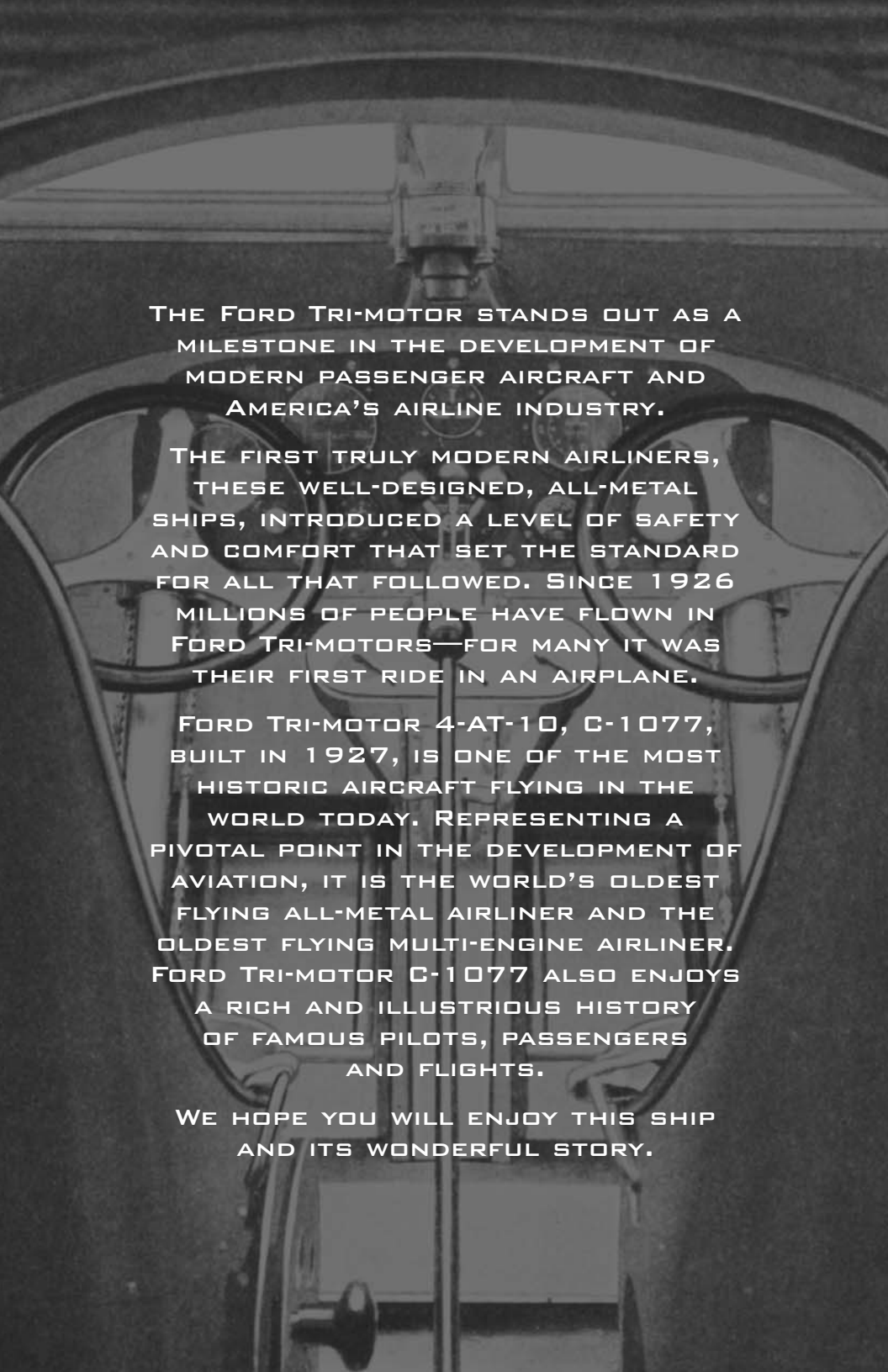


THE AMAZING STORY
OF AMERICA'S OLDEST
FLYING AIRLINER



1927 FORD TRI-MOTOR C-1077
MODEL 4-AT-A SERIAL NUMBER 10



THE FORD TRI-MOTOR STANDS OUT AS A
MILESTONE IN THE DEVELOPMENT OF
MODERN PASSENGER AIRCRAFT AND
AMERICA'S AIRLINE INDUSTRY.

THE FIRST TRULY MODERN AIRLINERS,
THESE WELL-DESIGNED, ALL-METAL
SHIPS, INTRODUCED A LEVEL OF SAFETY
AND COMFORT THAT SET THE STANDARD
FOR ALL THAT FOLLOWED. SINCE 1926
MILLIONS OF PEOPLE HAVE FLOWN IN
FORD TRI-MOTORS—FOR MANY IT WAS
THEIR FIRST RIDE IN AN AIRPLANE.

FORD TRI-MOTOR 4-AT-10, C-1077,
BUILT IN 1927, IS ONE OF THE MOST
HISTORIC AIRCRAFT FLYING IN THE
WORLD TODAY. REPRESENTING A
PIVOTAL POINT IN THE DEVELOPMENT OF
AVIATION, IT IS THE WORLD'S OLDEST
FLYING ALL-METAL AIRLINER AND THE
OLDEST FLYING MULTI-ENGINE AIRLINER.
FORD TRI-MOTOR C-1077 ALSO ENJOYS
A RICH AND ILLUSTRIOUS HISTORY
OF FAMOUS PILOTS, PASSENGERS
AND FLIGHTS.

WE HOPE YOU WILL ENJOY THIS SHIP
AND ITS WONDERFUL STORY.



C-1077 AND THE GOLDEN AGE OF AVIATION

Take yourself back to mid-1920s America. A time when most airplanes were made of wood and fabric wrapped around a framework of metal tubing. There were no real airlines, no paved runways and very little aviation infrastructure. What little “air service” there was consisted largely of entertainment. Aviation daredevils flying in rickety old surplus WW-I airplanes entertained crowds with death-defying acts which were frequently not all that death defying.

It was however, a time of growing optimism and the nation was about to spread its wings. What was desperately needed was a reliable air transportation system that allowed people to sit in the comfort of actual seats and inside the cabin rather than on mailbags in an open cockpit.

To the lasting benefit of everyone, Henry and Edsel Ford stepped up to the challenge. While they are rarely thought of as aviation pioneers, Henry and Edsel Ford contributed greatly to our modern system of air travel.

FORD LED THE WAY

It was Ford who pioneered the development and manufacture of America’s first all-metal airliners, at the same time promoting the use of these aircraft in ways that benefited everyone. Ford not only designed and built safe multi-engine transport planes, they also built America’s first concrete runway, passenger terminals and modern hangars. They used the first airport shuttle, a purpose-built Fordson bus, to carry passengers to and from the first airport hotel. Ford ran the first corporate airline, pioneered aerial radio navigation and played a critical role in the development of the airmail system.

Ford promoted aviation through their involvement in the National Air Tours and conducted huge national advertising programs intended to convince people that aviation offered a viable means of transportation. Perhaps most importantly, the widely respected Ford name lent a much-needed level of respect nascent industry. A *New York Times* article



Golden Age pioneers: Edsel B. Ford, Admiral Byrd and William B. Stout

from November 14, 1926, notes: “It took the entry of the Fords into the business of building and using airplanes to win the recognition of air transport by the Government and engage even the present half-hearted support of the American people.”

Henry Ford and his son, Edsel Ford, had actually been involved in aviation for some time. In 1909 Edsel Ford, at the age of 16, helped build a Blériot type airplane. It was the idea of a young Ford employee named Charles Van Auken. Henry Ford financed the aircraft which was powered by a Model T engine. A sudden gust of wind ended this endeavor after several flights, but Henry’s and Edsel’s interest in aviation remained strong and they continued to follow developments closely. It should not be too surprising that when a good opportunity came along to be involved again, the Fords took interest.

