lodge" (this was before today's era of ubiquitous chain hotels).



The Fletcher Motel, for crew layovers in Alpena (ALP), Mich. From a postcard.



Capt. Trig Johnston, flight attendant Fran Gilchrist and First Officer Ramona Larson begin a layover. Photo courtesy Trig Johnston.

Some of these small stations provided a "crew car," a junker that crews would use to drive to their layover motel and return to the airport the following day. Hanson relates, "Old, worn-out, noisy and hard to steer; the crew cars always started in the cold morning when the first officer went out to warm them up about 10 minutes before departure. I did my share of those warmups. They also served to take us to whatever restaurant we wanted to visit for dinner." Retired Capt. Cody Welch recalls that in winter "we used to use the crew car to do high-speed runway condition

determinations."

One particularly memorable layover "hotel" was in Sault Ste. Marie, Mich., where the airport was the former Kincheloe Air Force Base. Overnights there were part of a crew assignment called (somewhat alarmingly) an "illegal." These trips were in fact perfectly legal and were a constant duty period beginning the evening of one day through the following morning, with the luxury of a 4-5 hour nap at a hotel (other airlines use terms such as "high-speed" and "leanover" for this type of trip). Ret. Capt. Frank Clark explains: "After leaving DTW at 1030pm and with intermediate stops



Sault Ste. Marie passenger terminal, 1973. Photo: JP DesCamp.

in Traverse City and Pellston we arrived at 1230am and departed at 530am." Crews stayed at the former officers quarters of the military base, and Clark and JP DesCamp recall staying in windowless basement rooms with concrete block walls and communal bathrooms and showers.

LUXURY CONVAIR In 1982, Republic converted a CV-580 (ship 541) to a 17-seat executive configuration, re-registering it as N580 and offering it for luxury charters. Unfortunately, I have been unable to find any photos of celebrities using this service except for Liberace, who appeared in an article in the employee newspaper *Republic People* (NWAHC Archives.)



ONE OF THE FIRST PASSENGERS. Famed pianist Liberace, (left) relaxing in one of 580's comfortable seats, chats with Jim Palm, (right) Republic's director of sales development. The Milwaukee native flew home for a sales promotion with Gimbel's Department Store. In the middle is Jamie James, a member of Liberace's personal staff.

Below: The interior of N580. Photos: Keith Mock



ACCIDENTS Sadly, there were three crashes of NC 580s resulting in the loss of the aircraft:

1968: Crashed into hangar at ORD. Fatalities: 27. Probable Cause: Spatial disorientation. NTSB file no: **AR 70-27**
1972: Mid-air collision near ATW. Fatalities: 5. Probable Cause: Inadequate visibility for VFR. NTSB file no: **AR 73-09**
1978: Crash landing after takeoff from AZO. Fatalities: none. Probable Cause: Failure to follow procedures. NTSB File no: **AR 79-04**

TOP DUCK The merger of Republic Airlines and Northwest Airlines was completed on Oct. 1, 1986, and the 13 remaining Republic CV-580s joined the Northwest fleet. Twenty six months later, on Nov. 30, 1988, ship 517 flew the last Convair operation for NWA, flt. 1441 from CWA to MSP. The following day, a farewell party for the Convairs was held at the Holiday Inn in Bloomington, Minn., attended by over 1800 employees, family members and friends. Scenes from the party, historic film footage and segments from local newscasts were compiled in the film *Top Duck*. Why did NWA phase out the 580? Opinions vary: "Northwest thought it was an antique" "Northwest didn't know what to do with the aircraft" and "The small size of the fleet caused problems for crew scheduling and maintenance" are three I've heard. I submit that a major reason was that the 580 was no longer compatible with the emerging airline industry business model. On the day of the final 580 flight, one newscaster reported that "It's the last time that a propeller-driven

aircraft will be used by a major airline in this country." Well, that was only partially correct. The coming decade would see swarms of propeller-driven airliners at our airports. These planes—ATRs, Jetstreams, Brasilias, Dash 8s, SF340s and the like—would wear the colors and logos of almost all the major airlines, but in fact these aircraft were operated by airlines most passengers had never heard of—Colgan, Chataqua, Atlantic Coast, Skywest, Mesa, Trans States, etc.—and staffed by hard working but poorly-paid crews who might have less experience than their colleagues at the majors. The era of code sharing had arrived, and these codeshare flights would take over the bulk of service to the smaller cities. As we have seen, small cities today sometimes have less airline service than they enjoyed 50 years ago when the Convairs plied the skies of the upper midwest (REFLECTIONS March 2015). The retirement of NWA's CV-580 fleet was one tiny part of the increasing isolation and shrinkage of rural America.

