

MADDUX AIR LINES 1927-1929

by Ed Betts

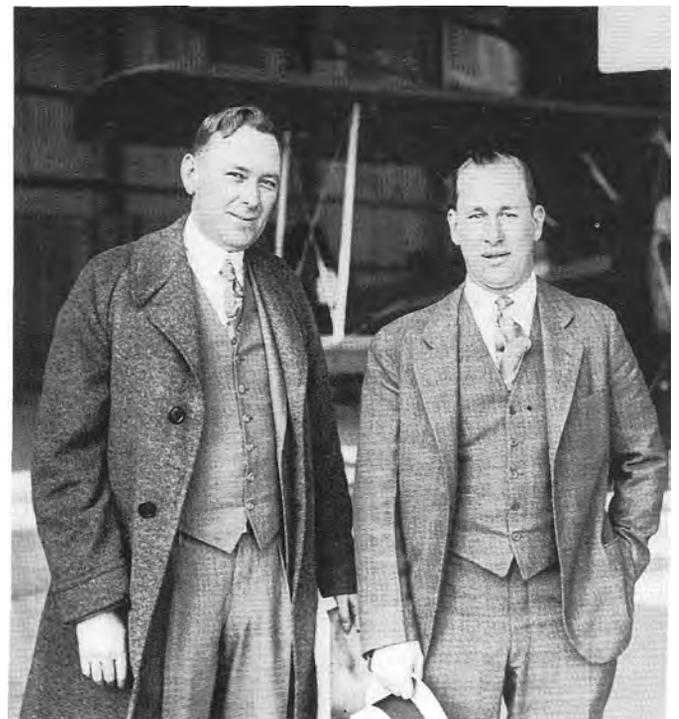


THE YEAR 1927—If any year in the decade of the "Roaring Twenties" typified the mood of the times, it was 1927. The Flappers were dancing the Charleston, speakeasies and bathtub gin were the vogue for the thirsty. Calvin Coolidge assumed the Presidency in 1923, after the death of Warren Harding, and announced "he chose not to run in 1928." Feminine fans were still grieving the sudden death of idol Rudolph Valentino at age 31 in 1926. The first Oscar awards went to Emil Jannings, *The Way of All Flesh*, Janet Gaynor, *Seventh Heaven*, and picture, *Wings*. Al Jolson headlined the first part-talking picture, *The Jazz Singer*. For the sports fans the New York Yankees beat Boston 4 to 0 in the World Series; the year that Babe Ruth hit 60 home runs and Lou Gehrig had 175 RBIs. Walter Hagen won golfs PGA Championship for the fourth consecutive year. Rene La Coste ended Bill Tilden's six-year reign as U.S. Open Tennis Champion. Gene Tunney won his second victory over Jack Dempsey. The only post-season football bowl classic was the Rose Bowl; Alabama and Stanford tied with a 7 to 7 score.

FLYING IN 1927—Flying was also making the headlines when Clarence Chamberlin and Bert Costa set an endurance record of 51 hours 11 minutes in their Bellanca. Nothing will compare with the epic flight of Charles Lindbergh when he landed in Paris on May 21. A few days later a Lt. James Doolittle made the first successful outside loop. The Pacific was also conquered when USAAC Lieutenants Maitland and Hegenberger flew a Fokker C2-3 from Oakland to Honolulu on June 28-29. The team of Ernie Smith and his navigator, Emory Bronte, had hopes to be the first but were delayed. They did establish a record as the first civilians to make the crossing from Oakland to

Molokai on July 14, flying their Travel Air monoplane. Other records made during the year included altitude (38,419 feet) by Clarence Chamberlin and speed (322.6 mph) by Lt. Al Williams with a 1,250-hp 24-cylinder Packard engine powering his Kirkham racing plane.

During the year 1926 there were a dozen newly created airlines which inaugurated service within the continental USA carrying the airmail under contract with the Post Office Department. The department was getting out of the flying business.



Arrival of the first trimotor Ford in Los Angeles (Rogers Field), July 27, 1927. According to Larkins it had an original serial number of 3114, then changed to NC1102. (W.T. Larkins)

Jack L. Maddux and Lawrence G. "Larry" Fritz. July 1927. (Ed Betts)

Ford Motor Company Chief Engineer William B. Mayo and Jack Maddux (in a Ford car). Rogers Field, July 27, 1927. (W.T. Larkins)

Original Maddux Ford with MADDUX AIRLINES on fuselage. (Ed Betts)

These were new routes and most were 'feeders' to the already established transcontinental route by the department between NYC and San Francisco. The Ford Motor Company was the first to inaugurate service with CAM#6 from Detroit/Dearborn to Cleveland on February 15, 1926. L.G. "Larry" Fritz, a veteran test pilot with Ford (and William Stout), flew the inaugural flight. Charles Lindbergh piloted the inaugural flight for Robertson Aircraft between Chicago and St. Louis on April 15.