BILL STOUT’S INSPIRATION

William B. Stout was an ingenious engineer and perhaps just as importantly, a consummate promoter. Though often incorrectly credited with the design of the Ford Tri-motor, perhaps his greatest contribution was to engage the Henry and Edsel Ford again in aviation.

Stout was a bright and innovative engineer who had been fascinated with flight since childhood. While working his way through school, he wrote newspaper columns covering a variety of mechanical subjects, including aviation. He also delivered public lectures on flying, displaying models loaned to him by Octave Chanute. He later moved to Detroit and started Stout Engineering Laboratories.

On April 25, 1922, the first all-metal airplane built in the United States, designed by Stout for the Navy, was first test flown by Eddie Stinson. In 1923, the company built the Stout Air Sedan, another all-metal design officially called the 1-AS, meaning the first Air Sedan. By 1924 this aircraft had evolved into the 2-AT Air Transport, named the Stout Air Pullman and carried eight passengers. It was an advanced design for its time. Ford purchased a number of these planes and formed Ford Air Transportation Service.

In April of 1925 Ford had become so interested in the Stout company that they constructed an airport, factory and hangar facility. They leased it all to the Stout Metal Airplane Company for \$150 a month. Later that year Ford, encouraged by his Chief Engineer William B. Mayo, purchased the company and it became the Stout Metal Airplane Division of the Ford Motor Company. That same year, Stout

set out to modify the single engine 2-AT into a tri-motor design by enlarging the wings and burying the two outboard engines into the wing itself. It was called the 3-AT.

Unfortunately for Stout, the 3-AT was a poor adaptation. It flew so badly that after a few short flights, even the test pilots refused to take it up again. The hapless plane was destroyed only a few days later in a mysterious hangar fire at the factory. Shortly thereafter, Bill Stout was sent on an extended speaking tour. He returned to a more marketing oriented role at the company. A new and larger factory was soon constructed and Harold Hicks and Tom Towle were given responsibility for a re-design of the 3-AT. This time, the outboard engines would be placed below the wings and a new designation was given. The new ship would be called the 4-AT.

THE 4-AT: A BRILLIANT DESIGN

The 4-AT Tri-motor was a brilliant design that formed the foundation for all of the remaining Ford Tri-motors that followed. 4-AT-1 (the “-1” denoting the serial number in the 4-AT series) was designed and built in a remarkably short period of time—it went from the drawing board to its first test flight in just over four months. That first flight was June 11, 1926.

In that first year, only three 4-ATs were built and ten more built in 1927. It is said that design changes were so frequent that no single Ford Tri-motor is exactly alike. This could well be true. As an example the very first 4-ATs were actually open cockpit designs. It was felt that pilots, in order to properly control the airplane, wanted to feel the wind, in their faces and listen

to the various noises of the wind and engines as they flew along.

Soon after production began however, the cockpits were enclosed and all the existing ships were retrofitted. Initially the cover was a somewhat boxy, square front, which was quickly changed to the more streamlined sloping front of the earlier 4-ATs. Shortly after that, more angular cockpit covering became standard, in part because it provided pilots with more room. C-1077, 4-AT-10, has the older sloping front windscreen. Interestingly, unlike other surviving Ford Tri-motors all of which are later serial numbers, the sides of the pilot compartment in serial #10 slope inward slightly. This sidewall design was for the open cockpit, and had not yet been changed when #10 was built.

From 1926 through 1933 there were 199 Ford Tri-motors built. The vast majority of these consisted of the 4- and 5-ATs. In total there were 79 of the slightly smaller 4-ATs built and 117 of the 5-ATs. Other aircraft included either modifications of these ships or experimental designs that were never produced in quantity.

The Ford Motor Company never made a dime in any of their aviation ventures, including the manufacture of the Tri-motor. However, the success of the Ford Tri-motor and its impact on the development of aviation cannot be overstated. Testimony to this is the fact that well over 100 airlines from around the world flew Ford Tri-motors at one time or another, many getting their start with the safe and reliable Ford. We wonder what those who built and flew these ships in the early days would think if they knew their Ford Tri-motors were still flying today.

THE STORY OF FORD TRI-MOTOR 4-AT-10, G-1077, A/K/A G-CARC “NIAGARA”

When we look at a beautiful airplane we can appreciate it as a work of art for its lines, colors and overall appearance. It is pleasing to our eyes and we like it; it is beautiful to us as an object. But there is an additional beauty found not only in its form, but also its function—what it has done and what it is capable of doing. That is indeed the case with Ford Tri-motor 1077.

Among the things this airplane is capable of doing is telling a story. It's a story of aviation heroes, passengers and events stretching back more than three-quarters of a century. This ship can let you feel a little bit of the Golden Age of Aviation and of the pioneers of that wondrous age who were its passengers and pilots. This, more than almost any airplane, is a time capsule. Travel back now with us.

FAMOUS PILOTS, FLIGHTS AND PASSENGERS OF G-1077

On the side of this ship is printed a list of names. These are the names of some of the people who have piloted 1077 and the list reads like a “Who’s Who” of pioneers from the Golden Age of Aviation. By all means, these are not the only people who have flown this ship, but they are indeed among aviation’s greats. So, before we go into famous flights of 1077 let’s talk about some of its famous pilots.



Charles Lindbergh – Among the great American pilots of the Golden Age, Charles Lindbergh is perhaps the best known. After all it was the “Lone Eagle” who electrified the world when, at the age 25 he flew alone across the Atlantic. He flew New York to Paris nonstop, collected the Orteig Prize and became a living legend. He flew Tri-motor 1077 in December 1927.

Harry Brooks – A handsome and engaging young pilot, Henry Ford treated him like a son. He was the chief pilot at the Ford Motor Company and was entrusted with many of the most significant flights made in Ford planes, including many in 1077.

Floyd Bennett – Congressional Medal of Honor winner and the first to fly over the North Pole (at least according to Admiral Byrd). Floyd Bennett was his pilot in the tri-motor *Josephine Ford* for that flight, in May of 1925. He teamed up with another polar pilot and his good friend, Bernt Balchen for the rescue of the *Bremen* flyers, a famous flight of 1077 made April 1928. He died of pneumonia enroute.

Captain Hermann Koehl – Captain Koehl was chief pilot of the “*Bremen*.” On April 12-13, 1928, their Junkers W.33L was the first aircraft to cross the Atlantic from east to west. Koehl, along with Fitzmaurice and Von Huenefeld landed their aircraft on Greenly Island, Quebec. Unable to fly further, Tri-motor 1077

went to their aid picking them up to complete their journey to New York. Koehl took his turn as pilot of 1077 on the long trip back to New York.

Major James Fitzmaurice – Co-pilot and navigator of the *Bremen* on its flight across the Atlantic. Fitzmaurice was a colorful, adventurous and visionary commanding officer of the Irish Air Corps. Major James Fitzmaurice, known as “Fitz” was added to the crew at their departure point in Ireland in April 1928. He helped fly 1077 from Greenly Island from April 26-27, 1928.

Baron Eberhard Guenther Von Huenefeld – Owner and financier of the *Bremen* and its flight across the Atlantic. Von Huenefeld was part of the crew, along with Koehl and Fitzmaurice. Called “*The Crazy Baron*,” the entire crew enjoyed substantial acclaim for their achievement. His “stick time” in 1077 was on the long two-day flight, which flew from Greenly Island to Lac St. Agnes to La Malbaie to Curtiss Field in Long Island, N.Y.

Amelia Earhart – Aviatix and aviation pioneer. First woman to: cross the Atlantic by air, complete a solo U.S. transcontinental round trip, first woman (and the second person) to solo the Atlantic, first woman to fly coast-to-coast non-stop, first person to solo any part of the Pacific Ocean. Amelia also became the first person to fly solo over both the Atlantic and Pacific Oceans when she completed her flight from Hawaii to California. She also was the first to fly non-stop from Africa, across the Red Sea, to the Indian sub-continent. She flew 1077 from Rochester to Buffalo, N.Y., on March 26, 1929.

