AEROMARINE AIRWAYS

By Donald W. Roderick*

In 1920, among other events, the Aeromarine Airways was born. This is the how, the who, and the where of that birth.

The Nation was just taking a second deep breath and beginning to relax after clearing up "The War to End Wars" as President Wilson would have it. Business was picking up the pieces left by the war and reorganizing itself for future endeavors.

The interesting and highly experimental field of public airplane travel glittered with promise. Glittered, that is, in the imagination of innumerable stock-selling promoters who filled the advertising columns of New York papers with offers of stock in airplane and dirigible companies planning to cross the country and/or the Atlantic.

In truth, however, only a few small private planes had been built or flown up to 1920. The military services had almost exclusive funds and opportunity to design and build airplanes. A large number of Curtiss or Standard "Jenny" (JN4D) primary pilot training planes were obtained by former Air Force pilots and flown out of fairgrounds or prairies on sightseeing flights. A smaller number of Curtiss "Seagull" flying boats that carried two or three passengers were also used along the coast.

All those early aircraft used the Curtiss OX-5 or OX-6 engines, 90-100 horsepower. No larger aircraft engines were available in the United States. To remedy this deficiency Col. Vincent of the Packard Motor Co. and Col. Hall of the Hall-Scott Motor Co. of Berkeley designed and put into production the Liberty engine. Produced mostly by Packard Motors, a great number of parts and a few complete engines were also manufactured by Ford Motors and by the Harmon Motor Car Co. of Indianapolis. Different types of this engine developed 350 horsepower (low compression) and 450 horsepower (high compression.) It was the only aircraft engine built in this country for several years.

Into all this confusion the Navy advertised a surplus of 20 F-5-L flying boats. The F-5-L was designed as a bomber, had a wingspread of 105 feet, weighed about 7 tons, and had a speed of about 70 mph with two Liberty 350 horsepower engines. Six were purchased by Aeromarine and delivered to Keyport N.J. to be converted.

Sensing an opportunity Mr. Inglis M. Uppercu organized a new Company and named it the Aeromarine West Indies Airways. Mr. C.F. Redden, former president of the Maxwell Motor Car Co., was placed as president, Mr. Earl D. Osborn as secretary-treasurer, and Mr. Wm. McKay as general manager. The new company opened offices in the Times Building, New York City.

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*This report was drafted by Don Roderick in 1974. Roderick had been a flight engineer with Aeromarine from 1920 to 1923. He asked Ernie Nygard, another Aeromarine flight engineer to help. Nygard apparently added handwritten comments and suggestions to the draft. This transcription is based on Roderick's draft and ?Nygard's suggested changes. Some improvements have been made to the spelling and grammar. However, Roderick's colorful use of the English language has been retained. / George K. Sioras

The new company (1) ordered 6 of the Navy's surplus F-5-L's and 25 of the Navy's surplus Liberty engines. These were delivered to the Aeromarine Plane and Motor Co. at Keyport N.J., which was eminently qualified for the job of converting the F-5-L hulls into safe and comfortable ten-passenger cabins. With admirable imagination the first three boats were named Santa Maria, Pinta and Nina, after those of another pioneer in the West Indies, Columbus. The next three were named for Columbus, Balboa and Ponce de Leon.

Remember, there were no Federal controls or licences for aircraft or pilots, nor regulations for inspections and flying. Only those rules applied which were specified by the company or pilot concerned.

The first delivery flight of the Santa Maria and Pinta from New York to Havana is best told by Miss Marion T. Colley, special staff correspondent for the New York Post. She was assigned to report on the flight and wrote thus from Havana, dated November 2, 1920:

"Woman Writer Tells of Thrilling Flight in Seaplane from New York to Havana.