The one transcontinental route (known as the "Main" or "Columbia" Line) was divided in two parts and open for bid in 1927. CAM#18, from Chicago to San Francisco, was won by Boeing Air Transport and service began on July 1. National Air Transport won CAM#17 from NYC to Chicago and began service on September 1. NAT already had CAM#3 (Chicago to Dallas) so their combined mileage was now 1,791 miles. Clement Keys, a former editor with the *Wall Street Journal*, founded NAT in 1924 with an original capital investment of \$10,000,000 and was Chairman of the Executive Committee. Paul Henderson, former Assistant Postmaster General and in charge of the airmail, was a Vice President.

There were exceptions, but most of the new airlines were formed with the one purpose, to carry the airmail, and their fleet had little or no accommodations for passengers. An example was Western Air Express which began operations on April 17, 1926, between Salt Lake City and Los Angeles (via Las Vegas). Their original equipment was the Douglas M-2 biplane . . . if the mail load permitted, a passenger could ride in the open cockpit in front of the pilot where the sacks of mail were stored (complete with a flying suit and parachute). Pacific Air Transport was awarded CAM#8 from the Seattle area to San Francisco and Los Angeles. However, their northbound trip originated at 11:45 P.M. . . there were no airway lights at the intermediate stops to Bakersfield and Fresno, so no passengers could be carried in their Ryan M-1 monoplanes. Vern Gorst, the owner, operated a bus company in Oregon and William Boeing was on the airline's Board of Directors.

JACK MADDUX—Investments in aviation-oriented stocks or companies were now very popular on Wall Street or other markets. One such potential investor was Jack L. Maddux, a very successful dealer in the Los Angeles area with the Ford-built Lincoln automobile. Through his contacts with Henry Ford and his Chief Engineer, William Mayo, he was convinced there was a future in operating an airline for passengers and freight (only) and agreed to investigate the possibility in the Los Angeles area. Maddux would also be a sales representative for the trimotor Ford monoplane out west. Maddux was able to purchase the seventh Model 4-AT off the assembly line (for \$42,000) and came east in July 1927 to take delivery. His pilot for the trip west, and the new business adventure, was Larry Fritz. Mayo, mechanic Jack Wiles plus a load of spare parts were the passengers and freight. It was to be a leisure trip as many stops were

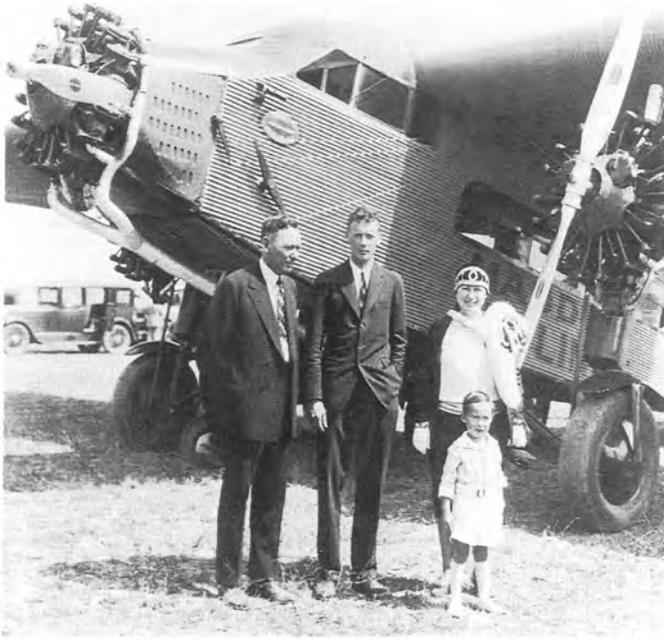


programmed in order to show off the plane (maybe a ride) to potential buyers. They departed Dearborn on the evening of July 22 for the first leg to Chicago. Then to Kansas City and Omaha. From there they followed the Post Office route to Salt Lake City.

At Salt Lake City they were joined by Parker Van Zandt and his pilot, LaMar Nelson. Van Zandt owned Scenic Airlines (later called Grand Canyon Air Line) and Nelson was a former pilot with Ford. At Las Vegas an overnight trip to Williams, Arizona, and return was flown to make a very special test flight . . . a demonstration of the Ford's ability to operate out of a high-altitude airport (Williams is 6,770 feet). At the time there was not a suitable airport so the landing was made on a local baseball field. No problem. Mr. Mayo's computations assured there was ample space for the takeoff . . . but the locals were somewhat skeptical and removed the left field fence just in case.

Mr. Mayo had an odd substitute for a note pad: he took notes on the white celluloid cuffs of his shirt. As a precaution, all excess weight was removed and shipped by train on to Los Angeles. A large crowd gathered the next morning to watch the departure. At about the home plate area the brakes were locked and the three engines revved up to max power, the brakes released and they were on the roll. Almost immediately the tail was in the air and the plane cleared the area where the left field fence had been by over 20 feet. This was the beginning of the legend of the Ford to operate from small and high-altitude air-





Inaugural Maddux flight to San Diego. Maddux, Charles Lindbergh (Honorary Chief Pilot), Mrs. Maddux and son, November 1, 1927. (Ed Betts)

Movie actor Raymond Hatton, a passenger on the second Ford flown to California. (Henry Ford Museum)

First Ford fenced off at Rogers Field, July 27, 1927. (Ed Betts)



solution: she would invite a group of the wives to lunch which was followed by the scenic flight. The women were ecstatic and their husbands soon overcame their shyness to fly and took part. With sufficient capital, Maddux Air Lines was incorporated on September 9, 1927.