Harold Gray – Mr. Gray was an instructor at the Ford pilot training school for the purchaser's designated pilots (Ford reserved the right to refuse to sell the plane if its prospective pilots didn't meet the grade). From there Gray went to Sky View Lines where he flew 1077, among other places over Niagara Falls. He then joined Juan Trippe at Pan American becoming a true pioneer in commercial air travel. Gray flew many ground-breaking flights in trans-oceanic flying boats and later became chairman of Pan American Airways.

Grant McConachie – Canadian aviation pioneer, bush pilot and ultimately beloved President of Canadian Pacific Airlines. He had purchased 1077 from Sky View Lines in late 1934 and flew it extensively in the Canadian far west. Among his many accomplishments, McConachie flew the first commercial flight over the Canadian Rockies in Tri-motor 1077. His name and exploits have made him a legend in Canadian aviation history.

ONE BEAUTIFUL SEPTEMBER DAY

 n September 19, 1927, Serial No. 10 rolled out of the factory for its first test flight. Exactly ten years and six days later while parked in Carcross, Yukon Territory the Canadian Civil Aviation Bureau canceled the ship's airworthiness certificate and grounded the airplane. The logbooks for C-1077, then carrying the Canadian registration G-CARC indicate it had 1,820 hours since that first flight in Detroit. In a decade of service during the Golden Age of Aviation, 4-AT Serial Number 10 had “done it all.”

The destinations themselves were far flung:



4-AT-10 rolled out of the factory for this photo on September 15, 1927, the official date of manufacture is listed as August 30th with the license application dated August 11th.

from Detroit to Mexico City, Florida to the Yukon, Niagara Falls to the far reaches of the North American continent at Greenly Island – 1077 went there and seemingly everywhere in between. Whether in New York City, Tampico, White Horse or Miami, this great silver ship was always at work and always drawing a crowd. Many of the trips are simply amazing slices of history involving some of the most prominent people of the day. Others were simply a day in the life of an early transport. But wherever it flew, 1077 was busy ushering in the dawn of commercial air travel.

THE LINDBERGH FLIGHTS

One of the greatest flights 1077 took involved the most famous personage of the day, his mother, his wife-to-be, a president, a captain of industry, an ambassador and host of others. It was Christmas of 1927.

Charles Lindbergh had just returned that June from his triumphant crossing of the Atlantic from New York to Paris. He instantly became the most famous person in the world. In the interest of promoting aviation and international goodwill, he took the *Spirit of St. Louis* on a

tour of the United States and Latin America prior to donating the historic craft to the Smithsonian Institution. That Christmas, he found himself in Mexico City, a guest of the American ambassador and his family.

At the time Mrs. Evangeline Lindbergh was teaching high school chemistry in Detroit. With all that had gone on that year, she had not had much of an opportunity to see her now famous aviator son. At the same time, Bill Stout and the Stout Metal Airplane Company, a division of the Ford Motor Company, had just completed the first full year of manufacturing the Ford Tri-motor. Sales were slowly beginning to pick up, but Bill Stout, ever mindful of the benefit of a little promotion and the importance of hooking up with a good name, had an idea: Why not fly Mrs. Lindbergh to Mexico City to spend Christmas with her son!

Air travel was still in its earliest stages. Ford had the most advanced airliner of the day and they wanted to do all they could to promote travel by air. How perfect it would be, Stout reasoned, to fly Mrs. Lindbergh all the way to Mexico City in a Ford plane to spend Christmas

with her son. It was a streak of promotional genius but it took a bit of convincing. Stout had to convince Mrs. Lindbergh, her son, Henry and Edsel Ford and, as relations between Mexico and the United States were not at all good at the time, the U.S. State Department, to make it happen. Stout somehow got the job done and the trip was on.

Stout called it the first commercial flight between the United States and Mexico, though it was more of a promotional flight and there may have been some other trans-border hops for commerce prior to that. It was certainly to be Mrs. Lindbergh's first long distance trip by air. And the Ford Tri-motor, the largest commercial aircraft being manufactured in the United States, would be the largest aircraft to fly in Mexico up to that time.

In any event, the plan was to fly from Ford Airport in Dearborn to Mexico City, departing on December 19, 1927. The trip down was just over 2,000 miles and would take four days. They would return from Mexico City on December 28, the same day Charles was to continue on his journey from Mexico City to Central America.



The Henry Ford

1077, Serial No. 10, was painted in Maddux Airlines livery for a quick overnight trip. Maddux had just taken delivery of Serial No. 12 two days earlier, but 1077 was a stand-in for this overnight trip

A COMPANY PLANE AT FIRST

Since September, Ford had kept 4-AT-10, C-1077 at the factory as a company aircraft. Pictures of the ship were used in company advertising and prospective buyers were taken on demo flights. As an example, on November 1, 1927, 1077 was painted in Maddux Air Lines livery for just one flight, an overnight sales flight carrying Maddux executives to Indianapolis.

A month later, in early December, 1077 was being used as a test bed, fitted with a pair of



The Henry Ford

The first Ford on floats, 1077 is shown in the Detroit River in early December, 1927, just prior to getting ready for Mrs. Lindbergh's trip to Mexico.

pontoons to see how the Tri-motor would do in water operations (thus making it the first Ford on floats). In the work order issued to correct damage done during that testing, we see the hints of pending trip to Mexico. Among other items factory Work Order #6495 issued for 1077 reads: "Install berth," and "Install temporary compass brackets,"

HENRY AND EDSSEL FORD SAY "BON VOYAGE"

All the arrangements were made. Tri-motor 1077 was ready, complete with the newly installed berth. The morning of Monday, December 19th was a cold one, 13 degrees Fahrenheit at the 10:00 a.m. departure time, so the big plane was pulled in the hangar for the departure ceremonies. Mrs. Lindbergh was picked up at her home and driven to the airport in a Lincoln. She arrived to find quite

a group of people. Along with numerous dignitaries and members of the press, Henry Ford was there with his wife Clara, as was Edsel Ford, along with other family and friends of some of the others going along on the trip.

The pilot was Harry Brooks, the co-pilot and mechanic was Harry Russell. Bill and Wilma Stout were going along as well, as was Adrian Lejous, Ford's manager in Mexico. It was quite a sendoff, captured by newspapermen and newsreel cameras. When everyone was on the plane, the engines were started while it was still in the hangar; they taxied out for one of the most spectacular flights of the Golden Age.

The trip was followed in newspapers around the country every step of the way. Harry Brooks reported in, directly to Henry Ford by telegraph at each stop. The route of the trip was: Dearborn → Indianapolis → St. Louis →

Bidding "Bon Voyage" to Mrs. Lindbergh as she departs for Mexico City in 1077, December 19, 1927. Henry and Clara Ford, Evangeline Lindbergh, Edsel Ford, Alma and Bill Stout, Harry Brooks and Harry Russell.





December 22, 1927, Mrs. Evangeline Lindbergh, Bill Stout and others arrive in Mexico City in C-1077. They were greeted by a cheering crowd as Mexican Air Force planes swooped and dove overhead.

Springfield → Tulsa → Dallas → San Antonio → Brownsville → Tampico → Mexico City. At every stop there was so much fanfare, they wondered if they would ever get to Mexico. Harry Russell wrote a fascinating day-by-day report of the trip, which notes the total flying time to Mexico City as 21:55 hours covering 2,055 miles.

The last leg of the trip included a stop in Tampico for lunch. There they picked up a Mexican pilot to help guide them over the mountains to Mexico City. As they came over the mountains, they were greeted by aircraft from the Mexican army which could not keep up with the faster Ford Tri-motor. Ironically, Charles had also taken off to greet them in flight, but was unable to locate the Ford, which was flying in and out of the clouds. He landed half an hour after they did.