Let's conclude with the reflections of three veteran pilots. Now well into their retirement years after long careers at Republic and Northwest, they were young men full of energy and optimism and just beginning their careers when they piloted the Convairs. Says Capt. John Hanson: "The 580 was special to me. It was a joy to fly, but more than that, it represented the freedom of an earlier time. It was one of the last of an era when you could cancel IFR 'for the rest of the evening' as you taxied out at DTW on a 3-stop nighttime flight to the Upper Peninsula of Michigan, and never talk to another FAA air traffic controller the rest of the evening. You then could choose whatever altitude you liked, fly whatever route you wished to see the sights, sit in silence and watch the moon and stars from the cockpit, and then, as you started your descent, ask the station agents if they would be kind enough to start the crew car and order a pizza for you. Or you could stop at a food store and pick up steaks to barbecue on the grill in a local park (we always kept charcoal and lighter fluid in the crew car trunk, and everyone knew they were there). Or you could go into the bar next to the hotel (I'm thinking of one called The Yodeler in Houghton) and order a sandwich; they all knew us and were glad for the business. The best part was that you knew that you got to wake up the next morning and go fly the 580 again! What a privilege! What a great life!"

Capt. Bob Banks adds, "I think about the 580 a lot. I still have dreams of flying almost every night, mostly on the 580 and it's fun. I loved that airplane." Concludes Capt. Trig Johnston, "Oh.....I would go back to those days of flying the Convair 580 right now, knowing I could never come back." →

REFERENCES

1. Killion, Gary. *The Convair Twins*, 240 to 640. MacDonald and Jane's Publishers Limited., London, UK 1979
2. Roach, John and Eastwood, Tony. *Turbo Prop Airliner Production List*. The Aviation Hobby Shop, West Drayton, UK 1994.
3. Love, Terry. *The Republic Airlines Story, 1945-1986*. Schiffer Publishing Co., Atglen PA USA. 2012
4. Personal communication with Captains Bob Banks, Frank Clark, John Hanson, Trig Johnston, Randy Sohn, Cody Welch; flight attendant JP DesCamp and mechanic Steve Marks. **The author especially thanks Capt. Randy Sohn for his generous and gracious assistance in the preparation of this article.**
5. *Top Duck*. The film *Top Duck* is available on YouTube and in DVD format in the NWAHC Gift Shop.
6. The NTSB incident files in the database at aviation-safety.net.

For more on North Central Airlines and the Convairs, see these excellent websites: hermantheduck.org northcentralmemories.blogspot.com

Capt. John Hanson was pilot in command of NW85 on Oct. 9, 2002. The 747, enroute to NRT, suffered a fatigue fracture of the lower rudder power control module manifold, rendering the aircraft nearly impossible to control and requiring an emergency landing at ANC. This incident has been dramatized on the Canadian television documentary series *Air Disasters*, and can be viewed on YouTube and on the Smithsonian Channel: <https://www.youtube.com/watch?v=PCdbasqhbZA>

Capt. Cody Welch is Chairman of the Ford Tri-Motor Flight Program for the Experimental Aircraft Association (EAA). For more information, see REFLECTIONS, Fall 2013.

A PRESIDENTIAL CONVAIR

In 1959, Joseph Kennedy Sr. purchased a CV-240 from American Airlines. Named *Caroline* after the daughter of John and Jacqueline Kennedy, it was used by JFK during his 1960 presidential campaign. It is now located at the Garber Facility of the Smithsonian Institution's National Air and Space Museum, where it awaits restoration. Photo: facebook



The ULTIMATE CONVAIR: the CV-580



KF Aerospace (formerly Kelowna Flightcraft) of Kelowna, BC in Canada has taken 5 CV-580s and added a 14ft/3in stretch to the fuselage to create the CV-5800. It offers a 10 ft. wide cargo door and a 9-ton payload. Four are currently in service with the IFL Group of Waterford, Mich., and operate out of the Pontiac, Mich. (PTK) airport. Photo: KF Aerospace.