The route chosen was between Los Angeles and San Diego. Claude Ryan began a similar daily service starting on March 1, 1925 (from "Dutch Flats" to an airport at Western Avenue and 99th Street in Los Angeles) using modified *Standard* biplanes. He charged \$15 for the 120-mile flight which took an hour and a half. A year later he was using the modified 11-passenger Douglas *Cloudster*. During the year 1926 the airline carried 5,600 passengers. George Allen was one of the pilots. However, in early 1927, Ryan discontinued this service and concentrated on building aircraft.

Eddie Bellande, a well-known local barnstormer and test pilot, was the first pilot hired by Maddux on October 2, 1927. Johnny Myers was hired as Chief Mechanic on November 6. Scheduled service would begin after the arrival of the second Ford from the factory. Movie stars Wallace Beery, Raymond Hatton and Will Fox along with Eddie Rickenbacker and William Mayo were among the passengers (with Fritz the pilot) for the flight to Los Angeles. Scheduled service, three times a week, began on November 1, 1927. Charles Lindbergh was the Honorary Chief Pilot for the inaugural flight.

It so happened that on the 27th of that month another passenger (no mail) airline inaugurated service from Los Angeles to Phoenix and Tucson flying a Fokker *Universal*. . . Jack Frye's Standard Air Lines operating from their Aero Corporation of California field (story in the Fall 1994 *Journal*). Maddux operated out of Rogers Field.

ports. They returned to Las Vegas and picked up two more passengers for the flight to Los Angeles.

Nearly a dozen military and civilian airplanes gave them an escort into the Los Angeles area and they circled Rogers Field several times before landing. A huge crowd had gathered and the police plus local airport personnel were trying to keep the landing area clear until the "monster" came to a complete stop and the engines cut. They landed at 3:30 P.M. on July 27, after 31 hours' flying time from Dearborn, and were greeted by D.F. McGarry, President of the Chamber of Commerce, and others. According to an interview by the *Los Angeles Times*, Maddux was reticent and would not confirm or deny his plans for the plane. It was surmised that it might be his personal "air yacht." There was not a hangar in the Los Angeles area which could house the plane's 75-foot wing span; it was roped off and a full-time sentry was on duty to keep the curious from getting too close.

In order to raise more capital among his business contacts, Maddux arranged a series of daily scenic hops around the Los Angeles area to show off the plane's potential. At first, many of the invited guests were reluctant to fly and they had all kinds of alibis for politely refusing the offer. Mrs. Maddux had a good

MADDUX AIR LINES, 1928—Maddux purchased six more 4-AT Fords in 1928, as additional schedules were added. The trip to San Diego operated daily and soon was extended to Agua Caliente, Mexico, a 10-minute flight from San Diego (where customs inspection was conducted on return). These were the "dry years" so it was popular to fly to Mexico for a legal drink plus other entertainment such as horse racing, bull fighting, gambling casinos, etc. It was especially popular with the Hollywood movie industry crowd. On weekends or holidays there could be several extra sections to accommodate the thirsty; on weekdays the flights were relatively empty. Some of the original pilots included George Allen, Fred "Doc" Whitney and John Guglielmetti—all experienced and well known in the area.

Instead of copilots in the right seat, mechanics rode along. They were called "Mates" and each was assigned to one airplane. Their job, besides minor repairs away from base, was to make a detailed report of the airplane's condition at the end of the day to the Lead Mechanic so that it would be in perfect shape for the next day's schedules. Larry Fritz was Chief Pilot and carried the title "Commodore" of the fleet.

Several times Maddux investigated the possibility of an international flight from San Diego to Mexico City. One of the first



was on November 15, 1928, when Larry Fritz (with "Mate" Stu Wilkinson) piloted a small group to meet with Mexican officials. On the trip south they encountered an unreported large buzzard cruising at their altitude. Apparently the buzzard got the worst of this midair collision.

Starting in early 1928 Western was making plans for what would be termed a "Model Airway" between Los Angeles and San Francisco. Weather reporting stations and two-way radio communications were part of the master plan. The President's son, Herbert Hoover, Jr., was Communications Chief. A large loan from the Guggenheim Fund helped with the expenses which included the purchase of three trimotor Fokker F-10s. Service began on March 26 which was nonstop from their Vail Field to Alameda (and then by ferry across the bay). The northbound flight departed at 9:00 A.M. and arrived at noon, the southbound at 9:10 A.M. and arrived at 12:10 P.M. The fare was \$60 (no return discount) and included ground transportation at both ends.