Mrs. Lindbergh's arrival in Mexico City attracted crowds second only to the arrival of her son the week before. The Tri-motor was the

largest plane ever seen in Mexico and its size and beauty added to the general thrill of the goings on. Harry Russell's log, Bill Stout's book "So Away I Went," Anne Morrow's diaries, and newspaper articles of the day tell a fascinating story of this Christmas gathering.

THE PRESIDENT OF MEXICO ENJOYS A RIDE IN C-1077

During the six-day visit the Ford Tri-motor was used extensively, hopping rides for just about anyone who was anyone in Mexico City. On December 24, Brooks notes, "We started carrying passengers about 10 AM and flew until about 3:30 PM, making 9 hops of about 30 minutes each — carried from 10 to 15 passengers each load. The longest run we made on take-off was 42 seconds — no wind and a temperature of about 95°F. The Mexican pilots said they had never seen a plane perform like that before, as



Harry Brooks and Harry Russell crewed 1077 from Dearborn to Mexico City and back on the Lindbergh adventure of December, 1927, Russell later became Manager of Ford Airport.

they could not fly between the hours of 9:30 AM and 4:30 PM. Their planes would not takeoff on account of the light air and heat.”

Russell goes on, almost nonchalantly, to describe some of that days distinguished passengers, “We carried the President and all of the government officials and they were all strong in their praise of the ship.”

There was no flying on Christmas day, but the 26th proved to be very exciting indeed. Mid-morning, a large group of people from the embassy headed out for rides in 1077, except this time Russell and Brooks were going to take a break. The pilot that morning would be Charles Lindbergh.



Charles Lindbergh with Ambassador Morrow, Mrs. Morrow and their daughter at the envoy's home in Mexico City.

CHARLES LINDBERGH TAKES ANNE MORROW FOR HER FIRST AIRPLANE RIDE IN C-1077

The *New York Times* reports “Colonel Lindbergh’s day was a busy one, he went to Valubuena field early in the morning and took up the wives and children of members of the embassy and consular staffs in the big Ford three-motored plane. On one trip he had fifteen women and children on board, but the plane took off easily and climbed well despite the altitude. He took up Mrs. Morrow, wife of the American Ambassador and also took up the Mexican Minister of War, Joaquin Amaro, and Mrs. Amaro.”

Mrs. Morrow’s flight was lightly loaded with just six passengers plus Colonel Lindbergh flying and Captain Winslow of the embassy staff in the co-pilot seat. The passengers included the Morrow’s three children, Con, Elisabeth and Anne, along with “Aunt Alice” and Bill Stout. It was the first time any of the Morrows had been flying and it left quite an impression. Twenty-one year old Anne Morrow was perhaps most impressed as she wrote at length in her diary about that flight. Whether or not she knew it at the time, she was falling in love, not only with flight, but also with Charles Lindbergh. Christmas in Mexico was their

first meeting and this was their first flight together. A year and a half later they were married.

THE ROMANCE OF THAT FLIGHT THROUGH THE EYES OF ANNE MORROW; IN HER OWN WORDS



A crowd around the hangars. The Ford plane shone—silver in the hot field—a group around it. We went over and stepped in. Mother, Aunt Alice, Elisabeth, Con and I (and Mr. Stout). It was like a train inside: wicker chairs, only slanted back at a terrific angle. The plane was nosed upwards. That angle gave me my first and only impression of fear. I looked out of the window and from under the wing could see the crowd and Dwight and the boys (so separated from us) taking pictures. Mr. Stout grinned and pointed the movie camera at us, one by one.

Then he came, across from the hangars, with Captain Winslow. He was striding along in his everyday suit and gray felt hat, band in pocket, head forward a little, talking to Captain Winslow and avoiding the looks of the crowd. He looked up quickly as he approached the plane and saw us and smiled, nodding. Then he stepped in, bending not to hit his head. Mother said “Good morning.” “Good morning, good morning,” he said and hurried up front to the pilot’s seat.

The engine started. It wasn’t as terrifically loud as one expected, but it quivered through you. I felt exalted.

He kept looking out the window at the engines.

“Let me be conscious of this! Let me be conscious!”

The engines whirred; easily, we started to roll—faster, faster. I did not look out—I was too excited, exalted, to watch the wheels. It all happened so quickly. Things whizzed past—trees, the hangars—I did not know when we left the ground. Jo screamed something to me above the engines’ roar.

Con, Elisabeth, and I went forward to the front seats just back of the Colonel and Captain W. (and separated from the rest of the car). Then we were happy—so terribly and ecstatically happy, alone and together and able to watch him. Suddenly I felt the real sensation of going up—a great lift, like a bird, like one’s dreams of flying—we soared in layers. That lift that took your breath away—there it was again! I had real and intense consciousness of flying. I was overjoyed. Then for the first time I looked down. We were high above the fields, and there far, far below was a small shadow as of a great bird tearing along the neatly marked-off fields. It gave me the most tremendous shock to realize for the first time the terrific speed we were going at and that that shadow meant us—us, like a mirror! That “bird”—it was us. We were over the city now; it looked like a doll’s model. The sun gleamed on the gold wings of that great statue in the square. How tiny it looked! The small drops of shadow circling the haystacks in the fields. The fields looked like braided cloth.

It was very smooth and steady now. There was a crack of the window open, and a sharp knife of swift air bisected in, giving the sense of speed.

The others were in back, far away. It was too Pullman-carish back there. Here, in front, we sbut out the whole world. We were close against the sky—we were flying!

He was so perfectly at home—all his movements mechanical. He sat easily and quietly, not rigidly, but relaxed, yet alert. One hand on the wheel—one hand! He has the most tremendous hands. I can see him still, and the grasp, the strong wrist, the grip of the thumb, his other hand rubbing his nose or something equally trivial! Looking clearly and calmly ahead, every movement quiet, ordered, easy—and completely harmonious. I don't know how I can say that, really, for he moved so very little and yet you felt the harmony of it.

Elisabeth opened the door (front) and asked where the Embassy was. He half turned to bear, nodded and looked out, then Captain Winslow pointed it out.

There it was: a little grass court, the steps and shadows clearly marked (shadows are very vivid from the air). He turned around once and smiled at us.

We were pointed towards the mountains—the mountains he would cross.

We saw a lake like quicksilver; a hill (marked with an advertisement) like a mound.

Oh, to go on and on—over mountains! I could understand why people never can give it up.

Cows and sheep are specks: our shadow tore over them, peasants looking up—even the hangars looked like cardboard boxes.

The mountains—the mountains looked at us!

The sun on the tinsel wings of the matchstick statue, the minute circling cars—so small, so small—the tiny patch of green, the court of the Embassy, where we would have the garden party that afternoon and he would stand and shake hands with thousands of those black moles in the street.

Now he looked down on it all and rubbed his nose and looked up toward the snow on “The Sleeping Lady.”

No wonder he has a disregard for death—and life. This is both.

We were turning. He motioned to us to go back. In a minute we were wheeling around—“banking”—at a terrific angle, over on one wing.

I did not look down until we were almost on the ground. I expected a terrific bounce. I looked out at the wheels: they grazed the ground, a cloud of dust but an imperceptible, balloon-like bounce, then again; we were down, a terrific speed, we rolled in and stopped.

We stepped out, dazed. Con and I watched Colonel L.'s head in the cockpit window, turning and looking out at the engine.

It was a complete and intense experience. I will not be happy till it happens again.

From *Christmas in Mexico*, Anne Morrow Lindbergh Diaries, 1927



The Henry Ford

Having some fun in front of 1077 in Mexico City, December 1927. Harry Russell is first left and Bill Stout is third from the left.