News and Announcements

UPCOMING REPUBLIC AIRLINES RETIRED EMPLOYEES (RARE) EVENTS

April 27, 2016: Lunch Meeting. Cost: \$25

Lost Spur Golf & Event Center, 2750 Sibley Memorial Hwy, Eagan MN 55121

Sept. 10, 2016: Annual Fall Picnic

Apple Valley American Legion, 14521 Granada Dr., Apple Valley MN 55124

Dec. 7, 2016: Annual Christmas Party

Lost Spur Golf & Event Center, address above.

For more information: **Gary Bramer**, 612-251-9698.

Mark your calendars now to save the dates!



THE REVIEWS ARE IN!

Some comments from visitors to the NWAHC, from our guestbook and facebook page:

Ralph Hanson: Thanks to all at the NWAHC for all the work you do.

Ronda Cocherell: Thanks for your dedication and hard work!!

Les Novitsky: Have done it (visited the HC) as a daytrip and it's terrific.

Peter Aleksic: Thank you to all of you for keeping the NWA memories alive!

Marilyn Koeppen: Awesome collection.

Tim Dick, Bev Koeppen, Doug & Evonne Fossen: Great memories!

Janice Fernandez: Thank you for the memories!

Jeff Campbell: Excellent! Keep the memories alive!

Steve Burk: I appreciate your efforts.

Jim Goodman: Great place. Lots of wisdom around the table.

Scott Denham: A little gem of airline history, with quite a diverse collection. Snuggled away in an office tower, it is well-worth the effort to seek it out. Volunteer staff is friendly and helpful.

Tom Kelly: What a great collection of NWA artifacts! Well displayed, including many for sale items. I'll be back when I have more time. Enjoyed very much.



Photo: NWAHC Archives.



IN MEMORIAM

Campion, John William. Feb. 7, 2016, age 89. He was a 40-year veteran of Northwest Airlines and retired as VP-Corporate Planning. Obituary: [http://www.startribune.com/obituaries/detail/122017/?fullname=bill-\(john-william\)-campion](http://www.startribune.com/obituaries/detail/122017/?fullname=bill-(john-william)-campion)

Johnson, Merry Jo. Feb. 12, 2016, age 90. She was a former NWA stewardess and the matriarch of three generations of NWA employees. She is the subject of the chapter "Stratocruiser Stewardess" in the book *Fujiyama Trays & Oshibori Towels*, by Anne Kerr. Obituary: <http://www.lundbergfuneral.com/obituary/Merry-Jo-Johnson/Cannon-Falls-MN/1589394>

For more information: <http://www.ladyskywriter.com/2016/02/the-johnson-family-loses-its-matriarch.html>



RICHARD ANDERSON RETIRES AS DELTA CEO

On Feb. 3, Delta Air Lines announced that **Richard Anderson**, former CEO of Northwest Airlines, would be retiring as Delta CEO, effective May 2, to be replaced by current Delta president **Ed Bastian**. Anderson was born in 1956 in Galveston, Tex. He holds a BS degree from the University of Houston and a Juris Doctor degree from the South Texas College of Law. He served as the Asst. District Attorney for the Harris County Criminal Court until 1987, when he joined Continental Airlines as VP and Deputy Counsel. He joined Northwest Airlines in 1990 as VP and Deputy General Counsel and served in a variety of executive positions before becoming CEO in 2001. He resigned in 2004 and became CEO of Delta Air Lines in 2007.

Photo: British Broadcasting Corporation.

UPCOMING 2016 AIRLINE COLLECTIBLE SHOWS/SALES**March 5:** San Francisco, Best Western Grosvenor SFO**March 18:** Shanghai, Shanghai International Airport Hotel**April 2:** Dallas, Courtyard & Towne Place Suites DFW**April 9:** Ypsilanti (Detroit), Willow Run Airport, Hangar One (see p. 12 for information on a special event at this show).**April 30:** Chicago, Holiday Inn Elk Grove Village**July 20-23:** New Orleans, Airliners International multi-day convention, Hilton New Orleans Airport**Aug. 27:** Cleveland, Sheraton Cleveland Hopkins Airport**Sept. 24:** San Francisco, Best Western Grosvenor SFO**Oct. 8:** Minneapolis, Best Western Plus BloomingtonComplete show information: http://wahsonline.com/show_info.php

Reminder: Airline-branded items for Northwest, Republic and many other airlines are available year-round at the NWAHC Gift Shop!