On April 14, 1928, Maddux began a daily service from Los Angeles to San Francisco (Oakland and then by ferry to San Francisco), with stops at Bakersfield (flag stop only), Visalia (Wednesday and Sunday only) and Fresno. The northbound flight departed at 8:00 A.M. and arrived 12:30 P.M., the southbound left at 8:00 A.M. and arrived at 12:30 P.M. The fare was \$45 (\$85 round trip) which included ground transportation by luxurious "closed" cars between the downtown offices and the airports. On Sundays the Agua Caliente flight was extended to Ensenada. Including Pacific Air Transport (one direction only), there were now three airlines competing for the passenger market between the two California metropolises.

Maddux moved their Bay Area operations to Mills Field (site of the SFO Airport today) in July, although Oakland remained a port of call. Complimentary bus service was provided to downtown San Francisco.

Art Burns, a veteran pilot (soloed in November 1913), was

hired on October 27, 1928, and one of his first trips proved to be a harrowing experience. He was flying into the San Francisco Bay Area on a pitch-black night when suddenly all three engines quit due to carburetor ice. He put the plane into a glide towards what appeared to be a large field and as soon as he felt the wheels hit the ground pulled the brake handle with all of his strength. He stopped just short of a large tree. It was a three-day wait before a strong north wind came up which would allow the plane to be ferried to Alameda.

For the year 1928, Maddux carried 9,443 passengers a total distance of 386,736 miles without a major incident. It also had one of the largest fleet of Fords (eight) plus two four-passenger Lockheed *Vegas* and two Travel Airs.

TOMMY TOMLINSON, 1929—A big event in 1928 was the National Air Races held in September at Mines Field (LAX today). A special event, aerobatics by military fighters in formation, saw the Navy team beat the Army team (The Three Musketeers) for the first time ever. The leader of the Navy's "Three Sea Hawks" was Lt. D.W. "Tommy" Tomlinson, an Annapolis graduate and veteran of 10 years in Naval flying. It was here that Tommy met Jack Maddux and the latter discussed a possible job managing the airline. Larry Fritz was about to resign and help Erie Halliburton organize his Southwest Air Fast Express (SAFE), operating with Fords between Sweetwater or Dallas to Tulsa and Kansas City or St. Louis. Maddux was in the process of refinancing and reorganizing and offered Tomlinson the job as VP-Operations. This was a 10-year contract plus a block of stock and to be a member of the Board of Directors. Tomlinson took a two-week leave of absence and flew several of the trips to Oakland or Agua Caliente. He also took Maddux and some of the directors to Nogales, Hermosillo and Guymas where discussions were held with Mexican officials with regard to a possible mail contract. This did not materialize.

After much deliberating the pros and cons, Tommy took early

retirement and joined the airline on January 1, 1929. The following quotes are Tommy's impression of the operations at the time:

"The Maddux Air Lines was, I found, but one step removed from the sort of thing I had known in the old gypsy flying days. Rogers Airport was a glorified mudhole. As for personnel organization, they were minus plus. All officers and no soldiers; everyone was boss, claiming glory when things went right, and disclaiming responsibility the moment trouble loomed.

'The facilities were painfully limited. One small sheet-iron office building served as waiting room, ticket office, flight office and pilots' room. On weekdays the place was like a tomb, on Saturdays and Sundays it was a mad house, for then the crowds came out to the field and chaos reigned. It had become the vogue for Hollywood's movie stars to fly to Agua Caliente for the weekends.

'A wooden shack served as stockroom and motor overhaul shop for the planes. The planes themselves stood out in the open. Men worked on them under every conceivable handicap. A mechanic checking a motor stood on a rickety stepladder, which rested on a foundation of mud. When it rained it poured; and the men huddled under a tarpaulin pulled over the power sections of the plane which they were working.

'The ship cleaners, polishing the interiors of the planes, tracked as much dirt into the cabins as they swept out.

'Anything resembling system was unknown. Each morning the Chief Pilot, Chief Clerk, Dispatcher, Superintendent of Maintenance—or whoever happened to be handy—surveyed the immediate situation, and began to yell at the mechanics, inquiring as to what planes, if any, were ready to fly that day. Frequently, at the last moment, a pilot slated to make a run would not appear on time. Investigation would bring to light the fact that the gentleman was at the moment in San Francisco or San Diego—on business of his own.

A few days after he joined the airline, Tomlinson went east to ferry the first of eight modernized Ford 5-AT models (with the new P&W 420-hp *Wasp* engine) on order by Maddux. The factory price was now \$65,475. Maddux, William Mayo, several Maddux directors and maintenance men who had studied the plane at the factory were the passengers. Near St. Louis the plane iced up and a forced landing was made in a cornfield. They spent



the night in the cabin with below freezing temperatures outside. The next day it was clear, but cold, and it took many attempts with the hand-cranked inertial starters to get the powerful engines to turn over and finally start. It was necessary to use a ladder to crank the center engine. Once the engines were started and warmed up, the departure was normal.