PART OF 1077 BECOMES PART OF THE SPIRIT

The next day, December 27, was very busy. The two Lindbergh's were to depart the next day—Mrs. Lindbergh back to Detroit in the Ford Tri-motor and Charles continuing his Latin American tour in the *Spirit of St. Louis*. More rides were hopped in the morning after which both aircraft were inspected for the next day's journeys. In addition to checking over the tri-motor, Harry Russell inspected the *Spirit of St. Louis* for "Lindy." Bill Stout tells the story:

Bill Stout: "We offered to have Harry Russell go over Lindbergh's plane before he left, Harry being considerably more reliable than the local mechanics. A very small thing may often influence a large event. Harry looked over the equipment and found that one of the brushes in the magneto was worn down to within an eighth inch of the end. Taking a long flight without a replacement would certainly have meant trouble. There were no replacements, so Harry took one of the brushes out of our

tri-motor and put the worn one in its place, knowing that our trip was shorter going home, and that we had two other engines to depend on if one stopped."

The fun "part" of this is that, as the *Spirit of St. Louis* only flew an additional 101.5 hours before being donated to the Smithsonian, the part from C-1077, which was placed in it in Mexico City, is no doubt hanging with the *Spirit* in the National Air & Space Museum.

BACK FROM MEXICO

On December 28, 1927, everyone was at the field at 6:00 a.m. The crew loaded up the Ford for the trip back to Dearborn. Harry Russell notes, "We had the baggage room full, the tail full and the bench in back of the cabin piled high — and 8 passengers on board. [We] helped 'Lindy' get started and took off right behind him."

The purpose of this booklet is not to tell every detail of every adventure of C-1077, perhaps that can be done another time, but suffice it to say this flight was a real adventure the entire

way. The ship arrived back in Dearborn, mid-day, January 2, 1928.

Immediately upon the ship's return a "squawk" list was prepared with "RUSH" instructions to have all repairs completed by 4:00 p.m. the next day. In all, 26 items were noted as either checked or repaired. One must remember that when Serial Number 10 was built, they were still going down quite a learning curve. This is evidenced by the work orders for repairs or adjustments on the ship. Our pilot readers will appreciate one notation.

During the return trip from Mexico, 1077 ran into some very heavy snowstorms. Russell's trip report says "our engines began to loose RPM on account of the snow filling the carburetor heaters. . . the engines were now turning 1400." After a quick landing near Edwardsburg, Michigan on New Year's Day, the cold and snow continued. While they tried to keep the engines going to warm them, "the engines were only turning 700 wide open, we had to cut them and arrange to stay for the night. The cause of the problem is revealed in the squawk list and subsequent report of repairs made:

Squawk list, item #14:

"Carburetor heaters no good"

Repair report, item #14:

"Turn Carburetor heaters around"

Apparently, the carburetor heaters had been installed backwards!

The rush to get the ship repaired was so it could get on its way to New York City for an aircraft exhibition. Harry Russell was again the pilot. After the New York show, the ship was returned to duty in Dearborn to await its next great adventure, which was not long in coming.

POLAR PIONEERS FLY 1077 ON THE BREMEN RESCUE

On April 13, 1928, the first aircraft to ever cross the Atlantic from east to west, landed and was disabled on Greenly Island, Quebec. Named the "*Bremen*," the Junkers W.33L landed after an epic 36-hour flight from Baldonnel, Ireland to the North American continent. The crew of three consisted of Captain Hermann Koehl, Major James Fitzmaurice and Baron Ehrenfried Guenther Von Huenefeld. While not actually in a life-or-death situation, they were more or less "stuck" while they tried to get supplies shipped, including benzol fuel for their Junkers. The problem was there were no aircraft anywhere nearby big enough to do the job, so the search was on to find one.



The Henry Ford

North Pole & South Pole pilots, Bernt Balchen and Floyd Bennett just before departing on the Bremen Rescue in Tri-motor 1077.

The *New York World* came up with the idea of arranging for a tri-motor to fly the aid of the *Bremen*. Admiral Byrd was approached with the idea but his tri-motor was not ready. Edsel Ford then quickly volunteered C-1077 for the job. Byrd's pilots, Floyd Bennett and Bernt Balchen were asked the fly the Ford, loaded



Fred W. Holson

Loading Ford Tri-motor 1077 with supplies, including cans of benzol, on Lac Ste. Agnes, April 23, 1928. They departed for the final push to Greenly Island early the next morning.

with supplies from Dearborn to Greenly Island. The two of them flew immediately from New York to Detroit in a Bellanca that was being evaluated for the Byrd's Arctic expedition. *New York World* reporter Charles Murphy accompanied noting, "Here at last was an aircraft large enough to be of practical use and the pilots were two of the top names in the business."

Unfortunately, both of them were sick, to the extent that as they flew toward Detroit, Balchen commented, "We're a fine pair to go rescuing anybody." In Detroit, Edsel Ford noticed this too and insisted they delay their departure and spend a day in the Ford hospital. They reluctantly agreed and departed Dearborn later for Greenly Island on April 20, 1928. Unfortunately Floyd Bennett was not at all well but insisted on going anyway. Upon reaching Ste. Agnes, Bennett was too sick to go on and Herta Junkers, there leading the rescue operations, ordered him flown to the hospital in Quebec City. Stricken with pneumonia Bennett died two days later.

Balchen, crew and supplies had continued on in 1077, arriving at the site where the *Bremen* was sitting. Attempts were made to repair the ship and start its balky engine so that the Atlantic flyers could continue on to New York in their own ship, but it was not to happen. After three days of trying, with the weather deteriorating the decision was made for the *Bremen* crew to depart for New York in 1077, in time to attend Bennett's funeral.



Fred W. Holson

The Bremen crew in front of their rescue ship, Tri-motor 1077 and pilot Balchen, on Greenly Island. Left to right, Major Fitzmaurice, Bernt Balchen, Captain Koehl and Baron Von Huenefeld.

ATLANTIC FLYERS PILOTS JOIN IN FLYING C-1077 TO NEW YORK

They left Greenly Island on April 16; the trip was a long one stretching two days as they flew from the island to Lac St. Agnes then on to Curtiss Field on Long Island, N.Y. During that flight Balchen and all three of the Atlantic flyers took turns at the controls of the tri-motor. Thus the first pilots to fly an airplane across the Atlantic from east to west, are added to the distinguished list of those who have piloted C-1077.

Americans went wild at the *Bremen* crew's safe arrival.

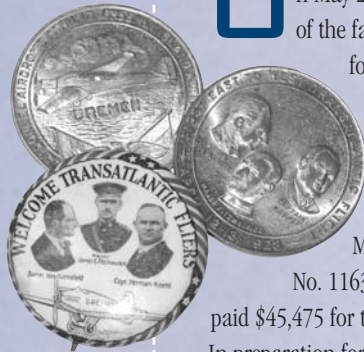
Upon its return from the *Bremen* rescue mission, 1077 had some of the extra equipment removed that had been installed for the trip. One of the items removed were the ski brackets. Factory work order #6888, May 3, 1928 instructs: "Remove ski brackets and install on 4-AT-15." As it happens 4-AT-15 is Admiral Byrd's tri-motor, "*The Floyd Bennett*" which is the aircraft Admiral Byrd

took to Antarctica and over the South Pole. So part of 1077 is on yet another historic aircraft *The Floyd Bennett* which now resides at the Henry Ford Museum.

SKY VIEW LINES ACQUIRES A FAMOUS PLANE

On May 21, 1928, perhaps mindful of the fame 1077 had garnered for itself, Sky View Lines purchased the ship, among other things to sell sightseeing rides over Niagara Falls. Ford Motor Company invoice No. 11634 shows Sky View Lines paid \$45,475 for their new airplane.

In preparation for the delivery Sky View had the aircraft remodeled for sightseeing flights, including additional chairs to accommodate 10 (then later 12) passengers. They also had the factory paint two promotional lines, in 2" letters, on the side: "*This machine flew Mrs. Lindbergh to Mexico,*" and "*This machine flew to the rescue of the Bremen crew.*" It must have been appealing to their passengers



Sky View Lines flight operations at Oakes Field, Chippawa, Ontario



Niagara Falls Public Library

1077 with its Canadian registration G-CARC, awaits the next load of passengers for a trip over Niagara Falls, early in the 1928 season.

as the wording was soon after enlarged and the description enhanced a bit to read: “THIS PLANE FLEW MRS. LINDBERGH TO MEXICO AND RETURN,” and below that, “LATER USED BY FLOYD BENNETT TO RESCUE BREMEN FLYERS.”