HISTORIC PHOTOS JOIN THE NWAHC ARCHIVAL COLLECTION

Recently the NWAHC was very gratified to receive an album of large format photos taken by Capt. **Don Berg** in 1952 while on a survey flight to Japan in preparation for the introduction of the B-377 on the Seattle to Tokyo route (service had begun in 1947 using the DC-4). A skilled amateur photographer, Berg's photos include typical ramp shots of the aircraft, but Capt. Berg also took care to explore the city to take photos of the daily lives of civilians still recovering from the devastation of the war. **Paul Joubert** purchased the album from the Berg family after Capt. Berg's death, and former NWA-MSP station manager **Arle Johnson** brought the album to the HC for donation on Joubert's behalf.



Left: HC volunteers Steve Marks and Dave McCarthy, with former MSP station manager Arle Johnson (right). Photo: Robert DuBert.

Right: An evocative night scene during a refueling stop in Shemya in the Aleutian Islands.



Right: The Imperial Hotel in Tokyo, designed by Frank Lloyd Wright. Heavily damaged during the war, it was demolished in 1968.



Left: On the ramp at Haneda Air Base. Note the ground equipment, fashioned from the chassis of a Japanese Army light tank.



Left: Street scene of pedestrians watching a street-corner puppet show.

Right: A group of young students.



Highly recommended is the website of the Midway Historians. This group, headed by retired United Capt. **Robert Russo**, is dedicated to preserving the history of Chicago's Midway Airport, which for several decades was the world's busiest airport. Be sure to check out the photo archives of **Pat Bukiri** and **Laird Scott**, which contain over 3500 photos taken at MDW from the 1930s to the present day, including this dramatic shot of a Northwest Stratocruiser taking off from "The Crossroads of the World."

<http://www.midwayhistorians.com/>



Photo: Lester Hendren.

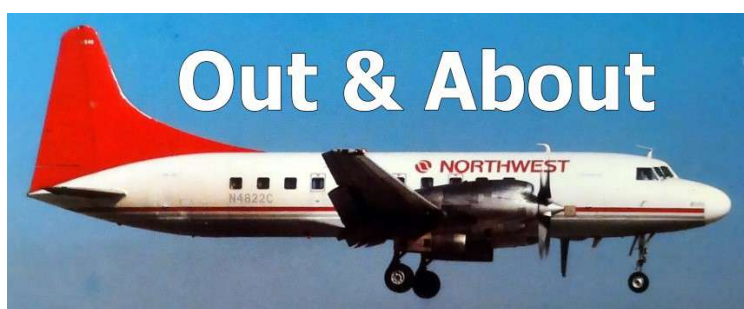


Photo: NWAHC Archives.

The FRONTIERS OF FLIGHT MUSEUM at LOVE FIELD, DALLAS TEXAS

6911 Lemmon Ave., Dallas TX 75209. 214-350-3600.

Mon-Sat: 10am-5pm, Sun: 1-5pm. Closed on major holidays.

\$10 Adults, \$8 Seniors 65+, Children 3-17 \$7, Under 3 Free.

Nearest airport: **DAL** (served by Delta, Southwest and Virgin America). Ground transport: Taxi, uber or car rental.

(If using **DFW**: DART Orange Line to Inwood/Love Field Station, taxi or uber from there.)

For complete information: <http://www.flightmuseum.com/>

This museum, devoted to both military and commercial aviation, occupies a 100,000 sq. ft. facility on the perimeter of Dallas Love Field, and houses 30 aircraft and space vehicles in 13 galleries. Southwest Airlines holds pride of place in one hangar, in a display entitled *The Heart of Our History* which includes a Southwest 737-300 containing displays and memorabilia including the motorcycle given to Founder/CEO/President Emeritus **Herb Kelleher** by the airline's employees. An upper-level gallery contains the largest display of historical memorabilia for Braniff International Airways to be found anywhere. For military aviation enthusiasts, the collection includes the unique Chance-Vought V-173 *Flying Pancake* and the impressive helm wheel and control cab instruments of the US Navy dirigible *USS Los Angeles*. Model builders will enjoy seeing the 350 1:48 aircraft models built by master modeller **Al Duval**. The gift shop is well-stocked and while the museum

offers only snack vending machines, many restaurants are located nearby.