"The Pinta and Santa Maria, as luxurious as Pullman cars, came swooping down into the harbor (Havana) with the first load of United States mail. The first airship in the service of the United States mail swooped down from a lavender and gold sky yesterday afternoon at 4:40 o'clock and taxied up the bay till it reached the Captain of the Port's office, its destination. It was the Pinta of the Aeromarine West Indies Airways. Four minutes later the sister ship, Santa Maria, sailed over the horizon and into the harbor to anchor a few hundred yards fron the Pinta.

"The arrival of the two boats marked the beginning of regular hydroplane service to be continued daily, between Havana and Key West and further points inland in both the United States and Cuba."

Miss Colley was the first passenger to land. Her trip, the longest ever made by air by a woman is described in her own story. The actual flying time, New York to Havana, was 22 hours. Elapsed time was from October 24 to November 1, 1920.

The passenger list on the two boats included Miss Clara Savage of the New York Times, Miss Pauline Lyman, aviatrix of Miami, James Morse, a cameraman, the Cuban Consul, Mr. S.D. Milom, Mrs. John Eisman who accompanied Capt. Eisman on the Santa Maria, and Mrs. Tibbs and son who accompanied Capt. Tibbs on the Pinta. Also aboard were Maj. George Bonnell, base manager at Key West, George Tiffany, base manager at Havana, and Mr. A. W. McKay, general manager of Aeromarine.

Miss Colley continues, "It is interesting to know that it costs $3.00 per minute to keep these giant planes in the air. With that in mind

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(1) The history appears to be slightly garbled here. Reports published in 1920 indicate that the first F-5-L converted for civilian use was put into operation by the Aeromarine Sightseeing and Navigation Co. in the summer of 1920, before Aeromarine West Indies Airways existed.

the fare of $75.00 per passenger from Key West to Havana seems remarkably reasonable. The planes are also carrying mail between the United States and Cuba and are thus the initiators of the first official aeroplane mail service between the United States and a foreign port." (2)

Who and how the air mail contract was attained by Aeromarine, I have never found out. There was a contract most certainly. Aeromarine was paid $75.00 a trip to carry 500 lbs of mail daily starting November 1, 1920 and ending April 30, 1921. (3) Outside of the prestige that carrying the mail involved, it was a headache to the company and a backache to the crews. When passengers were plentiful and we could fill the ship with passengers at $75.00, the fare during the first year, the sacks of mail took up the space for two passengers. And when passengers were scant or nil, we were required to make the trip with only the mail at $75.00. Neither condition occurred very often. At any rate, no mail was ever lost by Aeromarine. (4)

It was not all smooth sailing. Santa Maria was late one night and landed in the Gulf Stream. From the dark safety of the water's surface they attempted to taxi to a harbor. Thirty miles east of Havana they finally found refuge at Santa Cruz del Nort where the Hershey Company had a sugar mill. By that time all the fabric and ribs had been washed out of the lower wings. The Hershey people gave our boys all the help they could. But it took them two weeks to repair the wings and get ready to fly again. Then the Pinta found some rocks on the beach at Key West. Repairs to her bottom took her out of service for a week or two.

Thus it was that when we arrived in Key West with the Nina on Thanksgiving Day in 1920 we were pressed into immediate service. We made our first trip to Havana the next day with the mail and our VIP's.

It didn't seem long til the business of taking passengers and mail to Havana became a routine practice for all.

The immediate problem was to locate a proper base of operations in Key West. At first an open shed that had been a roller skating rink on South Beach was used. It was called La Briza and was little more than a shelter from the rain. When the Pinta went aground on the rocks just offshore and damaged her bottom the search for more suitable quarters was speeded up.

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(2) Actually the first foreign air mail service started on October 15, 1920 between Seattle, Washington and Victoria, British Columbia.

(3) The April 30, 1921 end date for air mail service was handwritten on the draft, presumably by Ernie Nygard. This conflicts with data from a 1932 GPO publication which shows air mail carried in May and June, 1921.