OPERATIONS TO GLENDALE—February 22, 1929, all operations were transferred to the newly completed Grand Central Terminal at Glendale. Here they had adequate facilities for equipment maintenance and overhaul plus a comfortable passenger terminal and ticket office. A big improvement was concrete runways, taxi strips and aprons to park the aircraft.

It was no secret that Tomlinson's entry into the Maddux company was greeted with suspicion by the current employees . . . rumors had already spread that they all, including the pilots, would be replaced by Tomlinson's Navy friends. The airline would be run in the typical "spit-and-polish" fashion of the Navy. The rumor was false so far as a mass displacement although two of Tommy's enlisted friends were hired in management positions. One was Bill Hughes, an 18-year veteran in maintenance, who was hired to be Chief Engineer. The other was Felix Preeg, a 16-year veteran as a pilot running an enlisted men's squadron, who was hired on March 16, and soon became Chief Pilot.

Under this trio's leadership, Maddux operations became very organized and systematic. There was lots of extra paperwork such as clearances and reports, typical of an airline operation today, but it soon spelled out efficiency—which has always been necessary for a profit. One example of Tommy's new approach was to have senior pilots serve as dispatchers. For example, there were four pilots based at Alameda and their typical tour of duty



Captain John Guglielmetti.

(Ed Betts)

Mexico City, November 15, 1928. Bob Wright (Richfield Oil), the Governor of Yucatan, Capt. Roberto Fuerto, stockholder Milton Bacon and wife, Pilot Larry Fritz and "Mate" Stu Wilkinson. Note the dent in the right wing—they hit a buzzard.

(Ed Betts)

Commodore Lawrence G. Fritz, Chief Pilot.

(W.T. Larkins)

A "Mate" in front of Ford.. .original logo (Maddux AL).

(W.T. Larkins)

was: one day flying to Glendale and return the following day, one day in the office as dispatcher, and one day off. The dispatcher worked with the pilots with regard to flight planning (weather, alternates, maximum weights, fuel, etc.), and both parties signed the clearance that all parameters were favorable for a safe and efficient flight. The pilot was never coerced into flying under conditions that he, personally, felt was unsafe. It was many years before this type of airline operation was deemed mandatory by the Department of Commerce.

Under Bill Hughes' guidance an efficient overhaul base was set up using revolutionary methods such as overhead conveyor belts to move essential engine parts from the storage area to the maintenance area. There were also forms to complete by the mechanics who did the work and signed by an inspector. Instead of a jack-of-all-trades, there were now specialists with engine maintenance or overhaul, airframe, instruments, etc.

On January 1, 1929, Maddux had its first serious accident when Mike Guglielmetti (brother of John) hit a soft spot after landing at Santa Rosa and the plane nosed down. The rear fuselage was badly buckled and two bulkheads were crushed. There were no injuries among the five passengers.

In early 1929 a new schedule between San Diego and Phoenix and then back to Los Angeles by way of Palm Springs was tried. One of the first trips was on April 21, and it ended in tragedy shortly after departing San Diego. It seems an Army pilot with a Boeing pursuit plane wanted to show off for the benefit of one passenger (his girlfriend) and was performing some sort of a maneuver, such as a buzz job, in the Ford's vicinity. For some unknown reason he pulled up right in front of the airliner and

hit the Ford in the center engine and cockpit area. The Army pilot's parachute caught in the tail of the Ford as it headed down, inverted, at a 45-degree angle and crashed. Pilot Maurice Murphy, "Mate" Louis Pratt and three passengers were killed.