Above: The Southwest 737-300 protrudes from one of the museum hangars.

Far left: A Braniff "Space Helmet", part of the uniform ensemble designed by **Emilio Pucci** in 1965 for Braniff flight attendants.

Left: The helm wheel and radio from the *USS Los Angeles*. The uniform and portrait belonged to Lt. Cmdr. **Charles E. Rosendahl**, commander of the airship. Rosendahl was the Commanding Officer of Naval Air Station Lakehurst at the time of the explosion of the LZ129 Hindenburg in 1937. Photos: Robert DuBert.



IMPORTANT INFORMATION FOR AIRLINE STOCKHOLDERS



Do you own shares in an airline? If so, you may be invited to sit in on an investor conference call. These sessions are usually offered every quarter, and afford the opportunity for the officers of an airline (CEO, President, CFO etc.) to present the previous quarter's financial results as well as their outlook for the future. Sometimes these presentations use business management jargon which can be confusing for the investor.

This past January, Kelly Yamaguchi, a reporter for *The Atlanta Journal Constitution*, attended a conference call for a major airline. She offered her translations for some commonly used airline business parameters, which we reprint below, with her permission.

The full article: <http://airport.blog.ajc.com/2016/01/19/the-real-meaning-behind-what-airlines-say-on-investor-conference-calls/>

Yield = Average fare, on a unit (per revenue passenger) basis

Increased Unit Revenue = Higher fares

Expand Operating Margins = Increase fares

Curtail Revenue Dilution = Keep fares high

Revenue Premium = Higher fares than other airlines

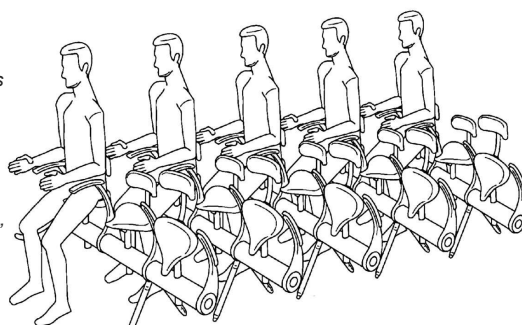
Push fuel savings to the bottom line = Keep fares high and avoid overspending on expansion, even when fuel prices go down