C-1077 was featured in Sky View advertisements touting its history as well as the appeal of flying in an airplane over the falls. Based at various times in the summer season between Niagara Falls, Buffalo, N.Y., and Oakes Field in Chippawa, Ontario, the plane was kept quite busy. As an example, during the 1928 season, which ran from June through early September, 1077 carried more than 12,000 passengers over the falls. In the winter months, 1077 would be dispatched to Miami and Palm Beach to give passenger rides to Florida tourists.

AMELIA EARHART TAKES THE CONTROLS

It was in March of 1929 that another famous aviator (we should say “aviatrix”) came into town for the Buffalo Aviation Show. On Tuesday, March 26, 1929, Sky View Lines

dispatched 1077, then based in Buffalo, to Rochester, New York to pick up Amelia Earhart and bring her back to Buffalo. Sky View pilot Donald Goold flew in the day before. In the morning Amelia, Don Goold, Henry Jones general manager for Sky View Lines, and a mechanic left Rochester for Buffalo. We’ll let the March 26, *Buffalo Evening Times* and the *Buffalo Evening News* tell the rest of the story:

Buffalo Evening Times:

Shows Ability as Flier

“Miss Earhart exhibited her ability as an aviatrix on the trip from Rochester when she climbed to an altitude in excess of 3,500 feet and flew at that height practically all the way.

She never once swerved from the course.

“Arriving at the airport she settled majestically over the field and then turned the controls over to Pilot Goold, who brought the giant plane to a stop directly in front of the administration building. City officials, airport officials and scores of others were on hand to greet or get a glimpse of the foremost woman in the field of aviation.”

MISS EARHART SEES BIG PLANE DEVELOPMENT

Aviation Will Not Displace But Will Be Adjunct to Other Transportation, Transoceanic Flier Says, Arriving Here for Air Show.

The first woman to fly across the Atlantic soared into Buffalo Tuesday--soared in with the wind on the wings of a giant airplane.

On her flight here from Rochester, with her own wings on the controls of the huge tri-motored Ford, Miss Amelia Earhart, whose courageous crossing to Europe a year ago attracted the plaudits of the world, told a representative of the Buffalo Evening News that the airplane should be considered merely an adjunct of the other forms of transportation;--tastes that the airplane never will quite supplant the railroad, the automobile and the steamship.

Buffalo's Airport Well Laid Out, Says Amelia



Buffalo Evening News:

Takes Over Controls

“Soon after leaving the Rochester airport in the Ford tri-motored plane placed at her disposal by the Sky View Lines, Inc. . . Miss Earhart climbed into the cockpit back of the nose of the vessel beside Pilot Donald F. Goold. In a moment she got the feel of the ship as it plunged at 90 miles an hour through the air and quickly learned to control side gusts and bumpiness. She took her hands and feet off the controls, grinning broadly.

‘Much easier to manage than my small ship,’ she remarked to Goold, ‘Like driving a locomotive on smooth rails.’

Then she began climbing the huge bird.

From 700 feet she took the vessel up to 4,000 feet, flying well above the clouds that floated along below like large balls of cotton tossed in the sea.”

After the flight with Amelia Earhart, 1077 began another flying season over the falls. Pilots included not only Don Goold (whose own

still lives in the Niagara area and who kindly assisted us with his father’s log books) but also Harold Gray, among others. Gray was a logical choice for Sky View as he had been an instructor at Ford’s Tri-motor flying school, plus Stout

FLY! FLY! FLY!

May 24th—May 24th—May 24th

And Every Day Thereafter at Oakes Field, Chippawa and River Road, Niagara Falls, Ont., from 9 a. m. to Dark.

OVER NIAGARA FALLS AND NIAGARA GORGE

IN THE FAMOUS C-1077

WHICH CARRIED MRS. LINDBERGH TO MEXICO CITY AND RETURN WAS USED FOR RELIEF OF BREMEN FLIERS

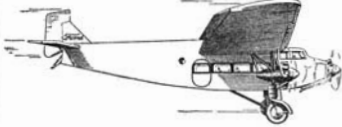
Ford, Stout Tri-Motored, All Metal Pullman Plane Carrying Fourteen Passengers. Piloted by Major John O. Leach, Famous Canadian Flyer.

SEE C-1077 ARRIVE AT OAKES FIELD FROM FORD AIRPORT, DETROIT, THURSDAY, MAY 24 AT ELEVEN A.M. STARTING AT NOON THREE TRIPS PER HOUR WILL BE MADE. COME EARLY AND MAKE RESERVATIONS TELEPHONE NIAGARA FALLS, ONT. 3029

NEW MODERN OBSERVATION TOWER. WATCH THIS PAPER FOR ANNOUNCEMENT OF FORMAL OPENING

SKY VIEW LINES, Ltd.

Advertisement in the May 23, 1928 issue of the Niagara Falls Gazette promoting the arrival of C-1077 for giving rides over Niagara Falls.



SKY VIEW LINES INC.

OPERATING

FORD TRI-MOTOR PLANES

For Sight-Seeing From

BUFFALO MUNICIPAL AIRPORT
 NIAGARA FALLS, N. Y., MUNICIPAL AIRPORT
 OAKES' FIELD, NIAGARA FALLS, ONT.

12,000 Passengers Carried Over Niagara Falls
 Last Season

See BUFFALO From the Sky TODAY

C-1077 the famous Tri-Motored Ford-Stout Air Pullman which carried Mrs. Lindbergh to Mexico City and later went to relief of Bremen Biers, is now at the Buffalo Airport. Make your plans to see Buffalo from the sky today.

SKY VIEW LINES, INC.

Main Office—Niagara Falls, N. Y.

OFFICERS

FRID J. COE, President.
 ROLAND L. O'BRIEN, Vice-President.
 JAMES S. DEVON, Secretary-Treasurer.
 HENRY S. JONES, General Manager.

DIRECTORS

ROLAND L. O'BRIEN—111 Main St., Buffalo, N. Y.
 W. M. R. FLOUT—Ingersoll, Mich.
 J. S. WOOD—Chicago, Ill.
 J. S. WOOD—Chicago, Ill.
 ERIC J. COE—Power City Bank, Niagara Falls, N. Y.
 DANIEL W. WARTON—of Court St., Buffalo, N. Y.
 REYNOLD R. KNOWN—1219 Marine Trust Bldg., Buffalo, N. Y.

BUFFALO—"Axis of Aviation"

An ad in the program of the Buffalo Aviation Show which Amelia Earhart attended, flying in on 1077. 1077 is the ship promoted in the advertisement.

and Mayo were among the investors in Sky View. Gray went on from there to distinguish himself as a pioneer, flying huge flying boats after joining Juan Trippe with Pan American. Ultimately Gray worked himself all the way up to become chairman of that great company.

THE FAMOUS FORD HEADS FOR THE YUKON

Sir Harry Oakes of Chippawa, Ontario, also was a significant investor in Sky View Lines and his airport, Oakes Field, served as its base on the Canadian side. Oakes was an interesting man. He started out in the Klondike gold rush of 1898, though his real fortune

came in his 1912 discovery of what became “the richest half mile in the world”—the Lakeshore Mine in northern Ontario. When the Great Depression pushed Sky View Lines out of business, Ford Tri-motor C-1077, which had been operating on the Canadian side as G-CARC, came up for sale. Fortunately for its suitor Grant McConachie, Sir Harry Oakes remembered his roots.

Grant McConachie was a bush pilot who, at the age of 22, had started his own crazy airline in the Canadian North serving prospectors, settlers, speculators or any one else with enough money to pay for tank of gas and just a little more. Struggling to build his United Air Transport, McConachie was sure of what he needed – G-CARC, the Ford Tri-motor Oakes had stored away. Traveling to Oakes’ estate in Niagara Falls in January 1935, McConachie hoped to negotiate a good deal. After starting out at the \$45,000 price Sky View had paid, Oakes seemed unwilling to negotiate. After four meetings and much reminiscing about the old and difficult days as a prospector and entrepreneur himself, Oakes asked McConachie, “Well how much *can* you pay?”