(4) This is not correct since mail was lost in the crash of January 1923. The narrative below indicates that Roderick was not in Florida during the 1922-1923 season, so he presumably wasn't aware that air mail service was resumed for a brief period in 1923.

Trumbo

The next place that was used was on ~~Trumbull~~ Island on the north side of Key West.. The way that came about was thus. Back when the Florida East Coast Railroad built in Key West they filled in a large area called ~~Trumbull~~ Island to use for railroad yards and a docking area. The railroad and the P & O (Peninsular and Occidental) Steamship Co. operated three ferries that carried 20-25 railroad cars to and from Havana daily. There were no passengers on these boats. During WWI the Navy needed space for an air station and a blimp hangar. Therefore, the railroad leased the surplus space on ~~Trumbull~~ Island to the Navy. In 1919 a hurricane destroyed all the Navy hangars and buildings except for one apartment building and the blimp hangar, which was later moved to Opa Locka.

This explanation seems necessary to show how the Navy was able to allow Aeromarine to use this space. We moved our spare parts and operations across town to the north shore on railroad land.

The Florida East Coast Railroad and the P & O Steamship Co. considered Aeromarine West Indies Airways very disagreeable competition. They reacted violently before Navy authorities and the courts to reclaim their land and dispossess Aeromarine before the lease expired. Both the Navy and the courts were unsympathetic and Aeromarine stayed there through the winter of 1920-1921.

The railroad property was not suitable as a base of operations. It was cold and wet at times as there was no shelter at all. We used it for a time, waiting the next move. This came in the spring when the name "Aeromarine West Indies Airways" was changed to "Aeromarine Airways." With a new manager, Major B.L. Smith, we moved our operations to property at the north end of Duval Street, Key West's main street. There was a building that made a satisfactory shop for overhauling motors, wings, propellors, etc. There also was a nice frame building facing Duval Street that made a good spot for ticket sales and a manager's office.

Many, many people came through this office. I remember Mae Murray with her furs, associates and cameramen making quite a to-do about boarding our aircraft. There I also met Juan Trippe, the master who originated Pan American Airways a few years later. I do not know if Mr. Trippe crossed to Cuba in our ships.

As time went on and not enough passengers came to ride our planes some (?)genius suggested that we fly one of our planes a few miles north over the bay and keys, meet the train, turn around, and fly back alongside the train to let passengers read the advertising on the side of the aeroplane. I do not know if this advertising generated any passengers for us. It was very low flying, a hazardous exercise. Any failure at that altitude would have resulted in complete disaster for men and plane.

Probably I should explain how passengers usually made their connection between the train and the ship to Havana. The ship to Havana was normally moored close to the dock owned by the railroad. The train, "The Havana Special", came directly out of New York. The end of the train's run was at the end of the dock alongside the ship. It was only a step from the cars to the ship and, of course, most people took that step.

The railroad, however evil-intentioned, had no power to stop those people who had heard of Aeromarine and desired to use our services from boarding taxicabs and proceeding to our office. The taxi drivers were, of course, in our favor. A few people had heard of Aeromarine's air trip to Havana. To avoid a rough overnight trip on a very rough little ship, the City of Miami or the Governor Cobb, or perhaps just to save a day, they bought air tickets and arrived with Aeromarine in the afternoon. Some days we had no passengers. Some days we had fifteen or twenty which required use of all three of our ~~palnes~~. PLANES.

The most rewarding people that used our services were not the passengers who traveled to and from Havana at $75.00 per trip, welcome as they were. We had other customers who chartered planes for extensive business trips to uncharted "centrals," bays and towns on the north or south coast of Cuba.

One of these was Mr. Gordon Rentschler, a sales engineer for the Hamilton (Ohio) Locomotive Works, manufacturer of heavy sugar mill machinery as well as railroad equipment. He was the brother of the Rentschler who was head of Pratt and Whitney, Hartford, Conn., manufacturer of aircraft engines. Mr. Rentschler's many destinations included Nuevitas and Santa Cruz del Nort on the north shore of Cuba, and Batabano, Cienfuegos and Manzanillo on the south shore.