Capacity discipline = Not adding many flights

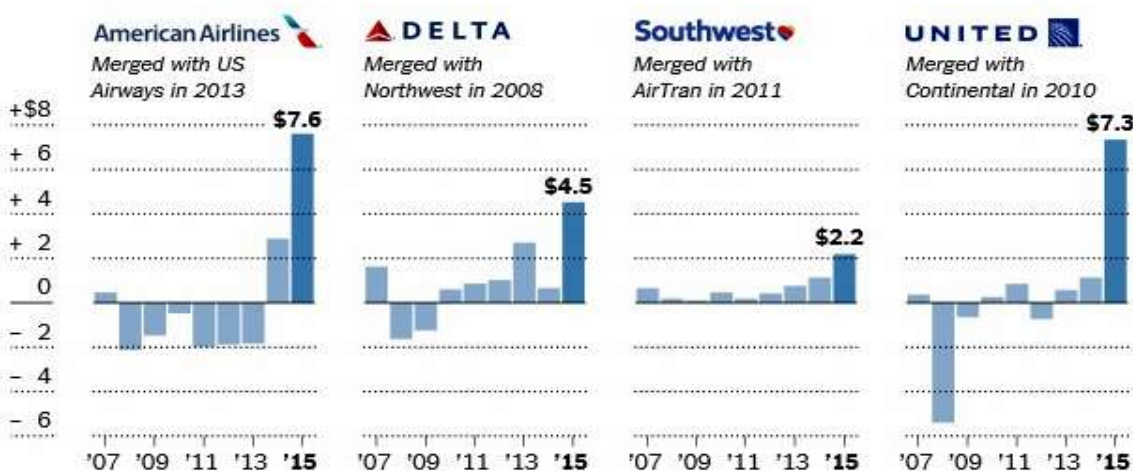
Increased load factor = Fuller planes

Upgauging through densification = Squeezing more seats onto a plane

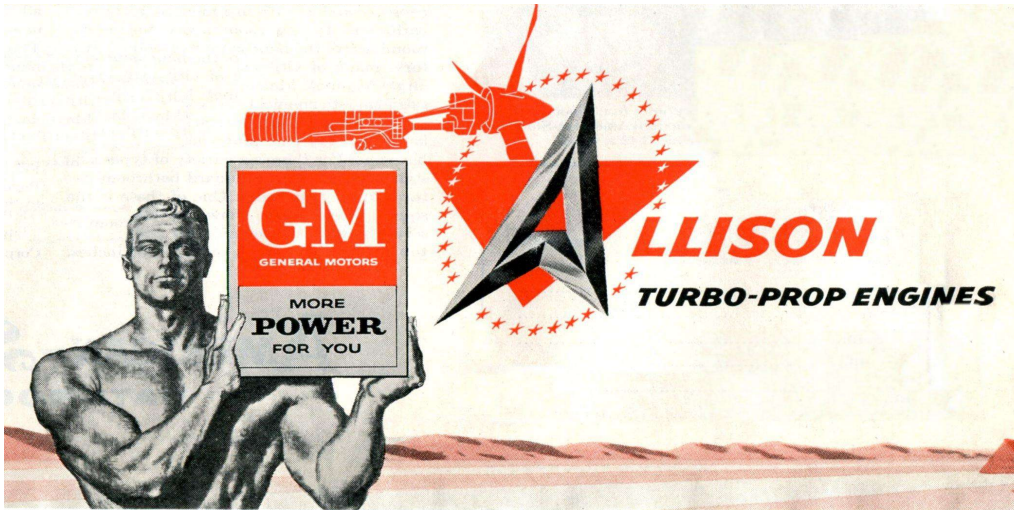
Right: Aviointeriors SpA schematic diagram for its Skyriider seat design, offered to Airbus following the certification of the A320 neo for up to 195 seats. These "seats" provide the passenger with a "perch" position, not quite sitting but not standing either.



Annual net income in billions



Source: New York Times



Above: Allison ad from the Saturday Evening Post.

Left: NC CV-580 ship 515, purchased in 1965 as a CV-340 from LACSA Costa Rica. Sold in 1977 to James Bay Energy Corp. Photo: David DeBace.

Right: Capt Randy Sohn on a North Central Ticket Jacket.




CONTEST RULES

The drawing is open to all paid attendees of the 2016 Detroit Aviation and Airlines Collectibles Show at no additional charge. No pilot's license required. Separate day-of-event contest entry required, forms available on site. Must be present to win. One contest entry per show attendee.

Drawing will take place at 315pm, April 9, 2016. C-47 start-up and taxi experience will take place at 330pm. Must be 18 years or older with a valid US or Canadian driver's license to enter cockpit.

Winner must be physically able to climb aboard and sit unassisted in C-47 cockpit. Winner agrees to sign safety and photography waivers, and to follow all instructor directives. Winner may transfer cockpit slot to another individual, provided that person meets all requirements above.

Event subject to operating, weather and mechanical conditions and may be cancelled without notice.



YOU AT THE CONTROLS

C-47 START-UP and TAXI

FREE Drawing!

In the Left Seat! Next to FAA-Certified C-47 Instructor

1st Prize ONE LUCKY PERSON GETS TO **START-UP** and **TAXI** THE YANKEE DOODLE DANDY C-47 **April 9th!**

2nd Prize C-47 **JUMP SEAT OBSERVER!** Center Jump Seat Cockpit Observer During Start-Up and Taxi!

A FIRST-TIME-EVER EVENT, and ONLY AT THE YANKEE AIR MUSEUM'S
2016 Detroit Aviation and Airline Collectibles Show

Saturday, April 9 in Bay 7 of Historic Hangar One at Willow Run Airport - West Side, 801 Kirk Profit Dr., Ypsilanti, Michigan

For more information: www.DetroitAviationShow.com or call the Yankee Air Museum, 734-483-4030.