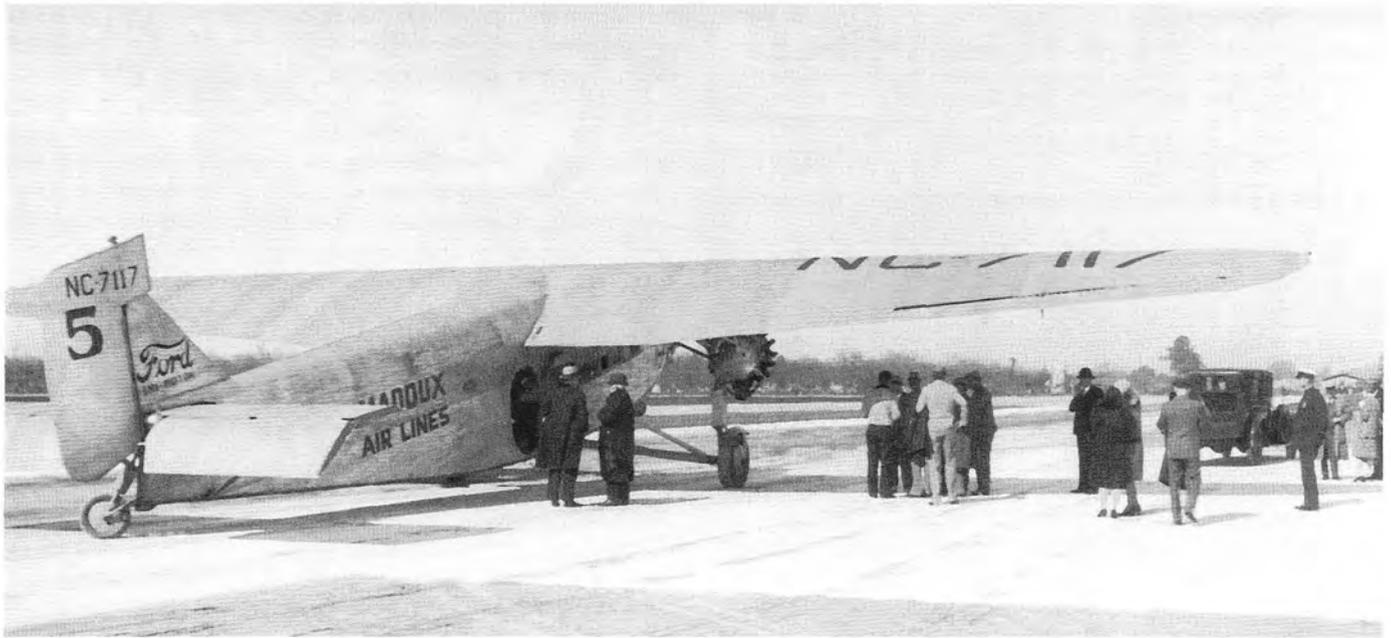
During 1929, Maddux continued to grow. Schedules were added such as three daily flights between Los Angeles and Alameda, five daily flights to Agua Caliente (plus extra sections, if necessary), and a spur route between Alameda and the Monterey Peninsula. By June of that year the fleet consisted of 15 Fords, the largest in the world. There was also a total of 16 pilots employed. Besides the regular schedules there were charters available: \$50 for the first hour with a four-passenger *Vega*, \$125 for the first hour with a 10-passenger Ford and \$175 for a 14-passenger Ford.

Moye Stephens was among those hired in 1929 as pilot and told what it was like to be qualified:

'Checking out consisted of one trip with a supervisor pilot to Alameda and return, another trip to Agua Caliente and then a demonstration of your landing technique in the Glendale traffic pattern. Then you made three takeoffs and landings, solo, as a supervisor pilot observed from the ground. . . if you passed all of these tests you were a qualified captain. '

THE GRAF ZEPPELIN, 1929—One of the most exciting and dramatic flights in history occurred between August 8 and 29, 1929, when the huge Graf Zeppelin made an unprecedented round-the-world trip from Lakehurst (N.J.) and return. It traveled east, with a stop in Germany (four days), across Siberia to Japan (four days of celebrations), then to Los Angeles (overnight) before proceeding back to Lakehurst. The dirigible was 775 feet long, 100 feet wide and 110 feet high with a spacious gondola that was 100 feet long and 20 feet wide. Twenty passengers were catered to the most luxurious service, splendid dining room and lounge, and staterooms which compared to the best of ocean liners of that era. There was one major exception, the gondola was not heated, which made it very uncomfortable across Siberia or at high cruising altitudes. The original fare for an Atlantic crossing was \$3,000. Commander (Dr.) Hugo