Also among Aeromarine's prime customers were the two Atkins brothers who owned the United States Sugar Corp. of Englewood, N.J. Their objectives were different, being buyers not sellers, but many of the people they visited were the same as those visited by Mr. Rentschler - the sugar producers. These special trips sometimes took a plane for a week or more, with corresponding income for the airline.

A feature we soon discovered, and cashed in on, was the sight-seeing trip. Aeroplanes were seldom heard of, and never before seen, by natives of far-off villages we went to. They were happy to part with $25.00 each for a ten or fifteen minute ride in the wonderful "hydoplano." We could pack in twenty or more of the little Chinese, brown or negro people. We made them real happy.

Gasolene was high, about 75¢ a gallon in those days. It came in 5 gallon tins, two cans in a wooden case. It took a lot of them to fill our tanks.

One special trip involved a gentleman who paid us to take him in privacy from Havana to Nassau via Key West and Miami, a lot of miles in those days. Another was for a gentleman with a group of chorus girls who bought passage to Palm Beach from Havana.

It was thought to be good publicity to accept an invitation from the Belle Aire Hotel in Clearwater to send the Nina during a golf tounament. The Belle Aire Hotel manager was a brother of the manager of the Havana Biltmore where we sometimes stayed. At Belle Aire we had a few practice flights but carried no passengers.

Back in Havana, picture in your mind the entrance to the harbor. It was a neck almost a mile long and quite narrow. It opened directly on the Gulf Stream to the northwest. The moorings to which we attached our airships were in this neck, a little to the side of the main channel and about halfway into the harbor. On January 15, 1921 a strong wind came up out of the northwest, The Pinta broke loose and came back onto the rough rocky shore of the harbor. The police came to our apartment

waking us all up with the words, "Pinta is on the rocks. Come quick." We did, and it was, and breaking up fast. It was a wet cold job. We had lots of help from the Cubans who were there. We salvaged the motors and saved a lot of the instruments from the wreckage. The rest was just kindling wood. It was the first serious loss for Aeromarine, but not in life.

About April 1, 1921 the Key West office received a garbled radio message from Nassau that Duke Shiller, one of our pilots, was sick in a Nassau hotel. Duke and a flight engineer, Floyd Walton, had been dispatched to Miami to fill a call from a well-known "importer" for transportation to Nassau. Our regular F-5-L scheduled flights had been discontinued for the summer. (5) So Schiller flew one of our smaller single-engine HS-2 planes on the trip. Walton was not a pilot.

At this time the shop had been overhauling the Santa Maria for special service in the New York and Washington area. This seaplane and its engines were in perfect condition. Therefore, it seemed logical to send the Santa Maria to Nassau to retrieve the ailing Mr. Shiller and take him to Miami. It could then continue north from there.

Pilot Ed Musick was appointed captain and Don Roderick flight engineer. Dr. Eugene Lowe, M.D. consented to go along saying he "needed a day off." Leslie Curry, a pharmacist and drug store owner went along as assistant to Dr. Lowe. D. Richardson, another pilot, went along to fly the HS-2 home. Miss G. Williams, Richardson's girl friend, went along for the ride. This group took off Monday morning, April 4, for a planned one-day trip to Miami by way of Nassau. We all expected to be in Miami that evening.

The ship was loaded with gas and, as we had no experience with the flight from Key West directly to Nassau, we also filled ten ten-gallon cans with gas to be sure we had enough.

After taking off we found that we had strong Northeast headwinds. With this condition our gas was soon used up. By that time we were over the Bahama Banks. The first sign of life we saw was a small sailboat and we landed nearby. It was a 26-foot sponge fishing boat with nine black men aboard. Captain Musick convinced them that they should take our passengers with them to Nassau, their home. We found that there was sufficient gas to go on the few miles to a safe anchorage close to the Andros Island beach.