McConachie said, “Twenty-five hundred dollars is all I’ve got.”

Oakes shot back, “Sold!”

And so 1077, now G-CARC, was off to Edmonton and points north, having been purchased at a bargain price. The trip back is a story in itself but suffice it to say the trip from Niagara Falls to Chicago, then five hours in “blizzard headwinds” to Minneapolis was long and cold. In fact it was so cold they were forced down due to frozen fuel lines half way between Minneapolis and Miles City, Montana.

After crashing through a fence on departure from Miles City due to frost on the wing, they finally arrived in Edmonton via Great Falls and Calgary.

An entire book could be written about the exploits of G-CARC in Canada. It worked throughout the west, including a stint with the Ringling Brothers circus. Barnstorming when it was not hauling freight, G-CARC, “The Largest Aircraft in Canada,” ran the county fair carnival circuit, visiting towns like Pincher Creek, Ponoka, Red Deer, Moose Jaw, Cardston, Okotoks and Olds offering rides at “a penny a pound.”

THE FIRST COMMERCIAL FLIGHT TO CROSS THE CANADIAN ROCKIES

One of its more historic flights was when Grant McConachie accepted a charter run from Calgary to Vancouver on May 16, 1935. Braving horrible conditions, the flight wove its way through mountain peaks and ice and snow with an emergency diversion south for fuel. The flight took hours longer than anyone had imagined, but they finally

arrived in Vancouver to a hero's welcome. They had successfully completed the first commercial flight over the Canadian Rockies – suddenly western Canada was connected by air!

In 1936 McConachie sold G-CARC to George Simmons' Northern Airways, with the plane to be based in Carcross, Yukon Territories. Before the purchase was consummated, Simmons wanted McConachie to fly G-CARC on a couple of revenue flights. One of these proved to be quite an experience and involved picking up ten passengers: two trappers and eight large Malamute dogs. The full story is told by McConachie's biographer, Ron Keith, in his wonderful book, *“Bush Pilot With a Briefcase;”* here is a glimpse of the excitement:

SLED DOGS GONE WILD!

“As the three engines roared ... the Malamutes panicked ... One of them snapped his leather leash, scrambled right into the extreme rear of the plane amongst the wires and pulleys that operated the rudder and tail-plane ... The other Malamutes tore loose too and raced after their mate ... At this critical moment, the two trappers stumbled to

Working in the wilds of the Canadian Rockies. Note the tarps to prevent frost on the wings as well as to keep the engines warm. Field repairs are under way on the right engine.



Canadian National Archives

the back ... The shift of weight teetering the Ford into an increasingly precarious nose-up attitude ... the airspeed needle falling – 70 – 65 – 60 ... If it went to 50 they were all dead! McConachie ordered Simmons back into the cabin to do something ... Simmons shoved the two bewildered trappers into the cockpit ... the weight of the four men up front slowly brought the nose down ... crisis over!”

McConachie made the sale and the great ship continued to soldier on as a freighter, passenger hauler and rescue plane, frequently flown by Canadian aviation pioneer Bob Randall. On November 21, 1936 while landing at Telegraph Creek, the ship nosed over on landing. Though the fuselage was buckled and cracked, Northern continued to fly until it was finally grounded by Canadian aviation inspectors on August 24, 1937.

AFTER 10 YEARS AND 10 DAYS, A 67-YEAR NAP

It had been exactly 10 years and 10 days since 4-AT-10, C-1077 and G-CARC had rolled out of the Stout Metal Airplane factory for its debut at Ford Airport. The great ship had flown exactly 1,820 hours, its pilots and passengers and flights defining the spirit of the Golden Age of Aviation. It was left there, at the Carcross, Yukon airport. Stripped of its engines and laying in the airport “graveyard.” Its final indignity was to be blown over on its back in a windstorm and there it lay for nearly 20 years.

Gene Frank of Caldwell, Idaho purchased 1077/G-CARC in 1956, hauling the largest pieces down the Alaskan highway in '56 and returning again in 1984 for the remnants. A pioneer aviator and barnstormer in his own

right, over his lifetime Gene Frank saved many historic aircraft. He did so when few others saw the value in these ancient relics. His intention was to restore C-1077, but in his mid 80s he reluctantly at first, then wholeheartedly agreed to pass his stewardship of the aircraft on to Greg Herrick.

Greg had visited Gene at Frank Airstrip outside of Caldwell many times over a period of years. They shared stories over cups of coffee in Gene’s rustic office, surrounded by aviation memorabilia. When Gene finally agreed to part with old Serial No. 10, it was in pretty rough shape. Greg was not sure if he had a restoration or a “resurrection” on his hands, but he was the proud owner of a real Ford Tri-motor!

A FASCINATING HISTORY IS REDISCOVERED

Over the course of discussing the Ford with aviation writer John Underwood, Greg began to learn of the true historic nature of C-1077. As it turned out, John had been following the Ford for many years, aware of its significant history and always hoping it would somehow be restored. His words of encouragement, combined with the elixir of a fascinating history, convinced Greg to move ahead with was to be, without a doubt, a daunting restoration project.

Greg moved the project to his hangar in Minneapolis while he considered how best to go about the task of restoration. A considerable amount of research had to be done and parts and skins had to be accumulated. It was a huge boost when John Seibold, whose Grand Canyon Airlines flies a Ford 5-AT, lent a helping hand. John has the original dies used to make the skin of the Ford tri-motors and he agreed to

loan them to Greg. Firing up the huge dies that had not been used in over 70 years was a task by itself. But finally, with corrugated panels in hand, the next step was the actual restoration.

For this project the choice was Hov-Aire of Vicksburg, Michigan. Maurice Hovius had been deeply involved in the restoration of Ford Tri-motor N-8419, now at the Kalamazoo Air Zoo. Maurice and a very skilled staff, led by Mike Westveer and Tod Anderson, have spent several years working on this and another Ford project in their shop. Hov-Aire possessed a great depth of knowledge on the construction and restoration of Ford Tri-motors.

HOW AUTHENTIC DO YOU WANT THE RESTORATION TO BE?

One choice that had to be made early in the restoration process was just what type of a restoration this was going to be. They asked Greg, “Are you just looking for a ‘flier?’ Do you want it set up to give rides? How authentic do you want it to be?”

Greg had two seemingly simple answers. He wanted the restoration to be as true to the original—as authentic as possible—while keeping safety as the number one priority. The next objective was to fix a point in 1077’s history and to restore the airplane to that particular configuration. For this Greg chose a very specific point in time: December 19, 1927, the day Mrs. Evangeline Lindbergh departed Dearborn to visit her son for Christmas in Mexico City.

Hov-Aire began to work on 1077 in the fall of 2000 with the project completed in the summer of 2004. The work was meticulous and in many cases required considerable experimentation to rediscover a few lost arts.

Particularly challenging was the repair and manufacture of new spar material. The original nested spars of all Ford Tri-motors are subject to eventual corrosion, weakening the structure. With the techniques for manufacture long forgotten a seemingly simple job actually took nearly two years to redevelop the proper methods of manufacture.

There were many details which needed attention as well, particularly as one of the objectives of the restoration was to bring the ship back to a very specific point in time. As with many older aircraft Serial No.10 had been remodeled and modified over the years depending on the job it was doing. It ultimately went from what was for the times, a fairly sophisticated “Pullman-carish” interior (as Anne Morrow Lindbergh described it) to a sightseeing ship, and finally to a fish hauling freighter.

THE NEW YORK TIMES DESCRIBES THE INTERIOR – BACK IN 1927

“**T**he *New York Times*, in describing the interior of 1077 to its readers in December of 1927 notes that, “The interior is painted in a pale blue leather, with five wicker chairs... and contains a berth... Forward of the passenger cabin is a small auxiliary cabin...”