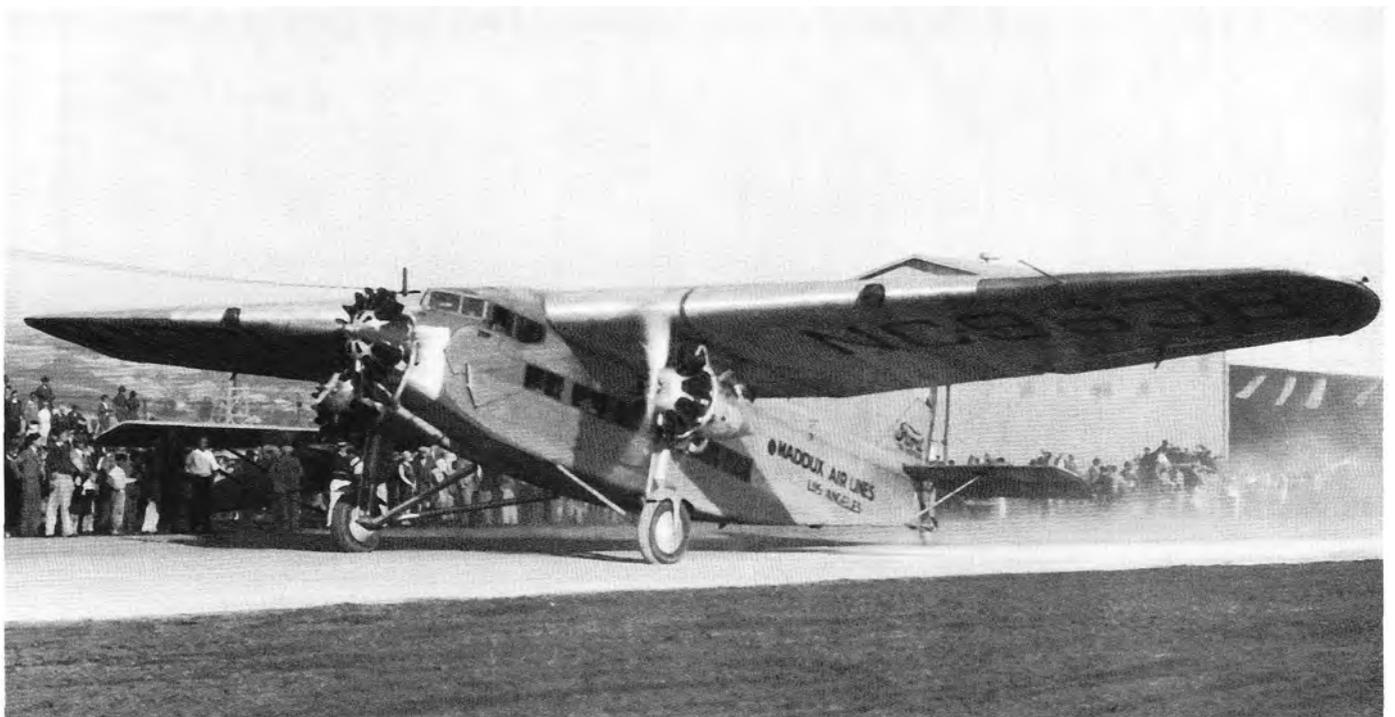


Eckener was in charge of the 41-man crew for the 20,500-mile trip which, naturally, set a record of 21 days, 7 hours and 34 minutes (12 days in the air). The average speed was 50 mph, top speed was 70 mph.

On the afternoon of August 26 it made a pass over the Golden Gate Bridge in the San Francisco area and then headed south along the coast to Los Angeles. A Maddux Ford was chartered to greet the Zep and lead it towards the landing spot at Mines Field (site of LAX today). Tomlinson was the pilot; passengers included a well-known newscaster from radio station KFWB, complete with a special radio to broadcast the event. The big problem was when and where they would find the Zep. Another problem developed when there was an electrical failure with the

Ford . . . all lights went out along with the normal two-way radio system. Not only could they not communicate with the Zep, there was the danger of not being seen by other aircraft in the area. The Zep was finally spotted about 12:30 A.M. to the west of Ventura with a full moon to outline its unmistakable shape. Fortunately, the Zep was listening to KFWB and was aware of the communications failure. They could answer questions by blinking their navigation lights.

The Ford circled the Zep as they flew over downtown Los Angeles (KFWB blinked the lights on their radio towers as a signal the broadcast was also received by them). However, Eckener decided to wait until sunrise to make the landing. A huge crowd already assembled spent the night in their cars



Rear-view passengers loading (original logo). (W.T. Larkins)

NC 9638 (5-AT) taxiing at Glendale's Grand Central Airport. (W.T. Larkins)

Mechanic pouring oil (original logo). (W.T. Larkins)

Maddux Ford in front of terminal building before it was completed (late 1928). Note temporary terminal on left. (W.T. Larkins)

Side view of NC 7582 with new logo. Last of the 4-AT models to Maddux. (W.T. Larkins)

awaiting the big event, scheduled for 5:00 A.M. Maddux reaped the benefits from all of this publicity as, even before dawn, there were hundreds of potential passengers lined up in front of the ticket office. They were eager to take a short hop between the two airports for a look at the Zep from above. Every available airplane and pilot was used for the frequent shuttles. As soon as one plane was loaded and taxied away for takeoff another was taxied to the ramp for the next load. Maddux Air Lines set a world's record for the number of passengers carried in one day. The Graf Zeppelin was to depart just after sundown. The last Maddux flight was reserved for all of the ground employees who had worked tirelessly to keep the operation going smoothly. According to Dick Hulse, who was in the dispatch office all day and a passenger, the Zep cast off its lines and started a slow climb to the east. Then, suddenly, as it neared a set of high-tension power lines, there was a deluge of water as ballast was dropped. The Zep barely cleared the lines by a few feet as it departed and headed for the Banning Pass into a clear and moonlit night on its last leg back to Lakehurst.

About mid-1929 Maddux adopted a different policy with regard to the "Mates" qualifications: The "new hires" were required to have a minimum of 100 hours of pilot time plus the qualifications of a licensed mechanic. When not needed for flight duty, it was common practice to work in the shops. Johnny Myers told how he had passed every test, but one, to be pilot qualified . . . the damned Morse Code exam (ability to send and receive a certain number of words a minute). Clarence Templeton told what it was like on payday, usually a Friday afternoon, for the mechanics . . . Jack Maddux was there leaning against his Lincoln with a big wad of cash; as each employee came up in line for his wages, Bill Hughes quoted from his notes the number of hours worked during the week and the amount due. He was paid in cash and there were no deductions for income tax, etc.