On Andros Island there were no people, no stores, no food, no water and no communications. We settled down making ourselves as comfortable as possible while awaiting rescue. At home the newspapers were full of stories about our tragic disappearance.

In the years after WWI the Navy operated a program called "The Atlantic Squadron." It consisted of eight or ten F-5-L flying boats, when available a couple of NC flying boats similar to the NC-4 which was the first aircraft to cross the Atlantic, and one or two mother ships which were parts depots and provided living quarters for the crews. The squadron had visited every country on both the east and west coasts of South America. It was based at Guantanamo in the winter and at Hampton Roads in the summer.

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(5) The date when air mail operations ended in 1921 continues to be a problem. See note (3) above.

Well, it just happened that this Atlantic Squadron and a group of PT planes (that carried and launched a full size torpedo) had been in Key West and had left for Miami the same morning that the Santa Maria left. When the Santa Maria turned up missing many of these Navy planes joined the search. Thus, on Wednesday we heard an approaching Navy plane and realized that rescue was much sooner than we had expected. The Navy fueled the Santa Maria and both seaplanes soon landed in Nassau Harbor. The sponge boat with our four passengers and the nine black men didn't get into port until Friday, when we had a joyful reunion.

The sick man was taken to Miami for treatment, the Key West people went home by train, and the Santa Maria was prepared for the trip north to Washington and New York.

Captain Musick, pilot, and Ernie Nygard, flight engineer, were the crew that took off on April 11, 1921. One of the passengers was Bob Bell-chambers of United Tours. After several flights in the Washington area the Santa Maria went on to New York and then to Keyport for a checkup at the Aeromarine factory.

The main office ordered an advertising trip through the Great Lakes and the Mississippi River. The Santa Maria took off with Captain Musick and Flight Engineer Nygard on a trip to Montreal, Toronto, Buffalo and Detroit. (We do not have a passenger list for this trip.) Bottom damage required that the ship be hauled out and repaired at Detroit about May 15. The trip south along the Mississippi began about May 23. Passengers were Earl D. Osborn, Secretary-Treasurer of Aeromarine Airways, W.W. Wyman, Wolf's Head Oil, Congressman Hicks of Oyster Bay, and Mr. E.J. Riley, Aeromarine public relations. Stops were made at a great many cities including Alton, Peoria, St. Louis, Cairo, Natchez, Memphis, New Orleans and a place called Tumica, La., population 6 white men and 300 blacks, where they stayed one night at a teachers house. In New Orleans the passengers were discharged. The Santa Maria continued via Apalachicola and St.Petersburg to Key West, arriving about October 26 to find hurricane warnings flying.

On November 21, 1921 the Santa Maria resumed the old routine of ferrying passengers back and forth to Havana. The fare had been cut from $75.00 to $45.00 which seemed to stimulate air travel.

In February 1922 the National City Bank of New York asked Aeromarine to make a survey by air of the south shore of Cuba in the vicinity of Jucaro and Manzanillo. On February 5, 1922, D. Richardson took off in a single-engine HS-2 with Nygard as flight engineer, Major B.L. Smith as mapmaker, and an expert Navy photographer. The plane had been fitted with a platform and stirrups for the photographer. The route was across Cuba via Havana and Batabano, then east to Cienfuegos where they stopped for the night. The second day the route took them further east to Jucaro where the National City wanted pictures of the coast for 20 miles. It took a number of days.

The living was primitive to say the least. There were no communications. Transportation was by narrow gauge rails to a place called Florida. Such automobiles as there were carried flanged wheels so as to use the rails. Fifteen or twenty miles of impenetrable mangrove swamp bordered the beach. "Sleeping quarters" was a galvanized covered shack with a dirt floor. It was infested with rats which, at night, came to "play" with the shoes on the floor. The boys used a 22 rifle on the rats and the tin roof was punctured several times. When a large rat called the "tree

rat" was killed the cook skinned and cooked it. "Not too bad," they said. The morning alarm clock was a large noisy flock of parrots that came by each morning. We gathered dung with which to make a smoke screen to chase the mosquitoes and gnats. Even so many large lumps grew on us where we were bitten. The bites were healed by dousing with cane alcohol which was plentiful.