The pale blue leather on the walls was actually not leather, but a simulated leather made by Ford. We were fortunate enough to find a sample of this material in an original interior door panel that had since been painted over. When we removed the top coat of paint we discovered the base material. It was all blue with a silver faux finish, which appeared to



In restoration, the right side center section reveals one of three fuel tanks and motor mounting system.

have been applied with a sponge. With a little practice Dawn Brooks was able to duplicate the process and appearance exactly.

Searching the archives of the Bensen Ford Research Center at Greenfield Village provided us with a great deal of information including the original design of the wicker chairs, along with some very good photographs of the originals. This allowed us to duplicate them precisely using the talents of Vic Siemers,

another local artisan in the Vicksburg area. The blue leather seat cushions were referenced in a Ford work order for 1077.

The washroom was another area which proved to be interesting with a surprising amount of information available from the archives. At some point, the luxury of a half bath had been removed from the ship. At the latest, it would have been removed when hauling freight in the wilds of the Canadian west would not have required a wash basin and toilet with running water. However, drawings, photographs and written descriptions told us exactly what it was like.

DON'T USE THE BATHROOM OVER POPULATED AREAS!

The interior of the washroom is painted white. There is a toilet which, as in the old railroad cars, was not intended to be used while in the station or, in this case, while parked at the airport. For that matter, passengers were no doubt asked to refrain from using it anytime they were flying over populated areas. The sink is of stainless steel with a matching steel water reservoir above it. Water used in the sink flows in to the toilet which helps keep it



After 67 years of rest C-1077 is rolled out for initial engine runs on June 17, 2004.

clean, and then out through the hole directly underneath in the bottom of the aircraft. Look out below!

In completing the restoration we were looking for details everywhere. The necessary information is found in a variety of places. Many things can be learned by studying the plane itself, other bits are provided by old photographs, drawings or specific aircraft records from the archives. Occasionally descriptions were used which were left to us by the passengers, crew or newspapers of the time. Once you start doing the research, it is hard not to get totally adsorbed in it. It's and ongoing project and is really half the fun of doing the restoration!

Completing the restoration are small touches befitting an aircraft of the historical significance. On board one may sit at the writing desk and, using pen and ink from 1927, write a note home on the ships own engraved stationery. There are two special logbooks on board as well. One is for visitors to sign as they join the long list of distinguished guests who have been aboard 1077. Another log provides a place for our modern day pilots to enter their names

below of Charles Lindbergh, Amelia Earhart, Grant McConachie and other aviation luminaries who have also piloted this aircraft.

The exterior of the ship carries the traditional Ford logo along with the references to the Lindbergh and *Bremen* trips exactly as Sky View had them added in 1928. Beneath the pilot's window are names of a number pioneers from Golden Age of Aviation who flew Serial No. 10 on many of her historic and exciting flights.

A SALUTE TO THE PIONEERS OF THE GOLDEN AGE OF AVIATION

This restoration has many purposes: To help preserve and share our great aviation heritage with all who are interested. In addition we wish to honor those who contributed to the development and building these aircraft and the infrastructure to support them. We also salute those individuals, both pilots and passengers, who embraced aviation in those early days. They are all the pioneers who led us on to the wonderful world of flight.



*This restoration is dedicated to my dad and mom, Walt and Dori Herrick,
for my first airplane ride and for always encouraging me to pursue my dreams.*

— Greg Herrick

**ORIGINAL SPECIFICATIONS
FORD TRI-MOTOR 4-AT-A, SERIAL NO. 10
C-1077 AND G-CARC "NIAGARA" IN CANADA
FIRST FLIGHT SEPTEMBER 10, 1927**

Maximum speed: 114 mph ★ Height: 11' 9"
Cruising speed: 95-100 mph ★ Length: 49' 10"
Landing speed: 59 mph ★ Wing span: 74'
Climb: 750 ft./min ★ Wing cord: 154" to 92"
Wing area: 785 sq. ft. ★ Gliding Ratio: 9.7
Gas Capacity: 231 gallons ★ Empty Weight: 5937 lbs.
Radius of Action: 500 miles ★ Gross Weight: 9300
Service Ceiling: 15,000 ft. ★ Max. seating exclusive of crew: 10
Original selling price: \$45,475

Suggested reading: *"The Ford Tri-motor,"* William T. Larkins; *"The Bremen,"*
Fred W. Hotson; *"The Aviation Legacy of Henry & Edsel Ford"* and *"Henry Ford's Airport,"*
both by Timothy J. O'Callaghan; *"Tin Goose,"* Douglas Ingells; *"So Away I Went,"*
William Bushnell Stout; *"The Ford Air Tours 1925 - 1931,"* Lesley Forden.

Our deepest gratitude and thanks go out to the many people who have helped to save 1077, a/k/a/ G-CARC "Niagara", over the years. We also wish to thank profusely those who have helped restore the ship and tell its story. I would like to say a special thanks to: Gene Frank; John Underwood; Sheldon Benner; Clark Seaborn; Robert Cameron; Fred W. Hotson; Tim O'Callaghan; Bruce Gowans; Robert Goold, Jr.; Bob Taylor; Maurice Hovius; Mike Westveer; Tod Anderson and the entire crew at Hov-Aire; Kermit Weeks; Suzanne Fedoruk; Don Carlson; John Seibold; Doug Carlson; Gene Olson; John Davis; Vic Smith; Betz Design; Al Holloway; John Mohr; Rochester, Buffalo and Niagara Falls Public Libraries; National Archives of Canada; Canadian Ministry of Transport; Canadian Aviation Historical Society; Latin American Aviation Historical Society; U.S. Federal Aviation Administration, Records Office; The Henry Ford, Bensen Ford Research Center; National Air & Space Museum, Archives Department. There have been so many people who have helped in various ways. Please forgive any omissions, which I am sure there are, as every bit of assistance has been of the utmost importance in this project.

AN ILLUSTRIOUS HISTORY

Ford Tri-motor 4-AT-10, C-1077, known as G-CARC in Canada, has a wonderful history of pilots and flights. Here are a few of the highlights.

Famous pilots who have flown this ship include:

- Charles Lindbergh, aviation pioneer
- Harry Brooks, Chief Pilot, Ford Motor Company
- Bernt Balchen, first to fly over the South Pole.
- Floyd Bennett, first to fly over the North Pole.
- Captain Hermann Koehl, *Bremen* crew, first to fly the Atlantic East to West
- Major James Fitzmaurice, *Bremen* crew, first to fly the Atlantic East to West
- Baron Ehrenfried Guenther Von Huenefeld, *Bremen* crew, first to fly the Atlantic East to West
- Grant McConachie, Canadian aviation pioneer, president of Canadian Pacific Airlines
- Amelia Earhart, pioneer aviatrix
- Harold Gray, aviation pioneer, chairman of Pan American

Famous flights & fun facts include:

- Flying Mrs. Evangeline Lindbergh to Mexico to see her son, Christmas 1927
- The first ship Anne Morrow flew in with Charles Lindbergh, Christmas 1927
- In 1927, the largest aircraft to have flown in Mexico
- First commercial trip from the U.S. to Mexico City
- In 1928, the largest aircraft to have flown in Canada
- First Ford Tri-motor to be put on floats
- First Ford Tri-motor exported
- First to fly a commercial flight over the Canadian Rockies
- Oldest Ford Tri-motor in existence
- America's oldest flying airliner
- World's oldest flying metal airliner
- World's oldest flying multi-engine airliner



Ford Tri-motor 4-AT-10 is owned by Greg Herrick's Yellowstone Aviation, Inc. of Jackson, Wyoming, and is part of the Golden Wings Flying Museum.

Produced by Yellowstone Aviation, Inc.

P.O. Box 6291, Jackson, Wyoming 83002-6291

Also see www.FordTri-motor.com

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