This was also about the time when Transcontinental Air Transport (TAT) was nearing the inauguration of their "48-Hour Coast-to-Coast" service . . . flying by day to Clovis, New Mexico; then an overnight train to Waynoka, Oklahoma; another TAT flight by day to Columbus, Ohio; and a second night by train to New York City. Service actually began on July 7, 1929, but the dress rehearsal and publicity flights began in June. Although it was not officially announced until later that year, the merger with Maddux was already in progress and four of their pilots were to fly the legs from Glendale to Kingman and Winslow, Arizona, where there was a crew change. Pilots Bellande, Guglielmetti, Shore and Stephens were now wearing TAT uniforms.

TAT ordered a fleet of 10 modern Fords (5-AT) which were furnished with plush interiors. The Maddux Fords, those to be retained, were refurbished with window shades, curtains and reading lights to bring them up to TAT's standards. Two-way





radiophones along with new powerful generators and regulators to operate same were part of the modifications. The huge transmitter was supported by an open rack about two feet long located in the tail of the plane. In order to work with low frequencies, below the usual AM band for broadcasts, a 200-foot antenna wire with a two-pound lead weight at the end was unreeled by the copilot (and, hopefully, retracted before landing). Another TAT requirement, which affected the Maddux "Mates," was to be qualified as pilots with a certified Department of Commerce license. There was a rush among the Mates to get the required minimum flying time for the coveted license . . . several were paying for this training and experience at private schools in their spare time.

Prior to the final merger with TAT, Maddux was flying a route schedule of 599 miles including the service between Los Angeles and San Francisco, and Los Angeles to Tia Juana and Agua Caliente. With a fleet of 16 Fords (one was lost and one sold in January) and two Lockheeds it flew over 40,000 passengers a total of 1,000,000 miles in 1929. These statistics are trivial if compared to what one "jumbo jet" can log in a few months' time, but Maddux Air Lines made a very important contribution to passenger travel without the benefit of an airmail contract. Few of the pioneer all-passenger airlines of that era survived.

TAT also operated out of the new Glendale Airport and leased their hangar and other facilities right next to those of Maddux. The merger to form TAT-Maddux was completed on November 16, 1929. The general offices were now located in St. Louis. Clement Keys was Chairman of the Board of Directors; Jack Maddux, President; Daniel Sheaffer, Chairman of the Executive Committee; and Charles Lindbergh, Chairman of the Technical Committee. Tommy Tomlinson was Manager of Operations for the Western Division, based at Glendale, and Steve Welsh the Manager for the Eastern Division, based at Columbus, Ohio. Four of the airlines mentioned: Western, Standard, Maddux and TAT were to eventually (through a series of mergers culminating in October 1930) be an important part of TWA's "roots." This would include personnel, equipment (air and ground), airports and, in some cases, part of their routes. The story of TAT and TAT-Maddux will be continued. •

NC 9639 (5-AT) with Parcel Post truck.

(W.T. Larkins)

Air view of NC 9636 (first 5-AT Ford to Maddux, January 4, 1929). (W.T. Larkins)

Ford cockpit. I am not certain, but believe this is not a Maddux Ford at the time because of the gyro horizon. May be TAT-Maddux or TWA a few years later. (Ed Betts)

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MADDUX AIR LINES FORD TRI-MOTORS

Serial No.	Registration	Fleet No.	Remarks
4-AT-7	3114, then NC-1102	1	7-26-27 to 4-21-31, to TWA
4-AT-12	NC-1781	2	10-28-27 to 1-16-29, to G.E. Flaherty, L.A.
4-AT-16	NC-4532		3-29-28 to 9-23-30, to Consolidated Air Lines, Sacramento, CA
4-AT-23	NC-5577	4	6-22-28 to 7-12-29, to Curtiss Flying Ser., L.A.
4-AT-31	NC-7117	5	8-17-28 to 4-21-31, to TWA
4-AT-32	NC-7118		8-24-28 to 7-15-29, to Curtiss Flying Service of Cal., L.A.
4-AT-33	NC-7119	7	9-7-28 to 4-21-31, to TWA. Crashed 12-19-31, Oklahoma City.
4-AT-36	NC-7582	8	8-25-28 to 4-21-31, to TWA. "The Glendale."
5-AT-10	NC-9636	9	1-4-29 to 4-21-29. Midair collision with PW-9D AC 28-37, San Diego 4-21-29.
5-AT-16	NC-9638	10	2-4-29 to 4-21-31, to TWA.
5-AT-17	NC-9639	11	2-7-29 to 4-21-31, to TWA.
5-AT-18	NC-9640		2-21-29 to 4-21-31, to TWA.
5-AT-19	NC-9641	14	3-6-29 to 4-21-31, to TWA.
5-AT-41	NC-9686		5-3-29 to 4-21-31, to TWA.
5-AT-46	NC-9689		7-12-29 to 1-19-30. Crashed Oceanside, CA. 1-19-30.
5-AT-51	NC-8413		7-20-29 to 4-21-31, to TWA.