Barnacles grew so fast on the hull's bottom that they had to be scraped off before we could take off. The water was full of jelly fish and man-o-war, and there were a few barracuda. In spite of all the hazards the job was completed. By dodging the numerous water-spouts and thunder storms the ~~palne~~ PLANE and crew made it back across Cuba to Havana and Key West.

The need for radio communication between the planes and the base at Key West was always considered necessary. Radio was in its infancy and it was not until 1922 that a competent radio engineer was hired. He built transmitters and receivers for the planes and the base at Key West so that messages could be sent and received from planes lying at anchor in Havana harbor. However, the radio equipment was heavy and cumbersome, and a radio operator was required to operate the set. It was difficult for the planes to carry the extra weight and the company was unable to pay the extra salary. So radio was not an unqualified success with Aeromarine.

Let me insert a word here about one of the critical failures of the Liberty engine. They were designed with timing gears of the "involute" type used at Packard Motors. A number of engine failures occurred with loss of planes and life due to failure of these gears. In 1920 the Washington Navy Yard designed and manufactured other timing gears of the "stub" type - heavier and stronger - for the Liberty engine. These could be procured for $100.00 a set - ten gears. Over the protests of the head office several sets of these gears were bought and installed. But not all our motors were so equipped. This has a distinct bearing on our most important failure as follows.

Captain Bill Miller and Engineer Harold Thompson left Havana flying the Ponce de Leon one afternoon in April 1922. The passengers were Mr. Atkins, our steady and ready customer, Mrs. Atkins, who previously had refused all efforts to get her to fly with her husband, the two small Atkins boys, the boys' nurse maid, and a New York salesman. When an engine failed Captain Miller was forced to ditch the plane in the fairly rough sea. The Ponce broke in two in the section where the nurse maid and the boys were and they were all lost at once. Mr. Atkins attempted to swim to his boys and he was also swept away. It was fortunate for the other survivors that a P & O steamship, a car ferry, was nearby and saw the crash. A lifeboat was put out and picked up Miller, Thompson, Mrs. Atkins and the salesman just before the wreckage sank. (6)

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(6) Roderick's rendition of the Aeromarine crash with four fatalities has several inexplicable errors. Atkins, his two sons, and their governess, Miss Grace McDonald, died when the flying boat Columbus was lost on January 13, 1923. The pilot was C.W. Miller and the engineer was Harold Thompson. The flight was from Key West to Havana. We have not found reports of any other Aeromarine fatalities in April 1922 or at any other time. The Ponce de Leon was reported ready for service out of Aeromarine's New York terminal in June 1923.

After a season that was considered highly successful in 1921-1922 and a busy program of engine overhaul and airplane reconditioning ahead using our new test stand, it was a shock to receive instructions from the head office in New York to ship all engines to the factory in Keyport for overhaul. This blow to our plans was only slightly softened by also transferring the foreman (me) and two other overhaul men (Walton and Neidig) to the factory.

The people at the factory gave us every courtesy and we resumed the overhaul of Aeromarine Airways motors as before. However, many of the jigs and fixtures that we had made in Key West were lacking at the factory. So it is possible that the engines overhauled at the factory were not as perfect as those that had been done at Key West, even though the work was done by the same persons.

It seemed to me obvious that the high overhead of the office in the Times Building in New York and the lack of operating experience exhibited by the management would destroy what we originally believed to be a permanent and progressive world air travel system. The writer therefore resigned from Aeromarine Airways in January 1923.

The harsh laws of economics forced Aeromarine Airways out of existence in September 1923.