The North Central Convairs—Fleet List. All aircraft ultimately converted to CV-580 by PacAero.

CV-340 (All upgraded using the CV-440 modification kits supplied by Convair. All received a 500-series ship number after re-engining.)

Serial no.	Registration no.	Acquired from	Year	NC/RC ship no.	Disposition (WFU = withdrawn from use)
13	N7517U	Texaco	1965	519	1989 WFU. 1992, sold to Avtec Inc.
22	N90852	Continental	1959	501	1981, sold to TigerAir.
30	N4801C	Delta	1969	509	1980, sold to James Smith.
38	N4802C	Delta	1962	512	1976, sold to James Bay Energy Corp.
39	N4803C	Delta	1962	511	1974, sold to Fuerza Aérea Boliviana.
49	N90854	Continental	1959	502	1981, sold to TigerAir.
50	N90855	Continental	1959	503	1985, sold to Simmons Airlines.
51	N4804C	Delta	1962	514	1976, sold to James Bay Energy Corp.
55	N3430	Alaska	1964	518	1989 WFU. 1992, sold to Avtec Inc.
60	N4805C	Delta	1960	508	1989 WFU. 1992, sold to Avtec Inc.
61	N3418	Braniff	1968	523	1989 WFU. 1992, sold to Avtec Inc.
67	N2728R	Continental	1964	516	1989 WFU. 1992, sold to Avtec AG.
77	N3423	Braniff	1967	524	1989 WFU. 1992, sold to Avtec AG.
82	N90857	Continental	1959	504	1985, sold to Simmons Airlines.
83	N90858	Continental	1959	505	1972, crashed near ATW. Written off.
100	N4810C	Delta	1961	507	1977, sold to James Bay Energy Corp.
101	N4811C	Delta	1961	510	1989 WFU. 1992, sold to Avtec AG.
109	N3429	Braniff	1967	522	1978, sold to James Bay Energy Corp.
116	N7530U	LAN Chile	1965	521	1981, sold to Gulf Air Transport.
137	N7528U	LAN Chile	1965	520	1981, sold to James Smith.
150	N2729R	3M Corp.	1964	517	1989 WFU. 1992, sold to Avtec AG.
160	N9067R	LACSA Costa Rica	1960	506	1981, sold to James Smith.
176	N4634S	LACSA Costa Rica	1965	515	1977, sold to James Bay Energy Corp.

CV-440 (All received a 500-series ship number after re-engining.)

327A	N8444H	Union Producing Co.	1966	548	1983, sold to Jay Dee Aircraft Supply.
334	N2041/N580	National	1963	541	1984, sold to Nolt Theriot Inc.
347	N2042	National	1963	542	1980, sold to Jay Dee Aircraft Supply.
352	N2044	National	1962	543	1977, sold to James Bay Energy Corp.
369	N2045	National	1962	544	1968, overshot runway at ORD. Written off.
370	N2046	National	1962	545	1974, sold to Fuerza Aérea Boliviana.
377	N4822C	Delta	1964	546	1989 WFU. 1992, sold to Avtec AG.
379	N4824C	Delta	1966	550	1989 WFU. 1992, sold to Avtec AG.
380	N4825C	Delta	1966	549	1978, crash landed at AZO. Written off.
390	N7743U	Shell Canada	1965	547	1988, sold to Super 580 Aircraft Corp.
462	N968N	General Motors	1967	551	1988, sold to Super 580 Aircraft Corp.
475	N969N	General Motors	1967	552	1988, sold to Super 580 Aircraft Corp.

Note: a total of 13 CV-580s entered the Northwest Airlines fleet at the time of the RC/NW merger in 1986.

Sources:

1. Killion, Gary. *The Convair Twins*, 240 to 640. MacDonald and Jane's Publishers Limited., London, UK 1979
2. Roach, John and Eastwood, Tony. *Turbo Prop Airliner Production List*. The Aviation Hobby Shop, West Drayton, UK 1994.
3. Love, Terry. *The Republic Airlines Story, 1945-1986*. Schiffer Publishing Co., Atglen PA USA. 2012
4. Personal communication with Randy Sohn.